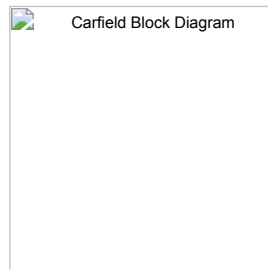


# Carfield Documentation

## Architecture



Carfield is organized in *domains*. As a mixed-criticality system (MCS), each domain serves different purposes in terms of functional safety and reliability, security, and computation capabilities.

Carfield relies on Cheshire as its host domain, and extends its minimal SoC with additional interconnect ports and interrupts.

The above block diagram depicts a fully-featured Carfield SoC, which currently provides:

- **Domains:**
  - *Host domain* (Cheshire), a Linux-capable RV64 system based on dual-core CVA6 processors with self-invalidation coherency mechanism
  - *Safe domain*, a Triple-Core-Lockstep (TCLS) RV32 microcontroller system based on CV32E40P, with fast interrupt handling through the RISC-V CLIC
  - *Secure domain*, a Dual-Core-Lockstep (DCLS) RV32 Hardware Root of Trust (HW RoT) systems that ensures the secure boot for the whole platform, serves as secure monitor for the entire system, and provides crypto acceleration services through various crypto-accelerators
  - *Accelerator domain*, comprises two programmable multi-core accelerators (PMCAs), an 12-cores integer cluster with Hybrid Modular Redundancy (HMR) capabilities oriented to compute intensive integer workloads such as AI, and a vectorial cluster with floating point vector processing capabilities to accelerate intensive control tasks
- **On-chip and off-chip memory endpoints:**
  - *Dynamic SPM*: dynamically configurable scratchpad memory (SPM) for *interleaved* or *contiguous* accesses aiming at reducing systematic bus conflicts to improve the time-predictability of the on-chip communication
  - *Partitionable hybrid LLC SPM*: the last-level cache (*host domain*) can be configured as SPM at runtime, as described in Cheshire's [Architecture](https://pulp-platform.github.io/cheshire/um/arch/) (<https://pulp-platform.github.io/cheshire/um/arch/>).
  - *External DRAM*: off-chip HyperRAM (Infineon) interfaced with in-house, open-source AXI4 Hyperbus memory controller and digital PHY connected to Cheshire's LLC
- **Mailbox unit**
  - Main communication vehicle among domains, based on an interrupt notification mechanism
- **Platform control registers (PCRs)**
  - Management and control registers for the entire platform, control clock sources assignments, clock gating, isolation.
- **Interconnect** (as in Cheshire):
  - A last level cache (LLC) configurable as a scratchpad memory (SPM) per-way
  - Up to 16 external AXI4 manager ports and 16 AXI and Regbus subordinate ports
  - Per-manager AXI4 traffic regulators for real-time applications
  - Per-manager AXI4 bus error units (UNBENT) for interconnect error handling
- **Interrupts** (as in Cheshire):
  - Core-local (CLINT *and* CLIC) and platform (PLIC) interrupt controllers
  - Dynamic interrupt routing from and to internal and external targets.
- **Peripherals:**
  - Generic timers
  - PWM timers
  - Watchdog timer
  - Ethernet
  - CAN

## Memory Map

This section shows Carfield's memory map. The group `Internal to Cheshire` in the table below only recalls the memory map described in the dedicated [documentation for Cheshire](#) (<https://pulp-platform.github.io/cheshire/um/arch/>), and is explicitly shown here for clarity.

| Start Address               | End Address (excl.) | Length    | Size    | Permissions | Cacheable | Atomics | Region   | Device   |
|-----------------------------|---------------------|-----------|---------|-------------|-----------|---------|----------|--|
| <b>Internal to Cheshire</b> |                     |           |         |             |           |         |          |  |
| 0x0000_0000                 | 0x0004_0000         | 0x04_0000 | 256 KiB | (debug)     |           |         | Debug    | Debug CVA6   |
| 0x0004_0000                 | 0x0100_0000         |           |         |             |           |         | Reserved |  |
| 0x0100_0000                 | 0x0100_1000         | 0x00_1000 | 4 KiB   | rw          |           |         | Config   | <a href="#">AXI_DMA_Config (ip/axi_dma_config/doc/idma_reg64_</a>  |
| 0x0100_1000                 | 0x0200_0000         |           |         |             |           |         | Reserved |  |
| 0x0200_0000                 | 0x0204_0000         | 0x04_0000 | 256 KiB | rx          |           |         | Memory   | Boot ROM   |
| 0x0204_0000                 | 0x0208_0000         | 0x04_0000 | 256 KiB | rw          |           |         | Irq      | <a href="#">CLINT (ip/clint/doc/registers.md)</a>  |
| 0x0208_0000                 | 0x020c_0000         | 0x04_0000 | 256 KiB | rw          |           |         | Irq      | <a href="#">IRQ_Routing (ip/irq_router/doc/regist</a>  |
| 0x020c_0000                 | 0x0210_0000         | 0x04_0000 | 256 KiB | rw          |           |         | Irq      | <a href="#">AXI_REALM_unit (ip/axi_realm/doc/r</a>   |
| 0x020c_0000                 | 0x0300_0000         |           |         |             |           |         | Reserved |  |
| 0x0300_0000                 | 0x0300_1000         | 0x00_1000 | 4 KiB   | rw          |           |         | Config   | <a href="#">Cheshire_PCRs (ip/cheshire/doc/regi</a>  |
| 0x0300_1000                 | 0x0300_2000         | 0x00_1000 | 4 KiB   | rw          |           |         | Config   | <a href="#">LLC (ip/axi_llc/doc/registers.md)</a>  |
| 0x0300_2000                 | 0x0300_3000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | <a href="#">UART (ip/uart/doc/registers.md)</a>  |
| 0x0300_3000                 | 0x0300_4000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | <a href="#">I2C (ip/i2c/doc/registers.md)</a>  |
| 0x0300_4000                 | 0x0300_5000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | <a href="#">SPIM (ip/spim/doc/registers.md)</a>  |
| 0x0300_5000                 | 0x0300_6000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | <a href="#">GPIO (ip/gpio/doc/registers.md)</a>  |
| 0x0300_6000                 | 0x0300_7000         | 0x00_1000 | 4 KiB   | rw          |           |         | Config   | <a href="#">Serial_Link (ip/serial_link/doc/register</a>   |
| 0x0300_7000                 | 0x0300_8000         | 0x00_1000 | 4 KiB   | rw          |           |         | Config   | <a href="#">VGA (ip/vga/doc/registers.md)</a>  |
| 0x0300_8000                 | 0x0300_A000         | 0x00_1000 | 8 KiB   | rw          |           |         | Config   | <a href="#">UNBENT (ip/unbent/doc/registers.md)</a>  |
| 0x0300_A000                 | 0x0300_B000         | 0x00_1000 | 4 KiB   | rw          |           |         | Config   | <a href="#">Tagger (ip/tagger/doc/registers.md)</a> (l   |
| 0x0300_8000                 | 0x0400_0000         |           |         |             |           |         | Reserved |  |
| 0x0400_0000                 | 0x1000_0000         | 0x40_0000 | 64 MiB  | rw          |           |         | Irq      | <a href="#">PLIC (ip/plic/doc/registers.md)</a>  |
| 0x0800_0000                 | 0x0C00_0000         | 0x40_0000 | 64 MiB  | rw          |           |         | Irq      | <a href="#">CLIC_INT (ip/clic/doc/clicint_registers (ip/clic/doc/clictv_registers.md), CLIC (ip/clic/doc/clicvs_registers.md), MCL (ip/clic/doc/mclc_registers.md)</a> |
| 0x1000_0000                 | 0x1400_0000         | 0x40_0000 | 64 MiB  | rwX         | yes       | yes     | Memory   | <a href="#">LLC_Scratchpad (ip/axi_llc/doc/regist</a>  |
| 0x1400_0000                 | 0x1800_0000         | 0x40_0000 | 64 MiB  | rwX         |           | yes     | Memory   | <a href="#">LLC_Scratchpad (ip/axi_llc/doc/regist</a>  |
| 0x1800_0000                 | 0x2000_0000         |           |         |             |           |         | Reserved |  |
| <b>External to Cheshire</b> |                     |           |         |             |           |         |          |  |
| 0x2000_0000                 | 0x2000_1000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | <a href="#">Ethernet (ip/ethernet/doc/registers.m</a>  |
| 0x2000_1000                 | 0x2000_2000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | <a href="#">CAN_BUS (ip/can_bus/doc/registers.</a>   |
| 0x2000_2000                 | 0x2000_3000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | (empty)  |
| 0x2000_3000                 | 0x2000_4000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | (empty)  |
| 0x2000_4000                 | 0x2000_5000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | <a href="#">GP_timer_1 (ip/gp_timer1_system_ti</a><br>(System timer)   |
| 0x2000_5000                 | 0x2000_6000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | <a href="#">GP_timer_2 (ip/gp_timer2_advanced</a><br>(Advanced timer)  |
| 0x2000_6000                 | 0x2000_7000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | GP timer 3   |
| 0x2000_7000                 | 0x2000_8000         | 0x00_1000 | 4 KiB   | rw          |           |         | I/O      | <a href="#">Watchdog_time (ip/watchdog_timer/d</a>   |

| Start Address | End Address (excl.) | Length         | Size    | Permissions | Cacheable | Atomics | Region          | Device   |
|---------------|---------------------|----------------|---------|-------------|-----------|---------|-----------------|--|
| 0x2000_8000   | 0x2000_9000         | 0x00_1000      | 4 KiB   | rw          |           |         | I/O             | (empty)  |
| 0x2000_9000   | 0x2000_a000         | 0x00_1000      | 4 KiB   | rw          |           |         | I/O             | <a href="#">HyperBUS (ip/hyperbus/doc/registers</a>                                |
| 0x2000_a000   | 0x2000_b000         | 0x00_1000      | 4 KiB   | rw          |           |         | I/O             | Pad Config   |
| 0x2000_b000   | 0x2000_c000         | 0x00_1000      | 4 KiB   | rw          |           |         | I/O             | <a href="#">L2_ECC_Config (ip/l2_ecc_config/do</a>                                 |
| 0x2001_0000   | 0x2001_1000         | 0x00_1000      | 4 KiB   | rw          |           |         | I/O             | <a href="#">Carfield Control and Status (ip/carfield_regs/doc/carfield_regs.mc</a> |
| 0x2002_0000   | 0x2002_1000         | 0x00_1000      | 4 KiB   | rw          |           |         | I/O             | (if any) PLL/CLOCK   |
| 0x2800_1000   | 0x4000_0000         |                |         |             |           |         | <i>Reserved</i> |  |
| 0x4000_0000   | 0x4000_1000         | 0x00_1000      | 4 KiB   | rw          |           |         | Irq             | <a href="#">Mailboxes (ip/mailbox/doc/registers.n</a>                              |
| 0x4000_1000   | 0x5000_0000         |                |         |             |           |         | <i>Reserved</i> |  |
| 0x5000_0000   | 0x5080_0000         | 0x80_0000      | 8 MiB   | rw          |           |         | Accelerators    | <a href="#">Integer_Cluster (ip/integer_cluster/doc/pulp_cluster_r</a>             |
| 0x5080_0000   | 0x5100_0000         |                |         |             |           |         | <i>Reserved</i> |  |
| 0x5100_0000   | 0x5180_0000         | 0x80_0000      | 8 MiB   | rw          |           |         | Accelerators    | <a href="#">FP_Cluster (ip/cluster_peripherals/do</a>                              |
| 0x5100_0000   | 0x6000_0000         |                |         |             |           |         | <i>Reserved</i> |  |
| 0x6000_0000   | 0x6002_0000         | 0x02_0000      | 128 KiB | rw          |           | yes     | Safe domain     | Safety Island Memory   |
| 0x6002_0000   | 0x6020_0000         | 0x1e_0000      |         | rw          |           |         | Safe domain     | reserved   |
| 0x6020_0000   | 0x6030_0000         | 0x10_0000      | 1 MiB   | rw          |           | yes     | Safe domain     | <a href="#">Safety_Island_Peripherals (ip/safety_</a>                              |
| 0x6030_0000   | 0x6080_0000         | 0x50_0000      |         | rw          |           |         | Safe domain     | reserved   |
| 0x6080_0000   | 0x7000_0000         |                |         |             |           |         | <i>Reserved</i> |  |
| 0x7000_0000   | 0x7002_0000         | 0x02_0000      | 128 KiB | rwX         | yes       | yes     | Memory          | LLC Scratchpad   |
| 0x7800_0000   | 0x7810_0000         | 0x10_0000      | 1 MiB   | rwX         | yes       | yes     | Memory          | L2 Scratchpad (Port 1, interleaved)  |
| 0x7810_0000   | 0x7820_0000         | 0x10_0000      | 1 MiB   | rwX         | yes       | yes     | Memory          | L2 Scratchpad (Port 1, non-interleave  |
| 0x7820_0000   | 0x7830_0000         | 0x10_0000      | 1 MiB   | rwX         | yes       | yes     | Memory          | L2 Scratchpad (Port 2, interleaved)  |
| 0x7830_0000   | 0x7840_0000         | 0x10_0000      | 1 MiB   | rwX         | yes       | yes     | Memory          | L2 Scratchpad (Port 2, non-interleave  |
| 0x8000_0000   | 0x20_8000_0000      | 0x20_0000_0000 | 128 GiB | rwX         | yes       | yes     | Memory          | LLC/DRAM   |

## Interrupt map

Carfield's interrupt components are exhaustively described in the dedicated section of the [documentation for Cheshire \(https://pulp-platform.github.io/cheshire/um/arch/\)](https://pulp-platform.github.io/cheshire/um/arch/). This section describes Carfield's interrupt map.

| Interrupt Source            | Interrupt sink | Bitwidth | Connection        | Type            | Comment |
|-----------------------------|----------------|----------|-------------------|-----------------|---------|
| <b>Carfield peripherals</b> |                |          |                   |                 |         |
| intr_wkup_timer_expired_o   |                | 1        | car_wdt_intrs[0]  | level-sensitive |         |
| intr_wdog_timer_bark_o      |                | 1        | car_wdt_intrs[1]  | level-sensitive |         |
| nmi_wdog_timer_bark_o       |                | 1        | car_wdt_intrs[2]  | level-sensitive |         |
| wkup_req_o                  |                | 1        | car_wdt_intrs[3]  | level-sensitive |         |
| aon_timer_rst_req_o         |                | 1        | car_wdt_intrs[4]  | level-sensitive |         |
| irq                         |                | 1        | car_can_intr      | level-sensitive |         |
| ch_0_o[0]                   |                | 1        | car_adv_timer_ch0 | edge-sensitive  |         |
| ch_0_o[1]                   |                | 1        | car_adv_timer_ch1 | edge-sensitive  |         |
| ch_0_o[2]                   |                | 1        | car_adv_timer_ch2 | edge-sensitive  |         |

| Interrupt Source            | Interrupt sink | Bitwidth | Connection   | Type            | Comment             |
|-----------------------------|----------------|----------|--|-----------------|---------------------|
| ch_0_o[3]                   |                | 1        | car_adv_timer_ch3  | edge-sensitive  |                     |
| events_o[0]                 |                | 1        | car_adv_timer_events[0]  | edge-sensitive  |                     |
| events_o[1]                 |                | 1        | car_adv_timer_events[1]  | edge-sensitive  |                     |
| events_o[2]                 |                | 1        | car_adv_timer_events[2]  | edge-sensitive  |                     |
| events_o[3]                 |                | 1        | car_adv_timer_events[3]  | edge-sensitive  |                     |
| irq_lo_o                    |                | 1        | car_sys_timer_lo   | edge-sensitive  |                     |
| irq_hi_o                    |                | 1        | car_sys_timer_hi   | edge-sensitive  |                     |
| <b>Cheshire peripherals</b> |                |          |  |                 |                     |
| zero                        |                | 1        | zero   | level-sensitive |                     |
| uart                        |                | 1        | uart   | level-sensitive |                     |
| i2c_fmt_threshold           |                | 1        | i2c_fmt_threshold  | level-sensitive |                     |
| i2c_rx_threshold            |                | 1        | i2c_rx_threshold   | level-sensitive |                     |
| i2c_fmt_overflow            |                | 1        | i2c_fmt_overflow   | level-sensitive |                     |
| i2c_rx_overflow             |                | 1        | i2c_rx_overflow  | level-sensitive |                     |
| i2c_nak                     |                | 1        | i2c_nak  | level-sensitive |                     |
| i2c_scl_interference        |                | 1        | i2c_scl_interference   | level-sensitive |                     |
| i2c_sda_interference        |                | 1        | i2c_sda_interference   | level-sensitive |                     |
| i2c_stretch_timeout         |                | 1        | i2c_stretch_timeout  | level-sensitive |                     |
| i2c_sda_unstable            |                | 1        | i2c_sda_unstable   | level-sensitive |                     |
| i2c_cmd_complete            |                | 1        | i2c_cmd_complete   | level-sensitive |                     |
| i2c_tx_stretch              |                | 1        | i2c_tx_stretch   | level-sensitive |                     |
| i2c_tx_overflow             |                | 1        | i2c_tx_overflow  | level-sensitive |                     |
| i2c_acq_full                |                | 1        | i2c_acq_full   | level-sensitive |                     |
| i2c_unexp_stop              |                | 1        | i2c_unexp_stop   | level-sensitive |                     |
| i2c_host_timeout            |                | 1        | i2c_host_timeout   | level-sensitive |                     |
| spih_error                  |                | 1        | spih_error   | level-sensitive |                     |
| spih_spi_event              |                | 1        | spih_spi_event   | level-sensitive |                     |
| gpio                        |                | 32       | gpio   | level-sensitive |                     |
| <b>Spatz cluster</b>        |                |          |  |                 |                     |
|                             | msip_i[0]      | 1        | (hostd_spatzcl_mb_intr_ored[0] \\<br>safed_spatzcl_intr_mb[0]) | level-sensitive | Snitch core #0      |
|                             | msip_i[1]      | 1        | (hostd_spatzcl_mb_intr_ored[1] \\<br>safed_spatzcl_intr_mb[1]) | level-sensitive | Snitch core #1      |
|                             | mtip_i[0]      | 1        | chs_mti[0]   | level-sensitive | Snitch core #0      |
|                             | mtip_i[1]      | 1        | chs_mti[1]   | level-sensitive | Snitch core #1      |
|                             | meip_i         | 2        | \\-  |                 | unconnected         |
|                             | seip_i         | 2        | \\-  |                 | unconnected         |
| <b>HRM integer cluster</b>  |                |          |  |                 |                     |
| eoc_o                       |                | 1        | pulpcl_eoc   | level-sensitive |                     |
|                             | mbox_irq_i     | 1        | (hostd_pulpcl_mb_intr_ored \\<br>safed_pulpcl_intr_mb)         | level-sensitive | to offload binaries |

| Interrupt Source     | Interrupt sink | Bitwidth | Connection   | Type                | Comment                    |
|----------------------|----------------|----------|--|---------------------|----------------------------|
| <b>Secure domain</b> |                |          |  |                     |                            |
|                      | irq_ibex_i     | 1        | (hostd_secd_mb_intr_ored \\<br>safed_secd_intr_mb) | level-<br>sensitive | to wake-up Ibex core       |
| <b>Safe domain</b>   |                |          |  |                     |                            |
|                      | irqs_i[0]      | 1        | hostd_safed_mbox_intr[0]                           | level-<br>sensitive | from host domain<br>CVA6#0 |
|                      | irqs_i[1]      | 1        | hostd_safed_mbox_intr[1]                           | level-<br>sensitive | from host domain<br>CVA6#1 |
|                      | irqs_i[2]      | 1        | secd_safed_mbox_intr                               | level-<br>sensitive | from secure domain         |
|                      | irqs_i[3]      | 1        | pulpcl_safed_mbox_intr                             | level-<br>sensitive | from HMR cluster           |
|                      | irqs_i[4]      | 1        | spatzcl_safed_mbox_intr                            | level-<br>sensitive | from vectorial cluster     |
|                      | irqs[5]        | 1        | irqs_distributed_249                               | level-<br>sensitive | tied to 0                  |
|                      | irqs[6]        | 1        | irqs_distributed_250                               | level-<br>sensitive | host domain UART           |
|                      | irqs[7]        | 1        | irqs_distributed_251                               | level-<br>sensitive | i2c_fmt_threshold          |
|                      | irqs[8]        | 1        | irqs_distributed_252                               | level-<br>sensitive | i2c_rx_threshold           |
|                      | irqs[9]        | 1        | irqs_distributed_253                               | level-<br>sensitive | i2c_fmt_overview           |
|                      | irqs[10]       | 1        | irqs_distributed_254                               | level-<br>sensitive | i2c_rx_overflow            |
|                      | irqs[11]       | 1        | irqs_distributed_255                               | level-<br>sensitive | i2c_nak                    |
|                      | irqs[12]       | 1        | irqs_distributed_256                               | level-<br>sensitive | i2c_scl_interference       |
|                      | irqs[13]       | 1        | irqs_distributed_257                               | level-<br>sensitive | i2c_sda_interference       |
|                      | irqs[14]       | 1        | irqs_distributed_258                               | level-<br>sensitive | i2c_stretch_timeout        |
|                      | irqs[15]       | 1        | irqs_distributed_259                               | level-<br>sensitive | i2c_sda_unstable           |
|                      | irqs[16]       | 1        | irqs_distributed_260                               | level-<br>sensitive | i2c_cmd_complete           |
|                      | irqs[17]       | 1        | irqs_distributed_261                               | level-<br>sensitive | i2c_tx_stretch             |
|                      | irqs[18]       | 1        | irqs_distributed_262                               | level-<br>sensitive | i2c_tx_overflow            |
|                      | irqs[19]       | 1        | irqs_distributed_263                               | level-<br>sensitive | i2c_acq_full               |
|                      | irqs[20]       | 1        | irqs_distributed_264                               | level-<br>sensitive | i2c_unexp_stop             |
|                      | irqs[21]       | 1        | irqs_distributed_265                               | level-<br>sensitive | i2c_host_timeout           |
|                      | irqs[22]       | 1        | irqs_distributed_266                               | level-<br>sensitive | spih_error                 |
|                      | irqs[23]       | 1        | irqs_distributed_267                               | level-<br>sensitive | spih_spi_event             |
|                      | irqs[55:24]    | 32       | irqs_distributed_299:268                           | level-<br>sensitive | gpio                       |
|                      | irqs_i[56]     | 1        | irqs_distributed_300                               | level-<br>sensitive | pulpcl_eoc                 |
|                      | irqs_i[57]     | 1        | irqs_distributed_309                               | level-<br>sensitive | car_wdt_intrs[0]           |
|                      | irqs_i[58]     | 1        | irqs_distributed_310                               | level-<br>sensitive | car_wdt_intrs[1]           |
|                      | irqs_i[59]     | 1        | irqs_distributed_311                               | level-<br>sensitive | car_wdt_intrs[2]           |
|                      | irqs_i[60]     | 1        | irqs_distributed_312                               | level-<br>sensitive | car_wdt_intrs[3]           |
|                      | irqs_i[61]     | 1        | irqs_distributed_313                               | level-<br>sensitive | car_wdt_intrs[4]           |
|                      | irqs_i[62]     | 1        | irqs_distributed_314                               | level-<br>sensitive | car_can_intr               |
|                      | irqs_i[63]     | 1        | irqs_distributed_315                               | edge-<br>sensitive  | car_adv_timer_ch0          |

| Interrupt Source | Interrupt sink    | Bitwidth | Connection               | Type            | Comment                   |
|------------------|-------------------|----------|--------------------------|-----------------|---------------------------|
| <b>Cheshire</b>  | irqs_i[64]        | 1        | irqs_distributed_316     | edge-sensitive  | car_adv_timer_ch1         |
|                  | irqs_i[65]        | 1        | irqs_distributed_317     | edge-sensitive  | car_adv_timer_ch2         |
|                  | irqs_i[66]        | 1        | irqs_distributed_318     | edge-sensitive  | car_adv_timer_ch3         |
|                  | irqs_i[67]        | 1        | irqs_distributed_319     | edge-sensitive  | car_adv_timer_events[0]   |
|                  | irqs_i[68]        | 1        | irqs_distributed_320     | edge-sensitive  | car_adv_timer_events[1]   |
|                  | irqs_i[69]        | 1        | irqs_distributed_321     | edge-sensitive  | car_adv_timer_events[2]   |
|                  | irqs_i[70]        | 1        | irqs_distributed_322     | edge-sensitive  | car_adv_timer_events[0]   |
|                  | irqs_i[71]        | 1        | irqs_distributed_323     | edge-sensitive  | car_sys_timer_lo          |
|                  | irqs_i[72]        | 1        | irqs_distributed_324     | edge-sensitive  | car_sys_timer_hi          |
|                  | irqs_i[127:73]    | 54       | irqs_distributed_331:325 | -               | tied to 0                 |
|                  | intr_ext_i[0]     | 1        | pulpcl_eoc               | level-sensitive | from HMR cluster          |
|                  | intr_ext_i[2:1]   | 2        | pulpcl_hostd_mbox_intr   | level-sensitive | from HMR cluster          |
|                  | intr_ext_i[4:3]   | 2        | spatzcl_hostd_mbox_intr  | level-sensitive | from vectorial cluster    |
|                  | intr_ext_i[6:5]   | 2        | safed_hostd_mbox_intr    | level-sensitive | from safe domain          |
|                  | intr_ext_i[8:7]   | 2        | secd_hostd_mbox_intr     | level-sensitive | from secure domain        |
|                  | intr_ext_i[9]     | 1        | car_wdt_intrs[0]         | level-sensitive | from carfield peripherals |
|                  | intr_ext_i[10]    | 1        | car_wdt_intrs[1]         | level-sensitive | from carfield peripherals |
|                  | intr_ext_i[11]    | 1        | car_wdt_intrs[2]         | level-sensitive | from carfield peripherals |
|                  | intr_ext_i[12]    | 1        | car_wdt_intrs[3]         | level-sensitive | from carfield peripherals |
|                  | intr_ext_i[13]    | 1        | car_wdt_intrs[4]         | level-sensitive | from carfield peripherals |
|                  | intr_ext_i[14]    | 1        | car_can_intr             | level-sensitive | from carfield peripherals |
| <b>Cheshire</b>  | intr_ext_i[15]    | 1        | car_adv_timer_ch0        | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[16]    | 1        | car_adv_timer_ch1        | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[17]    | 1        | car_adv_timer_ch2        | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[18]    | 1        | car_adv_timer_ch3        | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[19]    | 1        | car_adv_timer_events[0]  | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[20]    | 1        | car_adv_timer_events[1]  | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[21]    | 1        | car_adv_timer_events[2]  | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[22]    | 1        | car_adv_timer_events[3]  | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[23]    | 1        | car_sys_timer_lo         | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[24]    | 1        | car_sys_timer_hi         | edge-sensitive  | from carfield peripherals |
|                  | intr_ext_i[31:25] | 7        | 0                        |                 | tied to 0                 |
|                  | meip_ext_o[0]     | -        |                          | level-sensitive | unconnected               |
| <b>Cheshire</b>  | meip_ext_o[1]     | -        |                          | level-sensitive | unconnected               |
|                  | meip_ext_o[2]     | -        |                          | level-sensitive | unconnected               |
|                  | seip_ext_o[0]     | -        |                          | level-sensitive | unconnected               |

| Interrupt Source | Interrupt sink | Bitwidth | Connection | Type            | Comment        |
|------------------|----------------|----------|------------|-----------------|----------------|
| seip_ext_o[1]    |                | -        |            | level-sensitive | unconnected    |
| seip_ext_o[2]    |                | -        |            | level-sensitive | unconnected    |
| msip_ext_o[0]    |                | -        |            | level-sensitive | unconnected    |
| msip_ext_o[1]    |                | -        |            | level-sensitive | unconnected    |
| msip_ext_o[2]    |                | -        |            | level-sensitive | unconnected    |
| mtip_ext_o[0]    |                | -        |            | level-sensitive | Snitch core #0 |
| mtip_ext_o[1]    |                | -        |            | level-sensitive | Snitch core #1 |
| mtip_ext_o[2]    |                | -        |            | level-sensitive | unconnected    |

## Domains

The total number of domains is 7: *host domain*, *safe domain*, *secure domain*, *integer PMCA domain*, *vectorial PMCA domain*, *peripheral domain*, *dynamic SPM*.

Carfield's domains live in dedicated repositories. We therefore invite the reader to consult the documentation of each domain.

For more information about domains' memory requirements, visit [Synthesis and physical implementation \(.tg/synth.md\)](#).

Below, we focus on domains' parameterization within Carfield.

### Host domain (Cheshire) (<https://github.com/pulp-platform/cheshire>)

The *host domain* (Cheshire) embeds all the necessary components required to run OSs such as embedded Linux. It has two orthogonal *operation modes*.

- 1. *Untrusted mode*:** in this operation mode, the host domain is tasked to run untrusted services, i.e. non time- and non safety-critical applications. For example, this could be the case of infotainment on a modern car. In this mode, as in traditional automotive platforms, safety and resiliency features are deferred to a dedicated 32-bit microcontroller-like system, called `safe domain` in Carfield.
- 2. *Hybrid trusted/untrusted mode*:** in this operation mode, the host domain is in charge of both critical and non-critical applications. Key features supported to achieve this are:
  - A virtualization layer, which allows the system to accommodate the execution of multiple OSs, including rich, Unix-like OSs and Real-Time OSs (RTOS), coexisting on the same HW.
  - Spatial and temporal partitioning of resources: AXI matrix crossbar ([AXI-REALM \(<https://arxiv.org/abs/2311.09662>\)](#)), LLC, TLB, and a `physical tagger` in front of the cores to mark partitions by acting directly on the physical address space
  - Runtime configurable data/instruction cache and SPM
  - Fast interrupt handling, with optional interrupt routing through the RISC-V fast interrupt controller CLIC,
  - Configurable dual core setup between *lockstep* or *SMP* mode.

Hybrid operation mode is currently experimental, and mostly for research purposes. We advise of relying on a combination of host ad safe domain for a more traditional approach.

Cheshire is configured as follows:

- Two 64-bit, RISC-V CVA6 cores, with lightweight self-invalidation cache coherency, fast interrupt and virtualization support.
- 8 external AXI manager ports (`AxiNumExtSlv`) added to the matrix crossbar:
  - Dynamic SPM port 0
  - Dynamic SPM port 1
  - Safe domain
  - HMR cluster
  - Vectorial cluster
  - Mailbox unit
  - Ethernet
  - Peripherals
- 4 external AXI subordinate ports (`AxiNumExtMst`) added to the matrix crossbar:
  - Safe domain
  - Secure domain
  - HMR cluster
  - Vectorial cluster
- 4 external regbus subordinate ports (`NumTotalRegSlv`):
  - PCRs: control domains enable, clock gate, isolation
  - PLL control registers: for ASIC top-levels, leave unconnected otherwise
  - Padmux control registers: for ASIC top-levels, leave unconnected otherwise

- Dynamic SPM ECC control registers
- **AXI-REALM** (<https://arxiv.org/abs/2311.09662>) unit for bandwidth regulation and monitoring integrated in front of each AXI matrix crossbar manager
- Last-level cache (LLC) with HW spatial partitioning
- 32 *external* input interrupts (`CarfieldNumExtInttrs`), see [Interrupt map](#) in addition to Cheshire's own internal interrupts. Unused are tied to 0 (currently 9/32)
- 2 *external* interruptible harts (`CarfieldNumInterruptibleHarts`). The interruptible harts are Snitch core #0 and #1 in the vectorial cluster.
- An interrupt router with 1 *external target* (`CarfieldNumRouterTargets`), tasked to distribute N input interrupts to M targets. In Carfield, the external target is the *safe domain*.
- All Cheshire peripherals, except for VGA

By default, Cheshire hosts 128KiB of hybrid LLC/SPM, user-configurable.

## [Safe domain \(https://github.com/pulp-platform/safety\\_island\)](https://github.com/pulp-platform/safety_island)

The *safe domain* is a simple MCU-like domain that comprises three 32-bit real-time CV32E40P (CV32RT) RISC-V cores operating in triple-core-lockstep mode (TCLS).

These cores, enhanced with the RISC-V CLIC controller and optimized for fast interrupt handling and context switch, run RTOSs and safety-critical applications, embodying a core tenet of the platform reliability.

The *safe domain* is essential when the *host domain* is operated in *untrusted* mode.

The *safe domain* is configured as follows:

- 1 RISC-V debug module providing independent JTAG interface off-Carfield
- 1 AXI manager and 1 AXI subordinate ports, 32-bit data and 32-bit address wide, to and from the *host domain*, respectively. AXI datawidth conversion with the host domain is handled internally to the *safe domain*.
- 1 generic timer, essential for periodic ticks common in RTOSs. The generic timer in the *safe domain* is the same integrated in [Carfield's peripheral domain](#).
- CLIC RISC-V interrupt controller; as opposed to Cheshire, currently the CLIC is configured to run in M-mode.
- 128 *external* input interrupts. Unused are tied to 0.
- Fast interrupt extension that extends CV32 with additional logic to accelerate context switching. From here, the name [CV32RT](#) (<https://arxiv.org/abs/2311.08320>)
- 1 32-bit per-core FPU with down to float-16 precision, totaling 3 FPUs

By default, the processing elements share access to 128KiB of SPM for instructions and data, user-configurable.

## [Secure domain \(https://github.com/pulp-platform/opentitan/tree/carfield-soc\)](https://github.com/pulp-platform/opentitan/tree/carfield-soc)

The secure domain, based on the [OpenTitan project](#) (<https://opentitan.org/book/doc/introduction.html>), serves as the Hardware Root-of-Trust (HWRoT) of the platform. It handles *secure boot* and system integrity monitoring fully in HW through cryptographic acceleration services.

Compared to vanilla OpenTitan, the secure domain integrated in Carfield is modified/configured as follows:

- 1 AXI4 manager interface to Carfield, with a bridge between AXI4 and TileLink Uncached Lightweight (TL-UL) internally used by OpenTitan. By only exposing a manager port, unwanted access to the secure domain is prevented.
- Embedded flash memory replaced with an SRAM preloaded before secure boot procedure from an external SPI flash through OpenTitan private SPI peripheral. Once preload is over, the OpenTitan secure boot framework is unchanged compared to the vanilla version.
- Finally, a *boot manager* module has been designed and integrated to manage the [two available bootmodes](#) (`/sw.md`). In **Secure** mode, the systems executes the secure boot framework as soon as the reset is asserted, loading code from the external SPI and performing the signature check on its content. Otherwise, in **Non-secure** mode, the *secure domain* is clock gated and must be clocked and woken-up by an external entity (e.g., *host domain*)

By default, the secure domain hosts 512KiB of main SPM, and 16KiB of OTP memory, user-configurable.

## Accelerator domain

To augment computational capabilities, Carfield incorporates two PMCA's, described below. Both PMCA's integrate DMA engines to independently fetch data from the on-chip SPM or external DRAM.

### [HMR integer PMCA \(https://github.com/pulp-platform/pulp\\_cluster/tree/yt/rapidrecovery\)](https://github.com/pulp-platform/pulp_cluster/tree/yt/rapidrecovery)

The [hybrid modular redundancy \(HMR\) integer PMCA](#) (<https://arxiv.org/abs/2303.08706>) is specialized in accelerating the inference of Deep Learning and Machine Learning models. The multicore accelerator is built around 12 32-bit RISC-V cores empowered with ISA extensions, enabling integer arithmetic from 32-bit down to 2-bit precision.

The integer PMCA does not integrate a fully-fledged FPU co-processor. Nevertheless, it features a highly specialized domain specific accelerator (DSA), [RedMulE](#) (<https://www.sciencedirect.com/science/article/pii/S0167739X23002546>), which enables fast and energy-efficient floating-point GEMM on 16-bit and 8-bit data formats. This makes the PMCA capable of on-chip training of generalized Deep Learning models.

As part of a MCS, the integer PMCA's general-purpose cores can be reconfigured for *redundant execution*. A [Hybrid Modular Redundancy \(HMR\)](#) (<https://doi.org/10.1145/3635161>) unit allows the split/lock of the available cores in different redundant configurations during runtime, trading off the computing performance and the fault resilience capability according to the criticality of the application.

The PMCA can be configured in multiple redundant modes:



- **Independent:** All cores act independently with no redundancy mechanism. This configuration allows higher performance but has no reliability.
- **Dual Modular Redundancy (DMR):** The cores are grouped in lock-stepped pairs and rely on a specialized hardware extension for fast fault recovery in less than 30 clock cycles in case of fault detection. The PMCA provides the best trade-off between performance and fault recovery in this configuration.
- **Triple Modular Redundancy (TMR):** The cores are grouped in lock-stepped triplets and rely on either hardware extension or software mechanisms to recover from incurring faults. The PMCA provides the highest fault resilience in this configuration, at the cost of reduced performance.

By default, the integer PMCA's processing elements and tensor accelerator share access to 256KiB of L1 SPM, user-configurable.

### Vectorial PMCA (<https://github.com/pulp-platform/spatz>)

The vectorial PMCA, or Spatz PMCA (<https://dl.acm.org/doi/abs/10.1145/3508352.3549367>), handles vectorizable multi-format floating-point workloads.

A Spatz vector unit acts as a coprocessor of the Snitch core ([https://github.com/pulp-platform/snitch\\_cluster](https://github.com/pulp-platform/snitch_cluster)), a tiny RV32IMA core which decodes and forwards vector instructions to the vector unit.

A Snitch core and a Spatz vector unit are together referred to as *Core Complex (CC)*. The vectorial PMCA is composed by two CCs, each with the following configuration:

- 2 KiB of latch-based VRF
- 4 transprecision FPUs
- 1 integer processing unit (IPU)

Each FPU supports *FP8*, *FP16*, *FP32*, and *FP64* computation, while the IPU supports 8, 16, 32, and 64-bit integer computation.

By default, the CCs share access to 128KiB of L1 SPM, user-configurable.

## On-chip and off-chip memory endpoints

### Dynamic scratchpad memory (SPM) ([https://github.com/pulp-platform/dyn\\_spm](https://github.com/pulp-platform/dyn_spm))

The dynamic SPM features dynamically switching address mapping policy. It manages the following features:

- Two AXI subordinate ports
- Two address mapping modes: *interleaved* and *contiguous*
- 4 address spaces, 2 for each port. The address space is used to select the AXI port to use, and the mapping mode
- Every address space points to the same physical SRAM through a low-latency matrix crossbar
- ECC-equipped memory banks

By default, Carfield hosts 1MiB of dynamic SPM, user-configurable.

### Partitionable hybrid LLC/SPM ([https://github.com/pulp-platform/axi\\_llc](https://github.com/pulp-platform/axi_llc))

Carfield hosts a LLC optionally reconfigurable as SPM during runtime. In addition, the LLC supports HW-based partitioning to exploit intra-process or inter-processes isolation, improving the system's predictability. The LLC is described in detail in Cheshire's Architecture (<https://pulp-platform.github.io/cheshire/um/arch>).

### HyperBus off-chip link (<https://github.com/pulp-platform/hyperbus>)

Carfield integrates a in-house, open-source implementation of Infineon' HyperBus off-chip controller to connect to external HyperRAM modules.

It manages the following features:

- An AXI interface that attaches to Cheshire's partitionable hybrid LLC/SPM
- A configurable number of physical HyperRAM chips it can be attached to; by default, support for 2 physical chips is provided
- Support for HyperRAM chips with different densities (from 8MiB to 64MiB per chip aligned with specs).

## System bus interconnect

The interconnect is composed of a main AXI4 (<https://github.com/pulp-platform/axi>) matrix (or crossbar) with AXI5 atomic operations (ATOPs) support. The crossbar extends Cheshire's with additional external AXI manager and subordinate ports.

Cheshire's auxiliary Regbus ([https://github.com/pulp-platform/register\\_interface](https://github.com/pulp-platform/register_interface)) demultiplexer is extended with additional peripheral configuration ports for external PLL/FLL and padmux configuration, which are specific of ASIC wrappers.

An additional peripheral subsystem based on APB hosts Carfield-specific peripherals.

### Mailbox unit ([https://github.com/pulp-platform/mailbox\\_unit](https://github.com/pulp-platform/mailbox_unit))

The mailbox unit consists in a number of configurable mailboxes. Each mailbox is the preferred communication vehicle between *domains*. It can be used to wake-up certain domains, notify an *offloader* (e.g., Cheshire) that a *target device* (e.g., the integer PMCA) has reached execution completion, dispatch *entry points* to a *target device* to jump-start its execution, and many others.

It manages the following features:

- Interrupt based signaling receiver and sender
- A shared memory space common to all the mailboxes, implemented as a single register file. Currently, Carfield implements 25 mailboxes.
- Support for 32-bit word aligned read/write access.
- A convenience AXI-Lite wrapper for the configuration port.

Assuming each mailbox is identified with id *i*, the register file map reads:

| Offset           | Register     | Width (bit) | Note               |
|------------------|--------------|-------------|--------------------|
| 0x00 + i * 0x100 | INT_SND_STAT | 1           | current irq status |
| 0x04 + i * 0x100 | INT_SND_SET  | 1           | set irq            |
| 0x08 + i * 0x100 | INT_SND_CLR  | 1           | clear irq          |
| 0x0C + i * 0x100 | INT_SND_EN   | 1           | enable irq         |
| 0x40 + i * 0x100 | INT_RCV_STAT | 1           | current irq status |
| 0x44 + i * 0x100 | INT_RCV_SET  | 1           | set irq            |
| 0x48 + i * 0x100 | INT_RCV_CLR  | 1           | clear irq          |
| 0x4C + i * 0x100 | INT_RCV_EN   | 1           | enable irq         |
| 0x80 + i * 0x100 | LETTER0      | 32          | message            |
| 0x8C + i * 0x100 | LETTER1      | 32          | message            |

The above register map can be found in the dedicated [repository \(https://github.com/pulpo-platform/mailbox\\_uni\)](https://github.com/pulpo-platform/mailbox_uni), and is reported here for convenience.

## Platform control registers

PCRs provide basic system information, and control clock, reset and other functionalities of Carfield's *domains*.

A more detailed overview of each PCR (register subfields and description) can be found [here \(./../hw/regs/pcr.md\)](#). PCR base address is listed in the [Memory Map](#) as for the other devices.

| Name                           | Offset | Length | Description  |
|--------------------------------|--------|--------|--|
| VERSION0                       | 0x0    | 4      | Cheshire sha256 commit   |
| VERSION1                       | 0x4    | 4      | Safety Island sha256 commit  |
| VERSION2                       | 0x8    | 4      | Security Island sha256 commit  |
| VERSION3                       | 0xc    | 4      | PULP Cluster sha256 commit   |
| VERSION4                       | 0x10   | 4      | Spatz CLuster sha256 commit  |
| JEDEC_IDCODE                   | 0x14   | 4      | JEDEC ID CODE  |
| GENERIC_SCRATCH0               | 0x18   | 4      | Scratch  |
| GENERIC_SCRATCH1               | 0x1c   | 4      | Scratch  |
| HOST_RST                       | 0x20   | 4      | Host Domain reset -active high, inverted in HW-                      |
| PERIPH_RST                     | 0x24   | 4      | Periph Domain reset -active high, inverted in HW-                    |
| SAFETY_ISLAND_RST              | 0x28   | 4      | Safety Island reset -active high, inverted in HW-                    |
| SECURITY_ISLAND_RST            | 0x2c   | 4      | Security Island reset -active high, inverted in HW-                  |
| PULP_CLUSTER_RST               | 0x30   | 4      | PULP Cluster reset -active high, inverted in HW-                     |
| SPATZ_CLUSTER_RST              | 0x34   | 4      | Spatz Cluster reset -active high, inverted in HW-                    |
| L2_RST                         | 0x38   | 4      | L2 reset -active high, inverted in HW-                               |
| PERIPH_ISOLATE                 | 0x3c   | 4      | Periph Domain AXI isolate  |
| SAFETY_ISLAND_ISOLATE          | 0x40   | 4      | Safety Island AXI isolate  |
| SECURITY_ISLAND_ISOLATE        | 0x44   | 4      | Security Island AXI isolate  |
| PULP_CLUSTER_ISOLATE           | 0x48   | 4      | PULP Cluster AXI isolate   |
| SPATZ_CLUSTER_ISOLATE          | 0x4c   | 4      | Spatz Cluster AXI isolate  |
| L2_ISOLATE                     | 0x50   | 4      | L2 AXI isolate   |
| PERIPH_ISOLATE_STATUS          | 0x54   | 4      | Periph Domain AXI isolate status                                     |
| SAFETY_ISLAND_ISOLATE_STATUS   | 0x58   | 4      | Safety Island AXI isolate status                                     |
| SECURITY_ISLAND_ISOLATE_STATUS | 0x5c   | 4      | Security Island AXI isolate status                                   |
| PULP_CLUSTER_ISOLATE_STATUS    | 0x60   | 4      | PULP Cluster AXI isolate status                                      |
| SPATZ_CLUSTER_ISOLATE_STATUS   | 0x64   | 4      | Spatz Cluster AXI isolate status                                     |
| L2_ISOLATE_STATUS              | 0x68   | 4      | L2 AXI isolate status  |
| PERIPH_CLK_EN                  | 0x6c   | 4      | Periph Domain clk gate enable  |
| SAFETY_ISLAND_CLK_EN           | 0x70   | 4      | Safety Island clk gate enable  |
| SECURITY_ISLAND_CLK_EN         | 0x74   | 4      | Security Island clk gate enable                                      |
| PULP_CLUSTER_CLK_EN            | 0x78   | 4      | PULP Cluster clk gate enable   |
| SPATZ_CLUSTER_CLK_EN           | 0x7c   | 4      | Spatz Cluster clk gate enable  |
| L2_CLK_EN                      | 0x80   | 4      | Shared L2 memory clk gate enable                                     |
| PERIPH_CLK_SEL                 | 0x84   | 4      | Periph Domain pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll) |
| SAFETY_ISLAND_CLK_SEL          | 0x88   | 4      | Safety Island pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll) |

| Name                          | Offset | Length | Description  |
|-------------------------------|--------|--------|--|
| SECURITY_ISLAND_CLK_SEL       | 0x8c   | 4      | Security Island pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll) |
| PULP_CLUSTER_CLK_SEL          | 0x90   | 4      | PULP Cluster pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)    |
| SPATZ_CLUSTER_CLK_SEL         | 0x94   | 4      | Spatz Cluster pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)   |
| L2_CLK_SEL                    | 0x98   | 4      | L2 Memory pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)       |
| PERIPH_CLK_DIV_VALUE          | 0x9c   | 4      | Periph Domain clk divider value  |
| SAFETY_ISLAND_CLK_DIV_VALUE   | 0xa0   | 4      | Safety Island clk divider value  |
| SECURITY_ISLAND_CLK_DIV_VALUE | 0xa4   | 4      | Security Island clk divider value                                      |
| PULP_CLUSTER_CLK_DIV_VALUE    | 0xa8   | 4      | PULP Cluster clk divider value   |
| SPATZ_CLUSTER_CLK_DIV_VALUE   | 0xac   | 4      | Spatz Cluster clk divider value  |
| L2_CLK_DIV_VALUE              | 0xb0   | 4      | L2 Memory clk divider value  |
| HOST_FETCH_ENABLE             | 0xb4   | 4      | Host Domain fetch enable   |
| SAFETY_ISLAND_FETCH_ENABLE    | 0xb8   | 4      | Safety Island fetch enable   |
| SECURITY_ISLAND_FETCH_ENABLE  | 0xbc   | 4      | Security Island fetch enable   |
| PULP_CLUSTER_FETCH_ENABLE     | 0xc0   | 4      | PULP Cluster fetch enable  |
| SPATZ_CLUSTER_DEBUG_REQ       | 0xc4   | 4      | Spatz Cluster debug req  |
| HOST_BOOT_ADDR                | 0xc8   | 4      | Host boot address  |
| SAFETY_ISLAND_BOOT_ADDR       | 0xcc   | 4      | Safety Island boot address   |
| SECURITY_ISLAND_BOOT_ADDR     | 0xd0   | 4      | Security Island boot address   |
| PULP_CLUSTER_BOOT_ADDR        | 0xd4   | 4      | PULP Cluster boot address  |
| SPATZ_CLUSTER_BOOT_ADDR       | 0xd8   | 4      | Spatz Cluster boot address   |
| PULP_CLUSTER_BOOT_ENABLE      | 0xdc   | 4      | PULP Cluster boot enable   |
| SPATZ_CLUSTER_BUSY            | 0xe0   | 4      | Spatz Cluster busy   |
| PULP_CLUSTER_BUSY             | 0xe4   | 4      | PULP Cluster busy  |
| PULP_CLUSTER_EOC              | 0xe8   | 4      | PULP Cluster end of computation  |
| ETH_RGMII_PHY_CLK_DIV_EN      | 0xec   | 4      | Ethernet RGMII PHY clock divider enable bit                            |
| ETH_RGMII_PHY_CLK_DIV_VALUE   | 0xf0   | 4      | Ethernet RGMII PHY clock divider value                                 |
| ETH_MDIO_CLK_DIV_EN           | 0xf4   | 4      | Ethernet MDIO clock divider enable bit                                 |
| ETH_MDIO_CLK_DIV_VALUE        | 0xf8   | 4      | Ethernet MDIO clock divider value                                      |

## Peripherals

Carfield enhances Cheshire's peripheral subsystem with additional capabilities.

An external AXI manager port is attached to the matrix crossbar. The 64-bit data, 48-bit address AXI protocol is converted to the slower, 32-bit data and address APB protocol. An APB demultiplexer allows attaching several peripherals, described below.

### Generic and advanced timer

Carfield integrates a generic timer and an advanced timer.

The *generic timer* ([https://github.com/pulp-platform/timer\\_unit](https://github.com/pulp-platform/timer_unit)), manages the following features:

- 2 general purpose 32-bit up counter timers
- Input trigger sources:
  - FLL/PLL clock
  - FLL/PLL clock + Prescaler
  - Real-time clock (RTC) at crystal frequency (32kHz) or higher
  - External event
- 8-bit programmable prescaler to FLL/PLL clock
- Counting modes:
  - One shot mode: timer is stopped after first comparison match
  - Continuous mode: timer continues counting after comparison match
  - Cycle mode: timer resets to 0 after comparison match and continues counting
  - 64 bit cascaded mode
- Interrupt request generation on comparison match

For more information, read the dedicated [documentation \(https://github.com/pulp-platform/timer\\_unit/blob/master/doc/TIMER\\_UNIT\\_reference.xlsx\)](https://github.com/pulp-platform/timer_unit/blob/master/doc/TIMER_UNIT_reference.xlsx).

The *advanced timer* ([https://github.com/pulp-platform/apb\\_adv\\_timer](https://github.com/pulp-platform/apb_adv_timer)), manages the following features:

- 4 timers with 4 output signal channels each
- PWM generation functionality
- Multiple trigger input sources:
  - output signal channels of all timers
  - 32 GPIOs
  - Real-time clock (RTC) at crystal frequency (32kHz) or higher

- FLL/PLL clock In Carfield, we rely on a RTC.
- Configurable input trigger modes
- Configurable prescaler for each timer
- Configurable counting mode for each timer
- Configurable channel threshold action for each timer
- 4 configurable output events
- Configurable clock gating of each timer

For more information, read the dedicated [documentation \(https://github.com/pulp-platform/apb\\_adv\\_timer/blob/master/doc/APB\\_ADV\\_TIMER\\_reference.xlsx\)](https://github.com/pulp-platform/apb_adv_timer/blob/master/doc/APB_ADV_TIMER_reference.xlsx).

## Watchdog timer

We employ the watchdog timer developed by the [OpenTitan project \(https://opentitan.org/book/doc/introduction.html\)](https://opentitan.org/book/doc/introduction.html) project. It manages the following features:

- Two 32-bit upcounting timers: one timer functions as a wakeup timer, one as a watchdog timer
- 2 thresholds: *bark* (generates an interrupt) and *bite* (resets core)
- A 12 bit pre-scaler for the wakeup timer to enable very long timeouts

For more information, read the dedicated [documentation \(https://opentitan.org/book/hw/ip/aon\\_timer/\)](https://opentitan.org/book/hw/ip/aon_timer/).

## CAN

We employ a CAN device developed by the [Czech Technical University \(https://github.com/AlSagr-platform/can\\_bus/tree/pulp\)](https://github.com/AlSagr-platform/can_bus/tree/pulp) in Prague. It manages the following features:

- CAN 2.0, CAN FD 1.0 and ISO CAN FD
- Avalon memory bus
- Timestamping and transmission at given time
- Optional event and error logging
- Fault confinement state manipulation
- Transceiver delay measurement
- Variety of interrupt sources
- Filtering of received frame
- Listen-only mode, Self-test mode, Acknowledge forbidden mode
- Up to 14 Mbit in  $\Delta$  Data  $\Delta$  bit-rate (with 100 Mhz Core clock)

For more information, read the dedicated [documentation \(https://github.com/AlSagr-platform/can\\_bus/tree/pulp/doc\)](https://github.com/AlSagr-platform/can_bus/tree/pulp/doc).

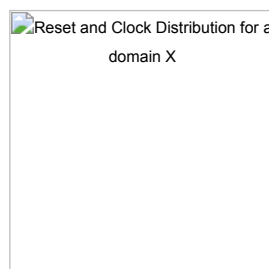
## Ethernet

We employ Ethernet IPs developed by [Alex Forench \(https://github.com/alexforench/verilog-ethernet\)](https://github.com/alexforench/verilog-ethernet) and assemble them with a high-performant DMA, the same used in Cheshire.

We use Reduced gigabit media-independent interface (RGMII) that supports speed up to 1000Mbit/s (1GHz).

For more information, read the dedicated [documentation \(http://alexforench.com/wiki/en/verilog/ethernet/start\)](http://alexforench.com/wiki/en/verilog/ethernet/start) of Ethernet components from its original repository.

## Clock and reset



The two figures above show the clock, reset and isolation distribution for a *domain x* in Carfield, and their relationship. A more detailed description is provided below.

## Clock distribution scheme, clock gating and isolation

Carfield is provided with 3 clocks sources. They can be fully asynchronous and not bound to any phase relationship, since dual-clock FIFOs are placed between domains to allow clock domain crossing (CDC):

- `host_clk_i`: preferably, clock of the *host domain*
- `alt_clk_i`: preferably, clock of *alternate* domains, namely *safe domain*, *secure domain*, *accelerator domain*
- `per_clk_i`: preferably, clock of *peripheral domain*

In addition, a real-time clock (RTC, `rt_clk_i`) is provided externally, at crystal frequency (32kHz) or higher.

These clocks are supplied externally, by a dedicated PLL per clock source or by a single PLL that supplies all three clock sources. The configuration of the clock source can be handled by the external PLL wrapper configuration registers, e.g. in a ASIC top level

Regardless of the specific name used for the clock signals in HW, Carfield has a flexible clock distribution that allows each of the 3 clock sources to be assigned to a *domain*, as explained below.

As the top figure shows, out of the 7 *domains* described in [Domains](#), 6 can be clock gated and *isolated*: *safe domain*, *secure domain*, *accelerator domain*, *peripheral domain*, *dynamic SPM*.

When *isolation* for a domain *x* is enabled, data transfers towards a domain are terminated and never reach it. To achieve this, an AXI4 compliant *isolation* module is placed in front of each domain. The bottom figure shows in detail the architecture of the isolation scheme between the *host domain* and a generic *x* domain, highlighting its relationship with the domain's reset and cloc signals.

For each of the 6 clock gateable domains, the following clock distribution scheme applies:

1. The user selects one of the 3 different clock sources
2. The selected clock source for the domain is fed into a default-bypassed arbitrary integer clock divider with 50% duty cycle. This allows to use different integer clock divisions for every target domain to use different clock frequencies
3. The internal clock gate of the clock divider is used to provide clock gating for the domain.

HW resources for the clock distribution (steps 1., 2., and 3.) and isolation of a domain *x*, are SW-controlled via dedicated PCRs. Refer to [Platform Control Registers](#) in this page for more information.

The only domain that is always-on and de-isolated is the *host domain* (Cheshire). If required, clock gating and/or isolation of it can be handled at higher levels of hierarchy, e.g. in a dedicated ASIC wrapper.

## Startup behavior after Power-on reset (POR)

The user can decide whether *secure boot* must be performed on the executing code before runtime. If so, the *secure domain* must be active after POR, i.e., clocked and de-isolated.

This behavior is regulated by the input pin `secure_boot_i` according to the following table:

| <code>secure_boot_i</code> | Secure Boot | System status after POR  |
|----------------------------|-------------|--|
| 0                          | OFF         | <i>secure domain</i> gated and isolated as the other 5 domains, <i>host domain</i> always-on and idle  |
| 1                          | ON          | <i>host domain</i> always-on and idle, <i>secure domain</i> active, takes over <i>secure boot</i> and can't be warm reset-ed; other 5 domains gated and isolated |

Regardless of the value of `secure_boot_i`, since by default some domains are clock gated and isolated after POR, SW or external physical interfaces (JTAG/Serial Link) must handle their wake-up process. Routines are provided in the [Software Stack](#) (`./sw/include/car_util.h`).

## Reset distribution scheme

Carfield is provided with one POR (active-low), `pwr_on_rst_ni`, responsible for the platform's *cold reset*.

The POR is synchronized with the clock of each domain, user-selected as explained above, and propagated to the domain.

In addition, a *warm reset* can be initiated from SW through the PCRs for each domain. Exceptions to this are the *host domain* (always-on), and the *secure domain* when `secure_boot_i` is asserted.

## axi\_dma\_config / doc / idma\_desc64\_frontend\_doc.md

### Summary

| Name                               | Offset | Length | Description   |
|------------------------------------|--------|--------|---|
| <code>idma_desc64.desc_addr</code> | 0x0    |        | 8 This register specifies the bus address at which the first transfer |
| <code>idma_desc64.status</code>    | 0x8    |        | 8 This register contains status information for the DMA.              |

# desc\_addr

This register specifies the bus address at which the first transfer descriptor can be found. A write to this register starts the transfer.

- Offset: 0x0
- Reset default: 0xffffffffffffffff
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "desc_addr", "bits": 64, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset              | Name      | Description |
|------|------|--------------------|-----------|-------------|
| 63:0 | wo   | 0xffffffffffffffff | desc_addr |             |

# status

This register contains status information for the DMA.

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "busy", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "fifo_full", "bits": 1, "attr": ["ro"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description  |
|------|------|-------|-----------|--|
| 63:2 |      |       |           | Reserved   |
| 1    | ro   | 0x0   | fifo_full | If this bit is set, the buffers of the DMA are full. Any further submissions via the desc_addr register may overwrite previously submitted jobs or get lost. |
| 0    | ro   | 0x0   | busy      | The DMA is busy  |

# axi\_dma\_config / doc / idma\_reg32\_2d\_frontend\_doc.md

## Summary

| Name   | Offset | Length | Description  |
|--|--------|--------|--|
| idma_reg32_2d_frontend. <u>src_addr</u>        | 0x0    | 4      | Source Address   |
| idma_reg32_2d_frontend. <u>dst_addr</u>        | 0x4    | 4      | Destination Address  |
| idma_reg32_2d_frontend. <u>num_bytes</u>       | 0x8    | 4      | Number of bytes  |
| idma_reg32_2d_frontend. <u>conf</u>            | 0xc    | 4      | Configuration Register for DMA settings                                |
| idma_reg32_2d_frontend. <u>stride_src</u>      | 0x10   | 4      | Source Stride  |
| idma_reg32_2d_frontend. <u>stride_dst</u>      | 0x14   | 4      | Destination Stride   |
| idma_reg32_2d_frontend. <u>num_repetitions</u> | 0x18   | 4      | Number of 2D repetitions   |
| idma_reg32_2d_frontend. <u>status</u>          | 0x1c   | 4      | DMA Status   |
| idma_reg32_2d_frontend. <u>next_id</u>         | 0x20   | 4      | Next ID, launches transfer, returns 0 if transfer not set up properly. |
| idma_reg32_2d_frontend. <u>done</u>            | 0x24   | 4      | Get ID of finished transactions.                                       |

# src\_addr

Source Address

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "src_addr", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

31:0   rw    0x0   src\_addr Source Address

# dst\_addr

Destination Address

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "dst_addr", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description         |
|------|------|-------|----------|---------------------|
| 31:0 | rw   | 0x0   | dst_addr | Destination Address |

# num\_bytes

Number of bytes

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "num_bytes", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description     |
|------|------|-------|-----------|-----------------|
| 31:0 | rw   | 0x0   | num_bytes | Number of bytes |

# conf

Configuration Register for DMA settings

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xf

## Fields

```
{"reg": [{"name": "decouple", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "deburst", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "serialize", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "twod", "bits": 1, "attr": ["rw"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description      |
|------|------|-------|-----------|------------------|
| 31:4 |      |       |           | Reserved         |
| 3    | rw   | 0x0   | twod      | 2D transfer      |
| 2    | rw   | 0x0   | serialize | Serialize enable |
| 1    | rw   | 0x0   | deburst   | Deburst enable   |
| 0    | rw   | 0x0   | decouple  | Decouple enable  |

# stride\_src

Source Stride

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "stride_src", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name       | Description   |
|------|------|-------|------------|---------------|
| 31:0 | rw   | 0x0   | stride_src | Source Stride |

# stride\_dst

Destination Stride

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "stride_dst", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name       | Description        |
|------|------|-------|------------|--------------------|
| 31:0 | rw   | 0x0   | stride_dst | Destination Stride |

# num\_repetitions

Number of 2D repetitions

- Offset: 0x18
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "num_repetitions", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name            | Description              |
|------|------|-------|-----------------|--------------------------|
| 31:0 | rw   | 0x1   | num_repetitions | Number of 2D repetitions |

# status

DMA Status

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0xffff

## Fields

```
{"reg": [{"name": "busy", "bits": 16, "attr": ["ro"], "rotate": 0}, {"bits": 16}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits  | Type | Reset | Name | Description |
|-------|------|-------|------|-------------|
| 31:16 |      |       |      | Reserved    |
| 15:0  | ro   | x     | busy | DMA busy    |

# next\_id

Next ID, launches transfer, returns 0 if transfer not set up properly.

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields



```
{"reg": [{"name": "next_id", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 ro x next\_id Next ID, launches transfer, returns 0 if transfer not set up properly.

# done

Get ID of finished transactions.

- Offset: 0x24
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "done", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 ro x done Get ID of finished transactions.

# axi\_dma\_config / doc / idma\_reg64\_2d\_frontend\_doc.md

## Summary

| Name   | Offset | Length | Description  |
|--|--------|--------|--|
| idma_reg64_2d_frontend. <u>src_addr</u>        | 0x0    | 8      | Source Address   |
| idma_reg64_2d_frontend. <u>dst_addr</u>        | 0x8    | 8      | Destination Address  |
| idma_reg64_2d_frontend. <u>num_bytes</u>       | 0x10   | 8      | Number of bytes  |
| idma_reg64_2d_frontend. <u>conf</u>            | 0x18   | 8      | Configuration Register for DMA settings                                |
| idma_reg64_2d_frontend. <u>status</u>          | 0x20   | 8      | DMA Status   |
| idma_reg64_2d_frontend. <u>next_id</u>         | 0x28   | 8      | Next ID, launches transfer, returns 0 if transfer not set up properly. |
| idma_reg64_2d_frontend. <u>done</u>            | 0x30   | 8      | Get ID of finished transactions.                                       |
| idma_reg64_2d_frontend. <u>stride_src</u>      | 0x38   | 8      | Source Stride  |
| idma_reg64_2d_frontend. <u>stride_dst</u>      | 0x40   | 8      | Destination Stride   |
| idma_reg64_2d_frontend. <u>num_repetitions</u> | 0x48   | 8      | Number of 2D repetitions   |

# src\_addr

Source Address

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "src_addr", "bits": 64, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

63:0 rw 0x0 src\_addr Source Address

# dst\_addr

Destination Address

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "dst_addr", "bits": 64, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description         |
|------|------|-------|----------|---------------------|
| 63:0 | rw   | 0x0   | dst_addr | Destination Address |

# num\_bytes

Number of bytes

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "num_bytes", "bits": 64, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description     |
|------|------|-------|-----------|-----------------|
| 63:0 | rw   | 0x0   | num_bytes | Number of bytes |

# conf

Configuration Register for DMA settings

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "decouple", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "deburst", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "serialize", "bits": 1, "attr": ["rw"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description      |
|------|------|-------|-----------|------------------|
| 63:3 |      |       |           | Reserved         |
| 2    | rw   | 0x0   | serialize | Serialize enable |
| 1    | rw   | 0x0   | deburst   | Deburst enable   |
| 0    | rw   | 0x0   | decouple  | Decouple enable  |

# status

DMA Status

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "busy", "bits": 1, "attr": ["ro"], "rotate": -90}, {"bits": 63}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
| 63:1 |      |       |      | Reserved    |
| 0    | ro   | x     | busy | DMA busy    |

# next\_id

Next ID, launches transfer, returns 0 if transfer not set up properly.

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "next_id", "bits": 64, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |   |         |  |
|------|----|---|---------|--|
| 63:0 | ro | x | next_id | Next ID, launches transfer, returns 0 if transfer not set up properly. |
|------|----|---|---------|--|

## done

Get ID of finished transactions.

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "done", "bits": 64, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |   |      |                                  |
|------|----|---|------|----------------------------------|
| 63:0 | ro | x | done | Get ID of finished transactions. |
|------|----|---|------|----------------------------------|

## stride\_src

Source Stride

- Offset: 0x38
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "stride_src", "bits": 64, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |            |               |
|------|----|-----|------------|---------------|
| 63:0 | rw | 0x0 | stride_src | Source Stride |
|------|----|-----|------------|---------------|

## stride\_dst

Destination Stride

- Offset: 0x40
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "stride_dst", "bits": 64, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |            |                    |
|------|----|-----|------------|--------------------|
| 63:0 | rw | 0x0 | stride_dst | Destination Stride |
|------|----|-----|------------|--------------------|

## num\_repetitions

Number of 2D repetitions

- Offset: 0x48
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "num_repetitions", "bits": 64, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name          | Description              |
|------|------|---------------------|--------------------------|
| 63:0 | rw   | 0x0 num_repetitions | Number of 2D repetitions |

## axi\_dma\_config / doc / idma\_reg64\_frontend\_doc.md

### Summary

| Name   | Offset | Length | Description  |
|--|--------|--------|--|
| idma_reg64_frontend. <a href="#">src_addr</a>  | 0x0    | 8      | Source Address   |
| idma_reg64_frontend. <a href="#">dst_addr</a>  | 0x8    | 8      | Destination Address  |
| idma_reg64_frontend. <a href="#">num_bytes</a> | 0x10   | 8      | Number of bytes  |
| idma_reg64_frontend. <a href="#">conf</a>      | 0x18   | 8      | Configuration Register for DMA settings                                |
| idma_reg64_frontend. <a href="#">status</a>    | 0x20   | 8      | DMA Status   |
| idma_reg64_frontend. <a href="#">next_id</a>   | 0x28   | 8      | Next ID, launches transfer, returns 0 if transfer not set up properly. |
| idma_reg64_frontend. <a href="#">done</a>      | 0x30   | 8      | Get ID of finished transactions.                                       |

### src\_addr

Source Address

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

### Fields

```
{"reg": [{"name": "src_addr", "bits": 64, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name   | Description    |
|------|------|--------------|----------------|
| 63:0 | rw   | 0x0 src_addr | Source Address |

### dst\_addr

Destination Address

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

### Fields

```
{"reg": [{"name": "dst_addr", "bits": 64, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name   | Description         |
|------|------|--------------|---------------------|
| 63:0 | rw   | 0x0 dst_addr | Destination Address |

### num\_bytes

Number of bytes

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

### Fields

```
{"reg": [{"name": "num_bytes", "bits": 64, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name | Description |
|------|------|------------|-------------|
|------|------|------------|-------------|

| Bits | Type | Reset | Name      | Description     |
|------|------|-------|-----------|-----------------|
| 63:0 | rw   | 0x0   | num_bytes | Number of bytes |

# conf

Configuration Register for DMA settings

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "decouple", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "deburst", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "serialize", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "reserved", "bits": 60, "attr": ["rw"], "rotate": -90}]}
```

| Bits | Type | Reset | Name      | Description      |
|------|------|-------|-----------|------------------|
| 63:3 |      |       |           | Reserved         |
| 2    | rw   | 0x0   | serialize | Serialize enable |
| 1    | rw   | 0x0   | deburst   | Deburst enable   |
| 0    | rw   | 0x0   | decouple  | Decouple enable  |

# status

DMA Status

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "busy", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "reserved", "bits": 63, "attr": ["ro"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
| 63:1 |      |       |      | Reserved    |
| 0    | ro   | x     | busy | DMA busy    |

# next\_id

Next ID, launches transfer, returns 0 if transfer not set up properly.

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "next_id", "bits": 64, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name    | Description  |
|------|------|-------|---------|--|
| 63:0 | ro   | x     | next_id | Next ID, launches transfer, returns 0 if transfer not set up properly. |

# done

Get ID of finished transactions.

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0xffffffffffffffff

## Fields

```
{"reg": [{"name": "done", "bits": 64, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

63:0 ro x done Get ID of finished transactions.

## axi\_llc / doc / registers.md

### Summary

| Name                                    | Offset | Length | Description                                       |
|---|--------|--------|---|
| <a href="#">axi_llc.CFG_SPM_LOW</a>     | 0x0    | 4      | SPM Configuration (lower 32 bit)                  |
| <a href="#">axi_llc.CFG_SPM_HIGH</a>    | 0x4    | 4      | SPM Configuration (upper 32 bit)                  |
| <a href="#">axi_llc.CFG_FLUSH_LOW</a>   | 0x8    | 4      | Flush Configuration (lower 32 bit)                |
| <a href="#">axi_llc.CFG_FLUSH_HIGH</a>  | 0xc    | 4      | Flush Configuration (upper 32 bit)                |
| <a href="#">axi_llc.COMMIT_CFG</a>      | 0x10   | 4      | Commit the configuration                          |
| <a href="#">axi_llc.FLUSHED_LOW</a>     | 0x18   | 4      | Flushed Flag (lower 32 bit)                       |
| <a href="#">axi_llc.FLUSHED_HIGH</a>    | 0x1c   | 4      | Flushed Flag (upper 32 bit)                       |
| <a href="#">axi_llc.BIST_OUT_LOW</a>    | 0x20   | 4      | Tag Storage BIST Result (lower 32 bit)            |
| <a href="#">axi_llc.BIST_OUT_HIGH</a>   | 0x24   | 4      | Tag Storage BIST Result (upper 32 bit)            |
| <a href="#">axi_llc.SET ASSO_LOW</a>    | 0x28   | 4      | Instantiated Set-Associativity (lower 32 bit)     |
| <a href="#">axi_llc.SET ASSO_HIGH</a>   | 0x2c   | 4      | Instantiated Set-Associativity (upper 32 bit)     |
| <a href="#">axi_llc.NUM_LINES_LOW</a>   | 0x30   | 4      | Instantiated Number of Cache-Lines (lower 32 bit) |
| <a href="#">axi_llc.NUM_LINES_HIGH</a>  | 0x34   | 4      | Instantiated Number of Cache-Lines (upper 32 bit) |
| <a href="#">axi_llc.NUM_BLOCKS_LOW</a>  | 0x38   | 4      | Instantiated Number of Blocks (lower 32 bit)      |
| <a href="#">axi_llc.NUM_BLOCKS_HIGH</a> | 0x3c   | 4      | Instantiated Number of Blocks (upper 32 bit)      |
| <a href="#">axi_llc.VERSION_LOW</a>     | 0x40   | 4      | AXI LLC Version (lower 32 bit)                    |
| <a href="#">axi_llc.VERSION_HIGH</a>    | 0x44   | 4      | AXI LLC Version (upper 32 bit)                    |
| <a href="#">axi_llc.BIST_STATUS</a>     | 0x48   | 4      | Status register of the BIST                       |

### CFG\_SPM\_LOW

SPM Configuration (lower 32 bit)

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

#### Fields

```
{"reg": [{"name": "low", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 low lower 32 bit

### CFG\_SPM\_HIGH

SPM Configuration (upper 32 bit)

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xffffffff

#### Fields

```
{"reg": [{"name": "high", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 high upper 32 bit

### CFG\_FLUSH\_LOW

Flush Configuration (lower 32 bit)

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "low", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--------------|
| 31:0 | rw   | 0x0   | low  | lower 32 bit |

CFG\_FLUSH\_HIGH

Flush Configuration (upper 32 bit)

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "high", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--------------|
| 31:0 | rw   | 0x0   | high | upper 32 bit |

COMMIT\_CFG

Commit the configuration

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "commit", "bits": 1, "attr": ["rw1s"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name   | Description          |
|------|------|-------|--------|----------------------|
| 31:1 |      |       |        | Reserved             |
| 0    | rw1s | 0x0   | commit | commit configuration |

FLUSHED\_LOW

Flushed Flag (lower 32 bit)

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "low", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--------------|
| 31:0 | ro   | 0x0   | low  | lower 32 bit |

FLUSHED\_HIGH

Flushed Flag (upper 32 bit)

- **Offset:** 0x1c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "high", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--------------|
| 31:0 | ro   | 0x0   | high | upper 32 bit |

## BIST\_OUT\_LOW

Tag Storage BIST Result (lower 32 bit)

- **Offset:** 0x20
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "low", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--------------|
| 31:0 | ro   | 0x0   | low  | lower 32 bit |

## BIST\_OUT\_HIGH

Tag Storage BIST Result (upper 32 bit)

- **Offset:** 0x24
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "high", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--------------|
| 31:0 | ro   | 0x0   | high | upper 32 bit |

## SET ASSO\_LOW

Instantiated Set-Associativity (lower 32 bit)

- **Offset:** 0x28
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "low", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--------------|
| 31:0 | ro   | 0x0   | low  | lower 32 bit |

## SET ASSO\_HIGH

Instantiated Set-Associativity (upper 32 bit)

- **Offset:** 0x2c
- **Reset default:** 0x0



- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "high", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |      |              |
|------|----|-----|------|--------------|
| 31:0 | ro | 0x0 | high | upper 32 bit |
|------|----|-----|------|--------------|

## NUM\_LINES\_LOW

Instantiated Number of Cache-Lines (lower 32 bit)

- **Offset:** 0x30
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "low", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |     |              |
|------|----|-----|-----|--------------|
| 31:0 | ro | 0x0 | low | lower 32 bit |
|------|----|-----|-----|--------------|

## NUM\_LINES\_HIGH

Instantiated Number of Cache-Lines (upper 32 bit)

- **Offset:** 0x34
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "high", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |      |              |
|------|----|-----|------|--------------|
| 31:0 | ro | 0x0 | high | upper 32 bit |
|------|----|-----|------|--------------|

## NUM\_BLOCKS\_LOW

Instantiated Number of Blocks (lower 32 bit)

- **Offset:** 0x38
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "low", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |     |              |
|------|----|-----|-----|--------------|
| 31:0 | ro | 0x0 | low | lower 32 bit |
|------|----|-----|-----|--------------|

## NUM\_BLOCKS\_HIGH

Instantiated Number of Blocks (upper 32 bit)

- **Offset:** 0x3c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "high", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

|      |    |     |      |              |
|------|----|-----|------|--------------|
| 31:0 | ro | 0x0 | high | upper 32 bit |
|------|----|-----|------|--------------|

## VERSION\_LOW

AXI LLC Version (lower 32 bit)

- Offset: 0x40
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "low", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

|      |    |     |     |              |
|------|----|-----|-----|--------------|
| 31:0 | ro | 0x0 | low | lower 32 bit |
|------|----|-----|-----|--------------|

## VERSION\_HIGH

AXI LLC Version (upper 32 bit)

- Offset: 0x44
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "high", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

|      |    |     |      |              |
|------|----|-----|------|--------------|
| 31:0 | ro | 0x0 | high | upper 32 bit |
|------|----|-----|------|--------------|

## BIST\_STATUS

Status register of the BIST

- Offset: 0x48
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "done", "bits": 1, "attr": ["ro"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

|      |    |     |      |                             |
|------|----|-----|------|-----------------------------|
| 31:1 |    |     |      | Reserved                    |
| 0    | ro | 0x0 | done | BIST successfully completed |

## axi\_realm / doc / registers.md

## Summary

| Name                                 | Offset | Length | Description                 |
|--------------------------------------|--------|--------|-----------------------------|
| <a href="#">axi_rt.major_version</a> | 0x0    | 4      | Value of the major_version. |
| <a href="#">axi_rt.minor_version</a> | 0x4    | 4      | Value of the minor_version. |
| <a href="#">axi_rt.patch_version</a> | 0x8    | 4      | Value of the patch_version. |

| Name                                 | Offset | Length | Description                            |
|--------------------------------------|--------|--------|--|
| <u>axi_rt.rt_enable</u>              | 0xc    | 4      | Enable RT feature on master            |
| <u>axi_rt.rt_bypassed</u>            | 0x10   | 4      | Is the RT inactive?                    |
| <u>axi_rt.len_limit_0</u>            | 0x14   | 4      | Fragmentation of the bursts in beats.  |
| <u>axi_rt.len_limit_1</u>            | 0x18   | 4      | Fragmentation of the bursts in beats.  |
| <u>axi_rt.imtu_enable</u>            | 0x1c   | 4      | Enables the IMTU.                      |
| <u>axi_rt.imtu_abort</u>             | 0x20   | 4      | Resets both the period and the budget. |
| <u>axi_rt.start_addr_sub_low_0</u>   | 0x24   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_1</u>   | 0x28   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_2</u>   | 0x2c   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_3</u>   | 0x30   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_4</u>   | 0x34   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_5</u>   | 0x38   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_6</u>   | 0x3c   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_7</u>   | 0x40   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_8</u>   | 0x44   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_9</u>   | 0x48   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_10</u>  | 0x4c   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_11</u>  | 0x50   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_12</u>  | 0x54   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_13</u>  | 0x58   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_14</u>  | 0x5c   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_low_15</u>  | 0x60   | 4      | The lower 32bit of the start address.  |
| <u>axi_rt.start_addr_sub_high_0</u>  | 0x64   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_1</u>  | 0x68   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_2</u>  | 0x6c   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_3</u>  | 0x70   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_4</u>  | 0x74   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_5</u>  | 0x78   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_6</u>  | 0x7c   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_7</u>  | 0x80   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_8</u>  | 0x84   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_9</u>  | 0x88   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_10</u> | 0x8c   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_11</u> | 0x90   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_12</u> | 0x94   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_13</u> | 0x98   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_14</u> | 0x9c   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.start_addr_sub_high_15</u> | 0xa0   | 4      | The higher 32bit of the start address. |
| <u>axi_rt.end_addr_sub_low_0</u>     | 0xa4   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_1</u>     | 0xa8   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_2</u>     | 0xac   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_3</u>     | 0xb0   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_4</u>     | 0xb4   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_5</u>     | 0xb8   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_6</u>     | 0xbc   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_7</u>     | 0xc0   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_8</u>     | 0xc4   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_9</u>     | 0xc8   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_10</u>    | 0xcc   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_11</u>    | 0xd0   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_12</u>    | 0xd4   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_13</u>    | 0xd8   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_14</u>    | 0xdc   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_low_15</u>    | 0xe0   | 4      | The lower 32bit of the end address.    |
| <u>axi_rt.end_addr_sub_high_0</u>    | 0xe4   | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_1</u>    | 0xe8   | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_2</u>    | 0xec   | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_3</u>    | 0xf0   | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_4</u>    | 0xf4   | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_5</u>    | 0xf8   | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_6</u>    | 0xfc   | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_7</u>    | 0x100  | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_8</u>    | 0x104  | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_9</u>    | 0x108  | 4      | The higher 32bit of the end address.   |
| <u>axi_rt.end_addr_sub_high_10</u>   | 0x10c  | 4      | The higher 32bit of the end address.   |

| Name   | Offset | Length | Description                          |
|--|--------|--------|--------------------------------------|
| <a href="#"><u>axi_rt.end_addr_sub_high_11</u></a> | 0x110  | 4      | The higher 32bit of the end address. |
| <a href="#"><u>axi_rt.end_addr_sub_high_12</u></a> | 0x114  | 4      | The higher 32bit of the end address. |
| <a href="#"><u>axi_rt.end_addr_sub_high_13</u></a> | 0x118  | 4      | The higher 32bit of the end address. |
| <a href="#"><u>axi_rt.end_addr_sub_high_14</u></a> | 0x11c  | 4      | The higher 32bit of the end address. |
| <a href="#"><u>axi_rt.end_addr_sub_high_15</u></a> | 0x120  | 4      | The higher 32bit of the end address. |
| <a href="#"><u>axi_rt.write_budget_0</u></a>       | 0x124  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_1</u></a>       | 0x128  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_2</u></a>       | 0x12c  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_3</u></a>       | 0x130  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_4</u></a>       | 0x134  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_5</u></a>       | 0x138  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_6</u></a>       | 0x13c  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_7</u></a>       | 0x140  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_8</u></a>       | 0x144  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_9</u></a>       | 0x148  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_10</u></a>      | 0x14c  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_11</u></a>      | 0x150  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_12</u></a>      | 0x154  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_13</u></a>      | 0x158  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_14</u></a>      | 0x15c  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.write_budget_15</u></a>      | 0x160  | 4      | The budget for writes.               |
| <a href="#"><u>axi_rt.read_budget_0</u></a>        | 0x164  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_1</u></a>        | 0x168  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_2</u></a>        | 0x16c  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_3</u></a>        | 0x170  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_4</u></a>        | 0x174  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_5</u></a>        | 0x178  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_6</u></a>        | 0x17c  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_7</u></a>        | 0x180  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_8</u></a>        | 0x184  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_9</u></a>        | 0x188  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_10</u></a>       | 0x18c  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_11</u></a>       | 0x190  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_12</u></a>       | 0x194  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_13</u></a>       | 0x198  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_14</u></a>       | 0x19c  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.read_budget_15</u></a>       | 0x1a0  | 4      | The budget for reads.                |
| <a href="#"><u>axi_rt.write_period_0</u></a>       | 0x1a4  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_1</u></a>       | 0x1a8  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_2</u></a>       | 0x1ac  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_3</u></a>       | 0x1b0  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_4</u></a>       | 0x1b4  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_5</u></a>       | 0x1b8  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_6</u></a>       | 0x1bc  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_7</u></a>       | 0x1c0  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_8</u></a>       | 0x1c4  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_9</u></a>       | 0x1c8  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_10</u></a>      | 0x1cc  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_11</u></a>      | 0x1d0  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_12</u></a>      | 0x1d4  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_13</u></a>      | 0x1d8  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_14</u></a>      | 0x1dc  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.write_period_15</u></a>      | 0x1e0  | 4      | The period for writes.               |
| <a href="#"><u>axi_rt.read_period_0</u></a>        | 0x1e4  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_1</u></a>        | 0x1e8  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_2</u></a>        | 0x1ec  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_3</u></a>        | 0x1f0  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_4</u></a>        | 0x1f4  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_5</u></a>        | 0x1f8  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_6</u></a>        | 0x1fc  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_7</u></a>        | 0x200  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_8</u></a>        | 0x204  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_9</u></a>        | 0x208  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_10</u></a>       | 0x20c  | 4      | The period for reads.                |
| <a href="#"><u>axi_rt.read_period_11</u></a>       | 0x210  | 4      | The period for reads.                |

| Name   | Offset | Length | Description                 |
|--|--------|--------|-----------------------------|
| <a href="#"><u>axi_rt.read_period_12</u></a>       | 0x214  | 4      | The period for reads.       |
| <a href="#"><u>axi_rt.read_period_13</u></a>       | 0x218  | 4      | The period for reads.       |
| <a href="#"><u>axi_rt.read_period_14</u></a>       | 0x21c  | 4      | The period for reads.       |
| <a href="#"><u>axi_rt.read_period_15</u></a>       | 0x220  | 4      | The period for reads.       |
| <a href="#"><u>axi_rt.write_budget_left_0</u></a>  | 0x224  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_1</u></a>  | 0x228  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_2</u></a>  | 0x22c  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_3</u></a>  | 0x230  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_4</u></a>  | 0x234  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_5</u></a>  | 0x238  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_6</u></a>  | 0x23c  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_7</u></a>  | 0x240  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_8</u></a>  | 0x244  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_9</u></a>  | 0x248  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_10</u></a> | 0x24c  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_11</u></a> | 0x250  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_12</u></a> | 0x254  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_13</u></a> | 0x258  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_14</u></a> | 0x25c  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.write_budget_left_15</u></a> | 0x260  | 4      | The budget left for writes. |
| <a href="#"><u>axi_rt.read_budget_left_0</u></a>   | 0x264  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_1</u></a>   | 0x268  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_2</u></a>   | 0x26c  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_3</u></a>   | 0x270  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_4</u></a>   | 0x274  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_5</u></a>   | 0x278  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_6</u></a>   | 0x27c  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_7</u></a>   | 0x280  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_8</u></a>   | 0x284  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_9</u></a>   | 0x288  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_10</u></a>  | 0x28c  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_11</u></a>  | 0x290  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_12</u></a>  | 0x294  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_13</u></a>  | 0x298  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_14</u></a>  | 0x29c  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.read_budget_left_15</u></a>  | 0x2a0  | 4      | The budget left for reads.  |
| <a href="#"><u>axi_rt.write_period_left_0</u></a>  | 0x2a4  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_1</u></a>  | 0x2a8  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_2</u></a>  | 0x2ac  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_3</u></a>  | 0x2b0  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_4</u></a>  | 0x2b4  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_5</u></a>  | 0x2b8  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_6</u></a>  | 0x2bc  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_7</u></a>  | 0x2c0  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_8</u></a>  | 0x2c4  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_9</u></a>  | 0x2c8  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_10</u></a> | 0x2cc  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_11</u></a> | 0x2d0  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_12</u></a> | 0x2d4  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_13</u></a> | 0x2d8  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_14</u></a> | 0x2dc  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.write_period_left_15</u></a> | 0x2e0  | 4      | The period left for writes. |
| <a href="#"><u>axi_rt.read_period_left_0</u></a>   | 0x2e4  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_1</u></a>   | 0x2e8  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_2</u></a>   | 0x2ec  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_3</u></a>   | 0x2f0  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_4</u></a>   | 0x2f4  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_5</u></a>   | 0x2f8  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_6</u></a>   | 0x2fc  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_7</u></a>   | 0x300  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_8</u></a>   | 0x304  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_9</u></a>   | 0x308  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_10</u></a>  | 0x30c  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_11</u></a>  | 0x310  | 4      | The period left for reads.  |
| <a href="#"><u>axi_rt.read_period_left_12</u></a>  | 0x314  | 4      | The period left for reads.  |

| Name                              | Offset | Length | Description                                |
|-----------------------------------|--------|--------|--|
| <u>axi_rt.read_period_left_13</u> | 0x318  | 4      | The period left for reads.                 |
| <u>axi_rt.read_period_left_14</u> | 0x31c  | 4      | The period left for reads.                 |
| <u>axi_rt.read_period_left_15</u> | 0x320  | 4      | The period left for reads.                 |
| <u>axi_rt.isolate</u>             | 0x324  | 4      | Is the interface requested to be isolated? |
| <u>axi_rt.isolated</u>            | 0x328  | 4      | Is the interface isolated?                 |
| <u>axi_rt.num_managers</u>        | 0x32c  | 4      | Value of the num_managers parameter.       |
| <u>axi_rt.addr_width</u>          | 0x330  | 4      | Value of the addr_width parameter.         |
| <u>axi_rt.data_width</u>          | 0x334  | 4      | Value of the data_width parameter.         |
| <u>axi_rt.id_width</u>            | 0x338  | 4      | Value of the id_width parameter.           |
| <u>axi_rt.user_width</u>          | 0x33c  | 4      | Value of the user_width parameter.         |
| <u>axi_rt.num_pending</u>         | 0x340  | 4      | Value of the num_pending parameter.        |
| <u>axi_rt.w_buffer_depth</u>      | 0x344  | 4      | Value of the w_buffer_depth parameter.     |
| <u>axi_rt.num_addr_regions</u>    | 0x348  | 4      | Value of the num_addr_regions parameter.   |
| <u>axi_rt.period_width</u>        | 0x34c  | 4      | Value of the period_width parameter.       |
| <u>axi_rt.budget_width</u>        | 0x350  | 4      | Value of the budget_width parameter.       |
| <u>axi_rt.max_num_managers</u>    | 0x354  | 4      | Value of the max_num_managers parameter.   |

# major\_version

Value of the major\_version.

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "major_version", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name          | Description                 |
|------|------|-------|---------------|-----------------------------|
| 31:0 | ro   | 0x0   | major_version | Value of the major_version. |

# minor\_version

Value of the minor\_version.

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "minor_version", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name          | Description                 |
|------|------|-------|---------------|-----------------------------|
| 31:0 | ro   | 0x0   | minor_version | Value of the minor_version. |

# patch\_version

Value of the patch\_version.

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "patch_version", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name          | Description                 |
|------|------|-------|---------------|-----------------------------|
| 31:0 | ro   | 0x0   | patch_version | Value of the patch_version. |

# rt\_enable

Enable RT feature on master

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "enable_0", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_1", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_2", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_3", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_4", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_5", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_6", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_7", "bits": 1, "attr": ["wo"], "rotate": -90}]}
```

| Bits | Type | Reset | Name     | Description                 |
|------|------|-------|----------|-----------------------------|
| 31:8 |      |       |          | Reserved                    |
| 7    | wo   | 0x0   | enable_7 | Enable RT feature on master |
| 6    | wo   | 0x0   | enable_6 | Enable RT feature on master |
| 5    | wo   | 0x0   | enable_5 | Enable RT feature on master |
| 4    | wo   | 0x0   | enable_4 | Enable RT feature on master |
| 3    | wo   | 0x0   | enable_3 | Enable RT feature on master |
| 2    | wo   | 0x0   | enable_2 | Enable RT feature on master |
| 1    | wo   | 0x0   | enable_1 | Enable RT feature on master |
| 0    | wo   | 0x0   | enable_0 | Enable RT feature on master |

# rt\_bypassed

Is the RT inactive?

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "bypassed_0", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "bypassed_1", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "bypassed_2", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "bypassed_3", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "bypassed_4", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "bypassed_5", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "bypassed_6", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "bypassed_7", "bits": 1, "attr": ["ro"], "rotate": -90}]}
```

| Bits | Type | Reset | Name       | Description         |
|------|------|-------|------------|---------------------|
| 31:8 |      |       |            | Reserved            |
| 7    | ro   | x     | bypassed_7 | Is the RT inactive? |
| 6    | ro   | x     | bypassed_6 | Is the RT inactive? |
| 5    | ro   | x     | bypassed_5 | Is the RT inactive? |
| 4    | ro   | x     | bypassed_4 | Is the RT inactive? |
| 3    | ro   | x     | bypassed_3 | Is the RT inactive? |
| 2    | ro   | x     | bypassed_2 | Is the RT inactive? |
| 1    | ro   | x     | bypassed_1 | Is the RT inactive? |
| 0    | ro   | x     | bypassed_0 | Is the RT inactive? |

# len\_limit\_0

Fragmentation of the bursts in beats.

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "len_0", "bits": 8, "attr": ["wo"], "rotate": 0}, {"name": "len_1", "bits": 8, "attr": ["wo"], "rotate": 0}, {"name": "len_2", "bits": 8, "attr": ["wo"], "rotate": 0}, {"name": "len_3", "bits": 8, "attr": ["wo"], "rotate": 0}]}
```

| Bits  | Type | Reset | Name  | Description                           |
|-------|------|-------|-------|---------------------------------------|
| 31:24 | wo   | 0x0   | len_3 | Fragmentation of the bursts in beats. |
| 23:16 | wo   | 0x0   | len_2 | Fragmentation of the bursts in beats. |
| 15:8  | wo   | 0x0   | len_1 | Fragmentation of the bursts in beats. |
| 7:0   | wo   | 0x0   | len_0 | Fragmentation of the bursts in beats. |

# len\_limit\_1

Fragmentation of the bursts in beats.

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "len_4", "bits": 8, "attr": ["wo"], "rotate": 0}, {"name": "len_5", "bits": 8, "attr": ["wo"], "rotate": 0}, {"name": "len_6", "bits": 8, "attr": ["wo"], "rotate": 0}, {"name": "len_7", "bits": 8, "attr": ["wo"], "rotate": 0}]}
```

### Bits Type Reset Name Description

|       |    |     |       |                |
|-------|----|-----|-------|----------------|
| 31:24 | wo | 0x0 | len_7 | For len_limit1 |
| 23:16 | wo | 0x0 | len_6 | For len_limit1 |
| 15:8  | wo | 0x0 | len_5 | For len_limit1 |
| 7:0   | wo | 0x0 | len_4 | For len_limit1 |

# imtu\_enable

Enables the IMTU.

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "enable_0", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_1", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_2", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_3", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_4", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_5", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_6", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "enable_7", "bits": 1, "attr": ["wo"], "rotate": -90}]}
```

### Bits Type Reset Name Description

|      |    |     |          |                   |
|------|----|-----|----------|-------------------|
| 31:8 |    |     |          | Reserved          |
| 7    | wo | 0x0 | enable_7 | Enables the IMTU. |
| 6    | wo | 0x0 | enable_6 | Enables the IMTU. |
| 5    | wo | 0x0 | enable_5 | Enables the IMTU. |
| 4    | wo | 0x0 | enable_4 | Enables the IMTU. |
| 3    | wo | 0x0 | enable_3 | Enables the IMTU. |
| 2    | wo | 0x0 | enable_2 | Enables the IMTU. |
| 1    | wo | 0x0 | enable_1 | Enables the IMTU. |
| 0    | wo | 0x0 | enable_0 | Enables the IMTU. |

# imtu\_abort

Resets both the period and the budget.

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "abort_0", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "abort_1", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "abort_2", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "abort_3", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "abort_4", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "abort_5", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "abort_6", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "abort_7", "bits": 1, "attr": ["wo"], "rotate": -90}]}
```

### Bits Type Reset Name Description

|      |    |     |         |  |
|------|----|-----|---------|--|
| 31:8 |    |     |         | Reserved                               |
| 7    | wo | 0x0 | abort_7 | Resets both the period and the budget. |
| 6    | wo | 0x0 | abort_6 | Resets both the period and the budget. |
| 5    | wo | 0x0 | abort_5 | Resets both the period and the budget. |
| 4    | wo | 0x0 | abort_4 | Resets both the period and the budget. |
| 3    | wo | 0x0 | abort_3 | Resets both the period and the budget. |
| 2    | wo | 0x0 | abort_2 | Resets both the period and the budget. |
| 1    | wo | 0x0 | abort_1 | Resets both the period and the budget. |
| 0    | wo | 0x0 | abort_0 | Resets both the period and the budget. |



# start\_addr\_sub\_low

The lower 32bit of the start address.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name                  | Offset |
|-----------------------|--------|
| start_addr_sub_low_0  | 0x24   |
| start_addr_sub_low_1  | 0x28   |
| start_addr_sub_low_2  | 0x2c   |
| start_addr_sub_low_3  | 0x30   |
| start_addr_sub_low_4  | 0x34   |
| start_addr_sub_low_5  | 0x38   |
| start_addr_sub_low_6  | 0x3c   |
| start_addr_sub_low_7  | 0x40   |
| start_addr_sub_low_8  | 0x44   |
| start_addr_sub_low_9  | 0x48   |
| start_addr_sub_low_10 | 0x4c   |
| start_addr_sub_low_11 | 0x50   |
| start_addr_sub_low_12 | 0x54   |
| start_addr_sub_low_13 | 0x58   |
| start_addr_sub_low_14 | 0x5c   |
| start_addr_sub_low_15 | 0x60   |

## Fields

```
{"reg": [{"name": "write_budget", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name         | Description                           |
|------|------|-------|--------------|---------------------------------------|
| 31:0 | wo   | 0x0   | write_budget | The lower 32bit of the start address. |

# start\_addr\_sub\_high

The higher 32bit of the start address.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name                   | Offset |
|------------------------|--------|
| start_addr_sub_high_0  | 0x64   |
| start_addr_sub_high_1  | 0x68   |
| start_addr_sub_high_2  | 0x6c   |
| start_addr_sub_high_3  | 0x70   |
| start_addr_sub_high_4  | 0x74   |
| start_addr_sub_high_5  | 0x78   |
| start_addr_sub_high_6  | 0x7c   |
| start_addr_sub_high_7  | 0x80   |
| start_addr_sub_high_8  | 0x84   |
| start_addr_sub_high_9  | 0x88   |
| start_addr_sub_high_10 | 0x8c   |
| start_addr_sub_high_11 | 0x90   |
| start_addr_sub_high_12 | 0x94   |
| start_addr_sub_high_13 | 0x98   |
| start_addr_sub_high_14 | 0x9c   |
| start_addr_sub_high_15 | 0xa0   |

## Fields

```
{"reg": [{"name": "write_budget", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name       | Description                            |
|------|------|------------------|--|
| 31:0 | wo   | 0x0 write_budget | The higher 32bit of the start address. |

# end\_addr\_sub\_low

The lower 32bit of the end address.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name                | Offset |
|---------------------|--------|
| end_addr_sub_low_0  | 0xa4   |
| end_addr_sub_low_1  | 0xa8   |
| end_addr_sub_low_2  | 0xac   |
| end_addr_sub_low_3  | 0xb0   |
| end_addr_sub_low_4  | 0xb4   |
| end_addr_sub_low_5  | 0xb8   |
| end_addr_sub_low_6  | 0xbc   |
| end_addr_sub_low_7  | 0xc0   |
| end_addr_sub_low_8  | 0xc4   |
| end_addr_sub_low_9  | 0xc8   |
| end_addr_sub_low_10 | 0xcc   |
| end_addr_sub_low_11 | 0xd0   |
| end_addr_sub_low_12 | 0xd4   |
| end_addr_sub_low_13 | 0xd8   |
| end_addr_sub_low_14 | 0xdc   |
| end_addr_sub_low_15 | 0xe0   |

## Fields

```
{"reg": [{"name": "write_budget", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name       | Description                         |
|------|------|------------------|-------------------------------------|
| 31:0 | wo   | 0x0 write_budget | The lower 32bit of the end address. |

# end\_addr\_sub\_high

The higher 32bit of the end address.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name                 | Offset |
|----------------------|--------|
| end_addr_sub_high_0  | 0xe4   |
| end_addr_sub_high_1  | 0xe8   |
| end_addr_sub_high_2  | 0xec   |
| end_addr_sub_high_3  | 0xf0   |
| end_addr_sub_high_4  | 0xf4   |
| end_addr_sub_high_5  | 0xf8   |
| end_addr_sub_high_6  | 0xfc   |
| end_addr_sub_high_7  | 0x100  |
| end_addr_sub_high_8  | 0x104  |
| end_addr_sub_high_9  | 0x108  |
| end_addr_sub_high_10 | 0x10c  |
| end_addr_sub_high_11 | 0x110  |
| end_addr_sub_high_12 | 0x114  |
| end_addr_sub_high_13 | 0x118  |
| end_addr_sub_high_14 | 0x11c  |
| end_addr_sub_high_15 | 0x120  |

## Fields

```
{"reg": [{"name": "write_budget", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name         | Description                          |
|------|------|-------|--------------|--------------------------------------|
| 31:0 | wo   | 0x0   | write_budget | The higher 32bit of the end address. |

# write\_budget

The budget for writes.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name            | Offset |
|-----------------|--------|
| write_budget_0  | 0x124  |
| write_budget_1  | 0x128  |
| write_budget_2  | 0x12c  |
| write_budget_3  | 0x130  |
| write_budget_4  | 0x134  |
| write_budget_5  | 0x138  |
| write_budget_6  | 0x13c  |
| write_budget_7  | 0x140  |
| write_budget_8  | 0x144  |
| write_budget_9  | 0x148  |
| write_budget_10 | 0x14c  |
| write_budget_11 | 0x150  |
| write_budget_12 | 0x154  |
| write_budget_13 | 0x158  |
| write_budget_14 | 0x15c  |
| write_budget_15 | 0x160  |

## Fields

```
{"reg": [{"name": "write_budget", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name         | Description            |
|------|------|-------|--------------|------------------------|
| 31:0 | wo   | 0x0   | write_budget | The budget for writes. |

# read\_budget

The budget for reads.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name           | Offset |
|----------------|--------|
| read_budget_0  | 0x164  |
| read_budget_1  | 0x168  |
| read_budget_2  | 0x16c  |
| read_budget_3  | 0x170  |
| read_budget_4  | 0x174  |
| read_budget_5  | 0x178  |
| read_budget_6  | 0x17c  |
| read_budget_7  | 0x180  |
| read_budget_8  | 0x184  |
| read_budget_9  | 0x188  |
| read_budget_10 | 0x18c  |
| read_budget_11 | 0x190  |
| read_budget_12 | 0x194  |
| read_budget_13 | 0x198  |
| read_budget_14 | 0x19c  |
| read_budget_15 | 0x1a0  |

## Fields

```
{"reg": [{"name": "read_budget", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name        | Description           |
|------|------|-------|-------------|-----------------------|
| 31:0 | wo   | 0x0   | read_budget | The budget for reads. |

## write\_period

The period for writes.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name            | Offset |
|-----------------|--------|
| write_period_0  | 0x1a4  |
| write_period_1  | 0x1a8  |
| write_period_2  | 0x1ac  |
| write_period_3  | 0x1b0  |
| write_period_4  | 0x1b4  |
| write_period_5  | 0x1b8  |
| write_period_6  | 0x1bc  |
| write_period_7  | 0x1c0  |
| write_period_8  | 0x1c4  |
| write_period_9  | 0x1c8  |
| write_period_10 | 0x1cc  |
| write_period_11 | 0x1d0  |
| write_period_12 | 0x1d4  |
| write_period_13 | 0x1d8  |
| write_period_14 | 0x1dc  |
| write_period_15 | 0x1e0  |

## Fields

```
{"reg": [{"name": "write_period", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name         | Description            |
|------|------|-------|--------------|------------------------|
| 31:0 | wo   | 0x0   | write_period | The period for writes. |

## read\_period

The period for reads.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name           | Offset |
|----------------|--------|
| read_period_0  | 0x1e4  |
| read_period_1  | 0x1e8  |
| read_period_2  | 0x1ec  |
| read_period_3  | 0x1f0  |
| read_period_4  | 0x1f4  |
| read_period_5  | 0x1f8  |
| read_period_6  | 0x1fc  |
| read_period_7  | 0x200  |
| read_period_8  | 0x204  |
| read_period_9  | 0x208  |
| read_period_10 | 0x20c  |
| read_period_11 | 0x210  |
| read_period_12 | 0x214  |

| Name           | Offset |
|----------------|--------|
| read_period_13 | 0x218  |
| read_period_14 | 0x21c  |
| read_period_15 | 0x220  |

## Fields

```
{"reg": [{"name": "read_period", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name        | Description           |
|------|------|-------|-------------|-----------------------|
| 31:0 | wo   | 0x0   | read_period | The period for reads. |

# write\_budget\_left

The budget left for writes.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name                 | Offset |
|----------------------|--------|
| write_budget_left_0  | 0x224  |
| write_budget_left_1  | 0x228  |
| write_budget_left_2  | 0x22c  |
| write_budget_left_3  | 0x230  |
| write_budget_left_4  | 0x234  |
| write_budget_left_5  | 0x238  |
| write_budget_left_6  | 0x23c  |
| write_budget_left_7  | 0x240  |
| write_budget_left_8  | 0x244  |
| write_budget_left_9  | 0x248  |
| write_budget_left_10 | 0x24c  |
| write_budget_left_11 | 0x250  |
| write_budget_left_12 | 0x254  |
| write_budget_left_13 | 0x258  |
| write_budget_left_14 | 0x25c  |
| write_budget_left_15 | 0x260  |

## Fields

```
{"reg": [{"name": "write_budget_left", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name              | Description                 |
|------|------|-------|-------------------|-----------------------------|
| 31:0 | ro   | 0x0   | write_budget_left | The budget left for writes. |

# read\_budget\_left

The budget left for reads.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name               | Offset |
|--------------------|--------|
| read_budget_left_0 | 0x264  |
| read_budget_left_1 | 0x268  |
| read_budget_left_2 | 0x26c  |
| read_budget_left_3 | 0x270  |
| read_budget_left_4 | 0x274  |
| read_budget_left_5 | 0x278  |
| read_budget_left_6 | 0x27c  |
| read_budget_left_7 | 0x280  |
| read_budget_left_8 | 0x284  |

| Name                | Offset |
|---------------------|--------|
| read_budget_left_9  | 0x288  |
| read_budget_left_10 | 0x28c  |
| read_budget_left_11 | 0x290  |
| read_budget_left_12 | 0x294  |
| read_budget_left_13 | 0x298  |
| read_budget_left_14 | 0x29c  |
| read_budget_left_15 | 0x2a0  |

## Fields

|  |  |
|--|--|
| {"reg": [{"name": "read_budget_left", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}} |  |
|--|--|

| Bits | Type | Reset | Name             | Description                |
|------|------|-------|------------------|----------------------------|
| 31:0 | ro   | 0x0   | read_budget_left | The budget left for reads. |

# write\_period\_left

The period left for writes.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name                 | Offset |
|----------------------|--------|
| write_period_left_0  | 0x2a4  |
| write_period_left_1  | 0x2a8  |
| write_period_left_2  | 0x2ac  |
| write_period_left_3  | 0x2b0  |
| write_period_left_4  | 0x2b4  |
| write_period_left_5  | 0x2b8  |
| write_period_left_6  | 0x2bc  |
| write_period_left_7  | 0x2c0  |
| write_period_left_8  | 0x2c4  |
| write_period_left_9  | 0x2c8  |
| write_period_left_10 | 0x2cc  |
| write_period_left_11 | 0x2d0  |
| write_period_left_12 | 0x2d4  |
| write_period_left_13 | 0x2d8  |
| write_period_left_14 | 0x2dc  |
| write_period_left_15 | 0x2e0  |

## Fields

|   |  |
|---|--|
| {"reg": [{"name": "write_period_left", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}} |  |
|---|--|

| Bits | Type | Reset | Name              | Description                 |
|------|------|-------|-------------------|-----------------------------|
| 31:0 | ro   | 0x0   | write_period_left | The period left for writes. |

# read\_period\_left

The period left for reads.

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name               | Offset |
|--------------------|--------|
| read_period_left_0 | 0x2e4  |
| read_period_left_1 | 0x2e8  |
| read_period_left_2 | 0x2ec  |
| read_period_left_3 | 0x2f0  |
| read_period_left_4 | 0x2f4  |

| Name                | Offset |
|---------------------|--------|
| read_period_left_5  | 0x2f8  |
| read_period_left_6  | 0x2fc  |
| read_period_left_7  | 0x300  |
| read_period_left_8  | 0x304  |
| read_period_left_9  | 0x308  |
| read_period_left_10 | 0x30c  |
| read_period_left_11 | 0x310  |
| read_period_left_12 | 0x314  |
| read_period_left_13 | 0x318  |
| read_period_left_14 | 0x31c  |
| read_period_left_15 | 0x320  |

Fields

```
{"reg": [{"name": "read_period_left", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name             | Description                |
|------|------|-------|------------------|----------------------------|
| 31:0 | ro   | 0x0   | read_period_left | The period left for reads. |

isolate

Is the interface requested to be isolated?

- Offset: 0x324
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "isolate_0", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "isolate_1", "bits": 1, "attr": ["ro"], "rotate":
```

| Bits | Type | Reset | Name      | Description                                |
|------|------|-------|-----------|--|
| 31:8 |      |       |           | Reserved                                   |
| 7    | ro   | x     | isolate_7 | Is the interface requested to be isolated? |
| 6    | ro   | x     | isolate_6 | Is the interface requested to be isolated? |
| 5    | ro   | x     | isolate_5 | Is the interface requested to be isolated? |
| 4    | ro   | x     | isolate_4 | Is the interface requested to be isolated? |
| 3    | ro   | x     | isolate_3 | Is the interface requested to be isolated? |
| 2    | ro   | x     | isolate_2 | Is the interface requested to be isolated? |
| 1    | ro   | x     | isolate_1 | Is the interface requested to be isolated? |
| 0    | ro   | x     | isolate_0 | Is the interface requested to be isolated? |

isolated

Is the interface isolated?

- Offset: 0x328
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "isolated_0", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "isolated_1", "bits": 1, "attr": ["ro"], "rotate":
```

| Bits | Type | Reset | Name       | Description                |
|------|------|-------|------------|----------------------------|
| 31:8 |      |       |            | Reserved                   |
| 7    | ro   | x     | isolated_7 | Is the interface isolated? |
| 6    | ro   | x     | isolated_6 | Is the interface isolated? |
| 5    | ro   | x     | isolated_5 | Is the interface isolated? |
| 4    | ro   | x     | isolated_4 | Is the interface isolated? |
| 3    | ro   | x     | isolated_3 | Is the interface isolated? |
| 2    | ro   | x     | isolated_2 | Is the interface isolated? |

| Bits | Type | Reset | Name       | Description                |
|------|------|-------|------------|----------------------------|
| 1    | ro   | x     | isolated_1 | Is the interface isolated? |
| 0    | ro   | x     | isolated_0 | Is the interface isolated? |

# num\_managers

Value of the num\_managers parameter.

- Offset: 0x32c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "num_managers", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name         | Description                          |
|------|------|-------|--------------|--------------------------------------|
| 31:0 | ro   | x     | num_managers | Value of the num_managers parameter. |

# addr\_width

Value of the addr\_width parameter.

- Offset: 0x330
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "addr_width", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name       | Description                        |
|------|------|-------|------------|------------------------------------|
| 31:0 | ro   | x     | addr_width | Value of the addr_width parameter. |

# data\_width

Value of the data\_width parameter.

- Offset: 0x334
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "data_width", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name       | Description                        |
|------|------|-------|------------|------------------------------------|
| 31:0 | ro   | x     | data_width | Value of the data_width parameter. |

# id\_width

Value of the id\_width parameter.

- Offset: 0x338
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "id_width", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|



| Bits | Type | Reset | Name     | Description                      |
|------|------|-------|----------|----------------------------------|
| 31:0 | ro   | x     | id_width | Value of the id_width parameter. |

# user\_width

Value of the user\_width parameter.

- Offset: 0x33c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "user_width", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name       | Description                        |
|------|------|-------|------------|------------------------------------|
| 31:0 | ro   | x     | user_width | Value of the user_width parameter. |

# num\_pending

Value of the num\_pending parameter.

- Offset: 0x340
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "num_pending", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name        | Description                         |
|------|------|-------|-------------|-------------------------------------|
| 31:0 | ro   | x     | num_pending | Value of the num_pending parameter. |

# w\_buffer\_depth

Value of the w\_buffer\_depth parameter.

- Offset: 0x344
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "w_buffer_depth", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name           | Description                            |
|------|------|-------|----------------|--|
| 31:0 | ro   | x     | w_buffer_depth | Value of the w_buffer_depth parameter. |

# num\_addr\_regions

Value of the num\_addr\_regions parameter.

- Offset: 0x348
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "num_addr_regions", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name             | Description                              |
|------|------|-------|------------------|--|
| 31:0 | ro   | x     | num_addr_regions | Value of the num_addr_regions parameter. |

# period\_width

Value of the period\_width parameter.

- Offset: 0x34c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "period_width", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name         | Description                          |
|------|------|-------|--------------|--------------------------------------|
| 31:0 | ro   | x     | period_width | Value of the period_width parameter. |

# budget\_width

Value of the budget\_width parameter.

- Offset: 0x350
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "budget_width", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name         | Description                          |
|------|------|-------|--------------|--------------------------------------|
| 31:0 | ro   | x     | budget_width | Value of the budget_width parameter. |

# max\_num\_managers

Value of the max\_num\_managers parameter.

- Offset: 0x354
- Reset default: 0x8
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "max_num_managers", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name             | Description                              |
|------|------|-------|------------------|--|
| 31:0 | ro   | 0x8   | max_num_managers | Value of the max_num_managers parameter. |

# can\_bus / doc / registers.md

## Summary

| Name                                     | Offset | Length | Description   |
|--|--------|--------|---|
| can_bus.ahb_ifc_hsel_valid               | 0x0    | 4      | Auto-extracted signal hsel_valid from ahb_ifc.vhd               |
| can_bus.ahb_ifc_write_acc_d              | 0x4    | 4      | Auto-extracted signal write_acc_d from ahb_ifc.vhd              |
| can_bus.ahb_ifc_write_acc_q              | 0x8    | 4      | Auto-extracted signal write_acc_q from ahb_ifc.vhd              |
| can_bus.ahb_ifc_haddr_q                  | 0xc    | 4      | Auto-extracted signal haddr_q from ahb_ifc.vhd                  |
| can_bus.ahb_ifc_h_ready_raw              | 0x10   | 4      | Auto-extracted signal h_ready_raw from ahb_ifc.vhd              |
| can_bus.ahb_ifc_sbe_d                    | 0x14   | 4      | Auto-extracted signal sbe_d from ahb_ifc.vhd                    |
| can_bus.ahb_ifc_sbe_q                    | 0x18   | 4      | Auto-extracted signal sbe_q from ahb_ifc.vhd                    |
| can_bus.ahb_ifc_swr_i                    | 0x1c   | 4      | Auto-extracted signal swr_i from ahb_ifc.vhd                    |
| can_bus.ahb_ifc_srd_i                    | 0x20   | 4      | Auto-extracted signal srd_i from ahb_ifc.vhd                    |
| can_bus.bit_destuffing_discard_stuff_bit | 0x24   | 4      | Auto-extracted signal discard_stuff_bit from bit_destuffing.vhd |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus. <u>bit_destuffing_non_fix_to_fix_chng</u>          | 0x28   | 4      | Auto-extracted signal non_fix_to_fix_chng from bit_destuffing.vhd          |
| can_bus. <u>bit_destuffing_stuff_lvl_reached</u>            | 0x2c   | 4      | Auto-extracted signal stuff_lvl_reached from bit_destuffing.vhd            |
| can_bus. <u>bit_destuffing_stuff_rule_violate</u>           | 0x30   | 4      | Auto-extracted signal stuff_rule_violate from bit_destuffing.vhd           |
| can_bus. <u>bit_destuffing_enable_prev</u>                  | 0x34   | 4      | Auto-extracted signal enable_prev from bit_destuffing.vhd                  |
| can_bus. <u>bit_destuffing_fixed_prev_q</u>                 | 0x38   | 4      | Auto-extracted signal fixed_prev_q from bit_destuffing.vhd                 |
| can_bus. <u>bit_destuffing_fixed_prev_d</u>                 | 0x3c   | 4      | Auto-extracted signal fixed_prev_d from bit_destuffing.vhd                 |
| can_bus. <u>bit_destuffing_same_bits_erase</u>              | 0x40   | 4      | Auto-extracted signal same_bits_erase from bit_destuffing.vhd              |
| can_bus. <u>bit_destuffing_destuffed_q</u>                  | 0x44   | 4      | Auto-extracted signal destuffed_q from bit_destuffing.vhd                  |
| can_bus. <u>bit_destuffing_destuffed_d</u>                  | 0x48   | 4      | Auto-extracted signal destuffed_d from bit_destuffing.vhd                  |
| can_bus. <u>bit_destuffing_stuff_err_q</u>                  | 0x4c   | 4      | Auto-extracted signal stuff_err_q from bit_destuffing.vhd                  |
| can_bus. <u>bit_destuffing_stuff_err_d</u>                  | 0x50   | 4      | Auto-extracted signal stuff_err_d from bit_destuffing.vhd                  |
| can_bus. <u>bit_destuffing_prev_val_q</u>                   | 0x54   | 4      | Auto-extracted signal prev_val_q from bit_destuffing.vhd                   |
| can_bus. <u>bit_destuffing_prev_val_d</u>                   | 0x58   | 4      | Auto-extracted signal prev_val_d from bit_destuffing.vhd                   |
| can_bus. <u>bit_err_detector_bit_err_d</u>                  | 0x5c   | 4      | Auto-extracted signal bit_err_d from bit_err_detector.vhd                  |
| can_bus. <u>bit_err_detector_bit_err_q</u>                  | 0x60   | 4      | Auto-extracted signal bit_err_q from bit_err_detector.vhd                  |
| can_bus. <u>bit_err_detector_bit_err_ssp_capt_d</u>         | 0x64   | 4      | Auto-extracted signal bit_err_ssp_capt_d from bit_err_detector.vhd         |
| can_bus. <u>bit_err_detector_bit_err_ssp_capt_q</u>         | 0x68   | 4      | Auto-extracted signal bit_err_ssp_capt_q from bit_err_detector.vhd         |
| can_bus. <u>bit_err_detector_bit_err_ssp_valid</u>          | 0x6c   | 4      | Auto-extracted signal bit_err_ssp_valid from bit_err_detector.vhd          |
| can_bus. <u>bit_err_detector_bit_err_ssp_condition</u>      | 0x70   | 4      | Auto-extracted signal bit_err_ssp_condition from bit_err_detector.vhd      |
| can_bus. <u>bit_err_detector_bit_err_norm_valid</u>         | 0x74   | 4      | Auto-extracted signal bit_err_norm_valid from bit_err_detector.vhd         |
| can_bus. <u>bit_filter_masked_input</u>                     | 0x78   | 4      | Auto-extracted signal masked_input from bit_filter.vhd                     |
| can_bus. <u>bit_filter_masked_value</u>                     | 0x7c   | 4      | Auto-extracted signal masked_value from bit_filter.vhd                     |
| can_bus. <u>bit_segment_meter_sel_tseg1</u>                 | 0x80   | 4      | Auto-extracted signal sel_tseg1 from bit_segment_meter.vhd                 |
| can_bus. <u>bit_segment_meter_exp_seg_length_ce</u>         | 0x84   | 4      | Auto-extracted signal exp_seg_length_ce from bit_segment_meter.vhd         |
| can_bus. <u>bit_segment_meter_phase_err_mt_sjw</u>          | 0x88   | 4      | Auto-extracted signal phase_err_mt_sjw from bit_segment_meter.vhd          |
| can_bus. <u>bit_segment_meter_phase_err_eq_sjw</u>          | 0x8c   | 4      | Auto-extracted signal phase_err_eq_sjw from bit_segment_meter.vhd          |
| can_bus. <u>bit_segment_meter_exit_ph2_immediate</u>        | 0x90   | 4      | Auto-extracted signal exit_ph2_immediate from bit_segment_meter.vhd        |
| can_bus. <u>bit_segment_meter_exit_segm_regular</u>         | 0x94   | 4      | Auto-extracted signal exit_segm_regular from bit_segment_meter.vhd         |
| can_bus. <u>bit_segment_meter_exit_segm_regular_tseg1</u>   | 0x98   | 4      | Auto-extracted signal exit_segm_regular_tseg1 from bit_segment_meter.vhd   |
| can_bus. <u>bit_segment_meter_exit_segm_regular_tseg2</u>   | 0x9c   | 4      | Auto-extracted signal exit_segm_regular_tseg2 from bit_segment_meter.vhd   |
| can_bus. <u>bit_segment_meter_sjw_mt_zero</u>               | 0xa0   | 4      | Auto-extracted signal sjw_mt_zero from bit_segment_meter.vhd               |
| can_bus. <u>bit_segment_meter_use_basic_segm_length</u>     | 0xa4   | 4      | Auto-extracted signal use_basic_segm_length from bit_segment_meter.vhd     |
| can_bus. <u>bit_segment_meter_phase_err_sjw_by_one</u>      | 0xa8   | 4      | Auto-extracted signal phase_err_sjw_by_one from bit_segment_meter.vhd      |
| can_bus. <u>bit_segment_meter_shorten_tseg1_after_tseg2</u> | 0xac   | 4      | Auto-extracted signal shorten_tseg1_after_tseg2 from bit_segment_meter.vhd |
| can_bus. <u>bit_stuffing_data_out_i</u>                     | 0xb0   | 4      | Auto-extracted signal data_out_i from bit_stuffing.vhd                     |
| can_bus. <u>bit_stuffing_data_halt_q</u>                    | 0xb4   | 4      | Auto-extracted signal data_halt_q from bit_stuffing.vhd                    |
| can_bus. <u>bit_stuffing_data_halt_d</u>                    | 0xb8   | 4      | Auto-extracted signal data_halt_d from bit_stuffing.vhd                    |
| can_bus. <u>bit_stuffing_fixed_reg_q</u>                    | 0xbc   | 4      | Auto-extracted signal fixed_reg_q from bit_stuffing.vhd                    |
| can_bus. <u>bit_stuffing_fixed_reg_d</u>                    | 0xc0   | 4      | Auto-extracted signal fixed_reg_d from bit_stuffing.vhd                    |
| can_bus. <u>bit_stuffing_enable_prev</u>                    | 0xc4   | 4      | Auto-extracted signal enable_prev from bit_stuffing.vhd                    |
| can_bus. <u>bit_stuffing_non_fix_to_fix_chng</u>            | 0xc8   | 4      | Auto-extracted signal non_fix_to_fix_chng from bit_stuffing.vhd            |
| can_bus. <u>bit_stuffing_stuff_lvl_reached</u>              | 0xcc   | 4      | Auto-extracted signal stuff_lvl_reached from bit_stuffing.vhd              |
| can_bus. <u>bit_stuffing_same_bits_rst_trig</u>             | 0xd0   | 4      | Auto-extracted signal same_bits_rst_trig from bit_stuffing.vhd             |
| can_bus. <u>bit_stuffing_same_bits_rst</u>                  | 0xd4   | 4      | Auto-extracted signal same_bits_rst from bit_stuffing.vhd                  |

| Name   | Offset | Length | Description   |
|--|--------|--------|---|
| can_bus. <u>bit_stuffing_insert_stuff_bit</u>      | 0xd8   | 4      | Auto-extracted signal insert_stuff_bit from bit_stuffing.vhd      |
| can_bus. <u>bit_stuffing_data_out_d_ena</u>        | 0xdc   | 4      | Auto-extracted signal data_out_d_ena from bit_stuffing.vhd        |
| can_bus. <u>bit_stuffing_data_out_d</u>            | 0xe0   | 4      | Auto-extracted signal data_out_d from bit_stuffing.vhd            |
| can_bus. <u>bit_stuffing_data_out_ce</u>           | 0xe4   | 4      | Auto-extracted signal data_out_ce from bit_stuffing.vhd           |
| can_bus. <u>bit_time_cfg_capture_drv_tq_nbt</u>    | 0xe8   | 4      | Auto-extracted signal drv_tq_nbt from bit_time_cfg_capture.vhd    |
| can_bus. <u>bit_time_cfg_capture_drv_prs_nbt</u>   | 0xec   | 4      | Auto-extracted signal drv_prs_nbt from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_drv_ph1_nbt</u>   | 0xf0   | 4      | Auto-extracted signal drv_ph1_nbt from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_drv_ph2_nbt</u>   | 0xf4   | 4      | Auto-extracted signal drv_ph2_nbt from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_drv_sjw_nbt</u>   | 0xf8   | 4      | Auto-extracted signal drv_sjw_nbt from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_drv_tq_dbt</u>    | 0xfc   | 4      | Auto-extracted signal drv_tq_dbt from bit_time_cfg_capture.vhd    |
| can_bus. <u>bit_time_cfg_capture_drv_prs_dbt</u>   | 0x100  | 4      | Auto-extracted signal drv_prs_dbt from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_drv_ph1_dbt</u>   | 0x104  | 4      | Auto-extracted signal drv_ph1_dbt from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_drv_ph2_dbt</u>   | 0x108  | 4      | Auto-extracted signal drv_ph2_dbt from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_drv_sjw_dbt</u>   | 0x10c  | 4      | Auto-extracted signal drv_sjw_dbt from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_tseg1_nbt_d</u>   | 0x110  | 4      | Auto-extracted signal tseg1_nbt_d from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_tseg1_dbt_d</u>   | 0x114  | 4      | Auto-extracted signal tseg1_dbt_d from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_drv_ena</u>       | 0x118  | 4      | Auto-extracted signal drv_ena from bit_time_cfg_capture.vhd       |
| can_bus. <u>bit_time_cfg_capture_drv_ena_reg</u>   | 0x11c  | 4      | Auto-extracted signal drv_ena_reg from bit_time_cfg_capture.vhd   |
| can_bus. <u>bit_time_cfg_capture_drv_ena_reg_2</u> | 0x120  | 4      | Auto-extracted signal drv_ena_reg_2 from bit_time_cfg_capture.vhd |
| can_bus. <u>bit_time_cfg_capture_capture</u>       | 0x124  | 4      | Auto-extracted signal capture from bit_time_cfg_capture.vhd       |
| can_bus. <u>bit_time_counters_tq_counter_d</u>     | 0x128  | 4      | Auto-extracted signal tq_counter_d from bit_time_counters.vhd     |
| can_bus. <u>bit_time_counters_tq_counter_q</u>     | 0x12c  | 4      | Auto-extracted signal tq_counter_q from bit_time_counters.vhd     |
| can_bus. <u>bit_time_counters_tq_counter_ce</u>    | 0x130  | 4      | Auto-extracted signal tq_counter_ce from bit_time_counters.vhd    |
| can_bus. <u>bit_time_counters_tq_counter_allow</u> | 0x134  | 4      | Auto-extracted signal tq_counter_allow from bit_time_counters.vhd |
| can_bus. <u>bit_time_counters_tq_edge_i</u>        | 0x138  | 4      | Auto-extracted signal tq_edge_i from bit_time_counters.vhd        |
| can_bus. <u>bit_time_counters_segm_counter_d</u>   | 0x13c  | 4      | Auto-extracted signal segm_counter_d from bit_time_counters.vhd   |
| can_bus. <u>bit_time_counters_segm_counter_q</u>   | 0x140  | 4      | Auto-extracted signal segm_counter_q from bit_time_counters.vhd   |
| can_bus. <u>bit_time_counters_segm_counter_ce</u>  | 0x144  | 4      | Auto-extracted signal segm_counter_ce from bit_time_counters.vhd  |
| can_bus. <u>bit_time_fsm_bt_fsm_ce</u>             | 0x148  | 4      | Auto-extracted signal bt_fsm_ce from bit_time_fsm.vhd             |
| can_bus. <u>bus_sampling_drv_ena</u>               | 0x14c  | 4      | Auto-extracted signal drv_ena from bus_sampling.vhd               |
| can_bus. <u>bus_sampling_drv_ssp_offset</u>        | 0x150  | 4      | Auto-extracted signal drv_ssp_offset from bus_sampling.vhd        |
| can_bus. <u>bus_sampling_drv_ssp_delay_select</u>  | 0x154  | 4      | Auto-extracted signal drv_ssp_delay_select from bus_sampling.vhd  |
| can_bus. <u>bus_sampling_data_rx_synced</u>        | 0x158  | 4      | Auto-extracted signal data_rx_synced from bus_sampling.vhd        |
| can_bus. <u>bus_sampling_prev_Sample</u>           | 0x15c  | 4      | Auto-extracted signal prev_Sample from bus_sampling.vhd           |
| can_bus. <u>bus_sampling_sample_sec_i</u>          | 0x160  | 4      | Auto-extracted signal sample_sec_i from bus_sampling.vhd          |
| can_bus. <u>bus_sampling_data_tx_delayed</u>       | 0x164  | 4      | Auto-extracted signal data_tx_delayed from bus_sampling.vhd       |
| can_bus. <u>bus_sampling_edge_rx_valid</u>         | 0x168  | 4      | Auto-extracted signal edge_rx_valid from bus_sampling.vhd         |
| can_bus. <u>bus_sampling_edge_tx_valid</u>         | 0x16c  | 4      | Auto-extracted signal edge_tx_valid from bus_sampling.vhd         |

| Name  | Offset | Length | Description   |
|---|--------|--------|---|
| can_bus. <a href="#">bus_sampling_ssp_delay</a>                   | 0x170  | 4      | Auto-extracted signal ssp_delay from bus_sampling.vhd                   |
| can_bus. <a href="#">bus_sampling_tx_trigger_q</a>                | 0x174  | 4      | Auto-extracted signal tx_trigger_q from bus_sampling.vhd                |
| can_bus. <a href="#">bus_sampling_tx_trigger_ssp</a>              | 0x178  | 4      | Auto-extracted signal tx_trigger_ssp from bus_sampling.vhd              |
| can_bus. <a href="#">bus_sampling_shift_regs_res_d</a>            | 0x17c  | 4      | Auto-extracted signal shift_regs_res_d from bus_sampling.vhd            |
| can_bus. <a href="#">bus_sampling_shift_regs_res_q</a>            | 0x180  | 4      | Auto-extracted signal shift_regs_res_q from bus_sampling.vhd            |
| can_bus. <a href="#">bus_sampling_shift_regs_res_q_scan</a>       | 0x184  | 4      | Auto-extracted signal shift_regs_res_q_scan from bus_sampling.vhd       |
| can_bus. <a href="#">bus_sampling_ssp_enable</a>                  | 0x188  | 4      | Auto-extracted signal ssp_enable from bus_sampling.vhd                  |
| can_bus. <a href="#">bus_traffic_counters_tx_ctr_i</a>            | 0x18c  | 4      | Auto-extracted signal tx_ctr_i from bus_traffic_counters.vhd            |
| can_bus. <a href="#">bus_traffic_counters_rx_ctr_i</a>            | 0x190  | 4      | Auto-extracted signal rx_ctr_i from bus_traffic_counters.vhd            |
| can_bus. <a href="#">bus_traffic_counters_tx_ctr_rst_n_d</a>      | 0x194  | 4      | Auto-extracted signal tx_ctr_rst_n_d from bus_traffic_counters.vhd      |
| can_bus. <a href="#">bus_traffic_counters_tx_ctr_rst_n_q</a>      | 0x198  | 4      | Auto-extracted signal tx_ctr_rst_n_q from bus_traffic_counters.vhd      |
| can_bus. <a href="#">bus_traffic_counters_tx_ctr_rst_n_q_scan</a> | 0x19c  | 4      | Auto-extracted signal tx_ctr_rst_n_q_scan from bus_traffic_counters.vhd |
| can_bus. <a href="#">bus_traffic_counters_rx_ctr_rst_n_d</a>      | 0x1a0  | 4      | Auto-extracted signal rx_ctr_rst_n_d from bus_traffic_counters.vhd      |
| can_bus. <a href="#">bus_traffic_counters_rx_ctr_rst_n_q</a>      | 0x1a4  | 4      | Auto-extracted signal rx_ctr_rst_n_q from bus_traffic_counters.vhd      |
| can_bus. <a href="#">bus_traffic_counters_rx_ctr_rst_n_q_scan</a> | 0x1a8  | 4      | Auto-extracted signal rx_ctr_rst_n_q_scan from bus_traffic_counters.vhd |
| can_bus. <a href="#">can_apb_tb_s_apb_paddr</a>                   | 0x1ac  | 4      | Auto-extracted signal s_apb_paddr from can_apb_tb.vhd                   |
| can_bus. <a href="#">can_apb_tb_s_apb_penable</a>                 | 0x1b0  | 4      | Auto-extracted signal s_apb_penable from can_apb_tb.vhd                 |
| can_bus. <a href="#">can_apb_tb_s_apb_pprot</a>                   | 0x1b4  | 4      | Auto-extracted signal s_apb_pprot from can_apb_tb.vhd                   |
| can_bus. <a href="#">can_apb_tb_s_apb_prdata</a>                  | 0x1b8  | 4      | Auto-extracted signal s_apb_prdata from can_apb_tb.vhd                  |
| can_bus. <a href="#">can_apb_tb_s_apb_pready</a>                  | 0x1bc  | 4      | Auto-extracted signal s_apb_pready from can_apb_tb.vhd                  |
| can_bus. <a href="#">can_apb_tb_s_apb_psel</a>                    | 0x1c0  | 4      | Auto-extracted signal s_apb_psel from can_apb_tb.vhd                    |
| can_bus. <a href="#">can_apb_tb_s_apb_pslverr</a>                 | 0x1c4  | 4      | Auto-extracted signal s_apb_pslverr from can_apb_tb.vhd                 |
| can_bus. <a href="#">can_apb_tb_s_apb_pstrb</a>                   | 0x1c8  | 4      | Auto-extracted signal s_apb_pstrb from can_apb_tb.vhd                   |
| can_bus. <a href="#">can_apb_tb_s_apb_pwdata</a>                  | 0x1cc  | 4      | Auto-extracted signal s_apb_pwdata from can_apb_tb.vhd                  |
| can_bus. <a href="#">can_apb_tb_s_apb_pwrite</a>                  | 0x1d0  | 4      | Auto-extracted signal s_apb_pwrite from can_apb_tb.vhd                  |
| can_bus. <a href="#">can_core_drv_clr_rx_ctr</a>                  | 0x1d4  | 4      | Auto-extracted signal drv_clr_rx_ctr from can_core.vhd                  |
| can_bus. <a href="#">can_core_drv_clr_tx_ctr</a>                  | 0x1d8  | 4      | Auto-extracted signal drv_clr_tx_ctr from can_core.vhd                  |
| can_bus. <a href="#">can_core_drv_bus_mon_ena</a>                 | 0x1dc  | 4      | Auto-extracted signal drv_bus_mon_ena from can_core.vhd                 |
| can_bus. <a href="#">can_core_drv_ena</a>                         | 0x1e0  | 4      | Auto-extracted signal drv_ena from can_core.vhd                         |
| can_bus. <a href="#">can_core_rec_ident_i</a>                     | 0x1e4  | 4      | Auto-extracted signal rec_ident_i from can_core.vhd                     |
| can_bus. <a href="#">can_core_rec_dlc_i</a>                       | 0x1e8  | 4      | Auto-extracted signal rec_dlc_i from can_core.vhd                       |
| can_bus. <a href="#">can_core_rec_ident_type_i</a>                | 0x1ec  | 4      | Auto-extracted signal rec_ident_type_i from can_core.vhd                |
| can_bus. <a href="#">can_core_rec_frame_type_i</a>                | 0x1f0  | 4      | Auto-extracted signal rec_frame_type_i from can_core.vhd                |
| can_bus. <a href="#">can_core_rec_is_rtr_i</a>                    | 0x1f4  | 4      | Auto-extracted signal rec_is_rtr_i from can_core.vhd                    |
| can_bus. <a href="#">can_core_rec_brs_i</a>                       | 0x1f8  | 4      | Auto-extracted signal rec_brs_i from can_core.vhd                       |
| can_bus. <a href="#">can_core_rec_esi_i</a>                       | 0x1fc  | 4      | Auto-extracted signal rec_esi_i from can_core.vhd                       |
| can_bus. <a href="#">can_core_alc</a>                             | 0x200  | 4      | Auto-extracted signal alc from can_core.vhd                             |
| can_bus. <a href="#">can_core_erc_capture</a>                     | 0x204  | 4      | Auto-extracted signal erc_capture from can_core.vhd                     |
| can_bus. <a href="#">can_core_is_transmitter</a>                  | 0x208  | 4      | Auto-extracted signal is_transmitter from can_core.vhd                  |
| can_bus. <a href="#">can_core_is_receiver</a>                     | 0x20c  | 4      | Auto-extracted signal is_receiver from can_core.vhd                     |
| can_bus. <a href="#">can_core_is_idle</a>                         | 0x210  | 4      | Auto-extracted signal is_idle from can_core.vhd                         |
| can_bus. <a href="#">can_core_arbitration_lost_i</a>              | 0x214  | 4      | Auto-extracted signal arbitration_lost_i from can_core.vhd              |
| can_bus. <a href="#">can_core_set_transmitter</a>                 | 0x218  | 4      | Auto-extracted signal set_transmitter from can_core.vhd                 |
| can_bus. <a href="#">can_core_set_receiver</a>                    | 0x21c  | 4      | Auto-extracted signal set_receiver from can_core.vhd                    |
| can_bus. <a href="#">can_core_set_idle</a>                        | 0x220  | 4      | Auto-extracted signal set_idle from can_core.vhd                        |
| can_bus. <a href="#">can_core_is_err_active</a>                   | 0x224  | 4      | Auto-extracted signal is_err_active from can_core.vhd                   |
| can_bus. <a href="#">can_core_is_err_passive</a>                  | 0x228  | 4      | Auto-extracted signal is_err_passive from can_core.vhd                  |
| can_bus. <a href="#">can_core_is_bus_off_i</a>                    | 0x22c  | 4      | Auto-extracted signal is_bus_off_i from can_core.vhd                    |
| can_bus. <a href="#">can_core_err_detected_i</a>                  | 0x230  | 4      | Auto-extracted signal err_detected_i from can_core.vhd                  |
| can_bus. <a href="#">can_core_primary_err</a>                     | 0x234  | 4      | Auto-extracted signal primary_err from can_core.vhd                     |
| can_bus. <a href="#">can_core_act_err_ovr_flag</a>                | 0x238  | 4      | Auto-extracted signal act_err_ovr_flag from can_core.vhd                |
| can_bus. <a href="#">can_core_err_delim_late</a>                  | 0x23c  | 4      | Auto-extracted signal err_delim_late from can_core.vhd                  |

| Name                                 | Offset | Length | Description   |
|--------------------------------------|--------|--------|---|
| can_bus.can_core_set_err_active      | 0x240  | 4      | Auto-extracted signal set_err_active from can_core.vhd      |
| can_bus.can_core_err_ctrs_unchanged  | 0x244  | 4      | Auto-extracted signal err_ctrs_unchanged from can_core.vhd  |
| can_bus.can_core_stuff_enable        | 0x248  | 4      | Auto-extracted signal stuff_enable from can_core.vhd        |
| can_bus.can_core_destuff_enable      | 0x24c  | 4      | Auto-extracted signal destuff_enable from can_core.vhd      |
| can_bus.can_core_fixed_stuff         | 0x250  | 4      | Auto-extracted signal fixed_stuff from can_core.vhd         |
| can_bus.can_core_tx_frame_no_sof     | 0x254  | 4      | Auto-extracted signal tx_frame_no_sof from can_core.vhd     |
| can_bus.can_core_stuff_length        | 0x258  | 4      | Auto-extracted signal stuff_length from can_core.vhd        |
| can_bus.can_core_dst_ctr             | 0x25c  | 4      | Auto-extracted signal dst_ctr from can_core.vhd             |
| can_bus.can_core_bst_ctr             | 0x260  | 4      | Auto-extracted signal bst_ctr from can_core.vhd             |
| can_bus.can_core_stuff_err           | 0x264  | 4      | Auto-extracted signal stuff_err from can_core.vhd           |
| can_bus.can_core_crc_enable          | 0x268  | 4      | Auto-extracted signal crc_enable from can_core.vhd          |
| can_bus.can_core_crc_spec_enable     | 0x26c  | 4      | Auto-extracted signal crc_spec_enable from can_core.vhd     |
| can_bus.can_core_crc_calc_from_rx    | 0x270  | 4      | Auto-extracted signal crc_calc_from_rx from can_core.vhd    |
| can_bus.can_core_crc_15              | 0x274  | 4      | Auto-extracted signal crc_15 from can_core.vhd              |
| can_bus.can_core_crc_17              | 0x278  | 4      | Auto-extracted signal crc_17 from can_core.vhd              |
| can_bus.can_core_crc_21              | 0x27c  | 4      | Auto-extracted signal crc_21 from can_core.vhd              |
| can_bus.can_core_sp_control_i        | 0x280  | 4      | Auto-extracted signal sp_control_i from can_core.vhd        |
| can_bus.can_core_sp_control_q        | 0x284  | 4      | Auto-extracted signal sp_control_q from can_core.vhd        |
| can_bus.can_core_sync_control_i      | 0x288  | 4      | Auto-extracted signal sync_control_i from can_core.vhd      |
| can_bus.can_core_ssp_reset_i         | 0x28c  | 4      | Auto-extracted signal ssp_reset_i from can_core.vhd         |
| can_bus.can_core_tran_delay_meas_i   | 0x290  | 4      | Auto-extracted signal tran_delay_meas_i from can_core.vhd   |
| can_bus.can_core_tran_valid_i        | 0x294  | 4      | Auto-extracted signal tran_valid_i from can_core.vhd        |
| can_bus.can_core_rec_valid_i         | 0x298  | 4      | Auto-extracted signal rec_valid_i from can_core.vhd         |
| can_bus.can_core_br_shifted_i        | 0x29c  | 4      | Auto-extracted signal br_shifted_i from can_core.vhd        |
| can_bus.can_core_fcs_changed_i       | 0x2a0  | 4      | Auto-extracted signal fcs_changed_i from can_core.vhd       |
| can_bus.can_core_err_warning_limit_i | 0x2a4  | 4      | Auto-extracted signal err_warning_limit_i from can_core.vhd |
| can_bus.can_core_tx_err_ctr          | 0x2a8  | 4      | Auto-extracted signal tx_err_ctr from can_core.vhd          |
| can_bus.can_core_rx_err_ctr          | 0x2ac  | 4      | Auto-extracted signal rx_err_ctr from can_core.vhd          |
| can_bus.can_core_norm_err_ctr        | 0x2b0  | 4      | Auto-extracted signal norm_err_ctr from can_core.vhd        |
| can_bus.can_core_data_err_ctr        | 0x2b4  | 4      | Auto-extracted signal data_err_ctr from can_core.vhd        |
| can_bus.can_core_pc_tx_trigger       | 0x2b8  | 4      | Auto-extracted signal pc_tx_trigger from can_core.vhd       |
| can_bus.can_core_pc_rx_trigger       | 0x2bc  | 4      | Auto-extracted signal pc_rx_trigger from can_core.vhd       |
| can_bus.can_core_pc_tx_data_nbs      | 0x2c0  | 4      | Auto-extracted signal pc_tx_data_nbs from can_core.vhd      |
| can_bus.can_core_pc_rx_data_nbs      | 0x2c4  | 4      | Auto-extracted signal pc_rx_data_nbs from can_core.vhd      |
| can_bus.can_core_crc_data_tx_wbs     | 0x2c8  | 4      | Auto-extracted signal crc_data_tx_wbs from can_core.vhd     |
| can_bus.can_core_crc_data_tx_nbs     | 0x2cc  | 4      | Auto-extracted signal crc_data_tx_nbs from can_core.vhd     |
| can_bus.can_core_crc_data_rx_wbs     | 0x2d0  | 4      | Auto-extracted signal crc_data_rx_wbs from can_core.vhd     |
| can_bus.can_core_crc_data_rx_nbs     | 0x2d4  | 4      | Auto-extracted signal crc_data_rx_nbs from can_core.vhd     |
| can_bus.can_core_crc_trig_tx_wbs     | 0x2d8  | 4      | Auto-extracted signal crc_trig_tx_wbs from can_core.vhd     |
| can_bus.can_core_crc_trig_tx_nbs     | 0x2dc  | 4      | Auto-extracted signal crc_trig_tx_nbs from can_core.vhd     |
| can_bus.can_core_crc_trig_rx_wbs     | 0x2e0  | 4      | Auto-extracted signal crc_trig_rx_wbs from can_core.vhd     |
| can_bus.can_core_crc_trig_rx_nbs     | 0x2e4  | 4      | Auto-extracted signal crc_trig_rx_nbs from can_core.vhd     |
| can_bus.can_core_bst_data_in         | 0x2e8  | 4      | Auto-extracted signal bst_data_in from can_core.vhd         |
| can_bus.can_core_bst_data_out        | 0x2ec  | 4      | Auto-extracted signal bst_data_out from can_core.vhd        |
| can_bus.can_core_bst_trigger         | 0x2f0  | 4      | Auto-extracted signal bst_trigger from can_core.vhd         |
| can_bus.can_core_data_halt           | 0x2f4  | 4      | Auto-extracted signal data_halt from can_core.vhd           |
| can_bus.can_core_bds_data_in         | 0x2f8  | 4      | Auto-extracted signal bds_data_in from can_core.vhd         |
| can_bus.can_core_bds_data_out        | 0x2fc  | 4      | Auto-extracted signal bds_data_out from can_core.vhd        |
| can_bus.can_core_bds_trigger         | 0x300  | 4      | Auto-extracted signal bds_trigger from can_core.vhd         |
| can_bus.can_core_destuffed           | 0x304  | 4      | Auto-extracted signal destuffed from can_core.vhd           |
| can_bus.can_core_tx_ctr              | 0x308  | 4      | Auto-extracted signal tx_ctr from can_core.vhd              |
| can_bus.can_core_rx_ctr              | 0x30c  | 4      | Auto-extracted signal rx_ctr from can_core.vhd              |
| can_bus.can_core_tx_data_wbs_i       | 0x310  | 4      | Auto-extracted signal tx_data_wbs_i from can_core.vhd       |
| can_bus.can_core_lpb_dominant        | 0x314  | 4      | Auto-extracted signal lpb_dominant from can_core.vhd        |
| can_bus.can_core_form_err            | 0x318  | 4      | Auto-extracted signal form_err from can_core.vhd            |
| can_bus.can_core_ack_err             | 0x31c  | 4      | Auto-extracted signal ack_err from can_core.vhd             |
| can_bus.can_core_crc_err             | 0x320  | 4      | Auto-extracted signal crc_err from can_core.vhd             |
| can_bus.can_core_is_arbitration      | 0x324  | 4      | Auto-extracted signal is_arbitration from can_core.vhd      |
| can_bus.can_core_is_control          | 0x328  | 4      | Auto-extracted signal is_control from can_core.vhd          |
| can_bus.can_core_is_data             | 0x32c  | 4      | Auto-extracted signal is_data from can_core.vhd             |
| can_bus.can_core_is_stuff_count      | 0x330  | 4      | Auto-extracted signal is_stuff_count from can_core.vhd      |
| can_bus.can_core_is_crc              | 0x334  | 4      | Auto-extracted signal is_crc from can_core.vhd              |

| Name                                   | Offset | Length | Description   |
|--|--------|--------|---|
| can_bus.can_core_is_crc_delim          | 0x338  | 4      | Auto-extracted signal is_crc_delim from can_core.vhd          |
| can_bus.can_core_is_ack_field          | 0x33c  | 4      | Auto-extracted signal is_ack_field from can_core.vhd          |
| can_bus.can_core_is_ack_delim          | 0x340  | 4      | Auto-extracted signal is_ack_delim from can_core.vhd          |
| can_bus.can_core_is_eof                | 0x344  | 4      | Auto-extracted signal is_eof from can_core.vhd                |
| can_bus.can_core_is_err_frm            | 0x348  | 4      | Auto-extracted signal is_err_frm from can_core.vhd            |
| can_bus.can_core_is_intermission       | 0x34c  | 4      | Auto-extracted signal is_intermission from can_core.vhd       |
| can_bus.can_core_is_suspend            | 0x350  | 4      | Auto-extracted signal is_suspend from can_core.vhd            |
| can_bus.can_core_is_overload_i         | 0x354  | 4      | Auto-extracted signal is_overload_i from can_core.vhd         |
| can_bus.can_core_is_sof                | 0x358  | 4      | Auto-extracted signal is_sof from can_core.vhd                |
| can_bus.can_core_sof_pulse_i           | 0x35c  | 4      | Auto-extracted signal sof_pulse_i from can_core.vhd           |
| can_bus.can_core_load_init_vect        | 0x360  | 4      | Auto-extracted signal load_init_vect from can_core.vhd        |
| can_bus.can_core_retr_ctr_i            | 0x364  | 4      | Auto-extracted signal retr_ctr_i from can_core.vhd            |
| can_bus.can_core_decrement_rec         | 0x368  | 4      | Auto-extracted signal decrement_rec from can_core.vhd         |
| can_bus.can_core_bit_err_after_ack_err | 0x36c  | 4      | Auto-extracted signal bit_err_after_ack_err from can_core.vhd |
| can_bus.can_core_is_pexs               | 0x370  | 4      | Auto-extracted signal is_pexs from can_core.vhd               |
| can_bus.can_crc_drv_fd_type            | 0x374  | 4      | Auto-extracted signal drv_fd_type from can_crc.vhd            |
| can_bus.can_crc_init_vect_15           | 0x378  | 4      | Auto-extracted signal init_vect_15 from can_crc.vhd           |
| can_bus.can_crc_init_vect_17           | 0x37c  | 4      | Auto-extracted signal init_vect_17 from can_crc.vhd           |
| can_bus.can_crc_init_vect_21           | 0x380  | 4      | Auto-extracted signal init_vect_21 from can_crc.vhd           |
| can_bus.can_crc_crc_17_21_data_in      | 0x384  | 4      | Auto-extracted signal crc_17_21_data_in from can_crc.vhd      |
| can_bus.can_crc_crc_17_21_trigger      | 0x388  | 4      | Auto-extracted signal crc_17_21_trigger from can_crc.vhd      |
| can_bus.can_crc_crc_15_data_in         | 0x38c  | 4      | Auto-extracted signal crc_15_data_in from can_crc.vhd         |
| can_bus.can_crc_crc_15_trigger         | 0x390  | 4      | Auto-extracted signal crc_15_trigger from can_crc.vhd         |
| can_bus.can_crc_crc_ena_15             | 0x394  | 4      | Auto-extracted signal crc_ena_15 from can_crc.vhd             |
| can_bus.can_crc_crc_ena_17_21          | 0x398  | 4      | Auto-extracted signal crc_ena_17_21 from can_crc.vhd          |
| can_bus.can_top_ahb_ctu_can_data_in    | 0x39c  | 4      | Auto-extracted signal ctu_can_data_in from can_top_ahb.vhd    |
| can_bus.can_top_ahb_ctu_can_data_out   | 0x3a0  | 4      | Auto-extracted signal ctu_can_data_out from can_top_ahb.vhd   |
| can_bus.can_top_ahb_ctu_can_adress     | 0x3a4  | 4      | Auto-extracted signal ctu_can_adress from can_top_ahb.vhd     |
| can_bus.can_top_ahb_ctu_can_scs        | 0x3a8  | 4      | Auto-extracted signal ctu_can_scs from can_top_ahb.vhd        |
| can_bus.can_top_ahb_ctu_can_srd        | 0x3ac  | 4      | Auto-extracted signal ctu_can_srd from can_top_ahb.vhd        |
| can_bus.can_top_ahb_ctu_can_swr        | 0x3b0  | 4      | Auto-extracted signal ctu_can_swr from can_top_ahb.vhd        |
| can_bus.can_top_ahb_ctu_can_sbe        | 0x3b4  | 4      | Auto-extracted signal ctu_can_sbe from can_top_ahb.vhd        |
| can_bus.can_top_ahb_res_n_out_i        | 0x3b8  | 4      | Auto-extracted signal res_n_out_i from can_top_ahb.vhd        |
| can_bus.can_top_apb_reg_data_in        | 0x3bc  | 4      | Auto-extracted signal reg_data_in from can_top_apb.vhd        |
| can_bus.can_top_apb_reg_data_out       | 0x3c0  | 4      | Auto-extracted signal reg_data_out from can_top_apb.vhd       |
| can_bus.can_top_apb_reg_addr           | 0x3c4  | 4      | Auto-extracted signal reg_addr from can_top_apb.vhd           |
| can_bus.can_top_apb_reg_be             | 0x3c8  | 4      | Auto-extracted signal reg_be from can_top_apb.vhd             |
| can_bus.can_top_apb_reg_rden           | 0x3cc  | 4      | Auto-extracted signal reg_rden from can_top_apb.vhd           |
| can_bus.can_top_apb_reg_wren           | 0x3d0  | 4      | Auto-extracted signal reg_wren from can_top_apb.vhd           |
| can_bus.can_top_level_drv_bus          | 0x3d4  | 4      | Auto-extracted signal drv_bus from can_top_level.vhd          |
| can_bus.can_top_level_stat_bus         | 0x3d8  | 4      | Auto-extracted signal stat_bus from can_top_level.vhd         |
| can_bus.can_top_level_res_n_sync       | 0x3dc  | 4      | Auto-extracted signal res_n_sync from can_top_level.vhd       |
| can_bus.can_top_level_res_core_n       | 0x3e0  | 4      | Auto-extracted signal res_core_n from can_top_level.vhd       |
| can_bus.can_top_level_res_soft_n       | 0x3e4  | 4      | Auto-extracted signal res_soft_n from can_top_level.vhd       |
| can_bus.can_top_level_sp_control       | 0x3e8  | 4      | Auto-extracted signal sp_control from can_top_level.vhd       |
| can_bus.can_top_level_rx_buf_size      | 0x3ec  | 4      | Auto-extracted signal rx_buf_size from can_top_level.vhd      |
| can_bus.can_top_level_rx_full          | 0x3f0  | 4      | Auto-extracted signal rx_full from can_top_level.vhd          |
| can_bus.can_top_level_rx_empty         | 0x3f4  | 4      | Auto-extracted signal rx_empty from can_top_level.vhd         |
| can_bus.can_top_level_rx_frame_count   | 0x3f8  | 4      | Auto-extracted signal rx_frame_count from can_top_level.vhd   |
| can_bus.can_top_level_rx_mem_free      | 0x3fc  | 4      | Auto-extracted signal rx_mem_free from can_top_level.vhd      |
| can_bus.can_top_level_rx_read_pointer  | 0x400  | 4      | Auto-extracted signal rx_read_pointer from can_top_level.vhd  |
| can_bus.can_top_level_rx_write_pointer | 0x404  | 4      | Auto-extracted signal rx_write_pointer from can_top_level.vhd |
| can_bus.can_top_level_rx_data_overrun  | 0x408  | 4      | Auto-extracted signal rx_data_overrun from can_top_level.vhd  |
| can_bus.can_top_level_rx_read_buff     | 0x40c  | 4      | Auto-extracted signal rx_read_buff from can_top_level.vhd     |
| can_bus.can_top_level_rx_mof           | 0x410  | 4      | Auto-extracted signal rx_mof from can_top_level.vhd           |
| can_bus.can_top_level_txtb_port_a_data | 0x414  | 4      | Auto-extracted signal txtb_port_a_data from can_top_level.vhd |

| Name                                      | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus.can_top_level.txtb_port_a_address | 0x418  | 4      | Auto-extracted signal txtb_port_a_address from can_top_level.vhd |
| can_bus.can_top_level.txtb_port_a_cs      | 0x41c  | 4      | Auto-extracted signal txtb_port_a_cs from can_top_level.vhd      |
| can_bus.can_top_level.txtb_port_a_be      | 0x420  | 4      | Auto-extracted signal txtb_port_a_be from can_top_level.vhd      |
| can_bus.can_top_level.txtb_sw_cmd_index   | 0x424  | 4      | Auto-extracted signal txtb_sw_cmd_index from can_top_level.vhd   |
| can_bus.can_top_level.txt_buf_failed_bof  | 0x428  | 4      | Auto-extracted signal txt_buf_failed_bof from can_top_level.vhd  |
| can_bus.can_top_level.int_vector          | 0x42c  | 4      | Auto-extracted signal int_vector from can_top_level.vhd          |
| can_bus.can_top_level.int_ena             | 0x430  | 4      | Auto-extracted signal int_ena from can_top_level.vhd             |
| can_bus.can_top_level.int_mask            | 0x434  | 4      | Auto-extracted signal int_mask from can_top_level.vhd            |
| can_bus.can_top_level.rec_ident           | 0x438  | 4      | Auto-extracted signal rec_ident from can_top_level.vhd           |
| can_bus.can_top_level.rec_dlc             | 0x43c  | 4      | Auto-extracted signal rec_dlc from can_top_level.vhd             |
| can_bus.can_top_level.rec_ident_type      | 0x440  | 4      | Auto-extracted signal rec_ident_type from can_top_level.vhd      |
| can_bus.can_top_level.rec_frame_type      | 0x444  | 4      | Auto-extracted signal rec_frame_type from can_top_level.vhd      |
| can_bus.can_top_level.rec_is_rtr          | 0x448  | 4      | Auto-extracted signal rec_is_rtr from can_top_level.vhd          |
| can_bus.can_top_level.rec_brs             | 0x44c  | 4      | Auto-extracted signal rec_brs from can_top_level.vhd             |
| can_bus.can_top_level.rec_esl             | 0x450  | 4      | Auto-extracted signal rec_esl from can_top_level.vhd             |
| can_bus.can_top_level.store_data_word     | 0x454  | 4      | Auto-extracted signal store_data_word from can_top_level.vhd     |
| can_bus.can_top_level.sof_pulse           | 0x458  | 4      | Auto-extracted signal sof_pulse from can_top_level.vhd           |
| can_bus.can_top_level.store_metadata      | 0x45c  | 4      | Auto-extracted signal store_metadata from can_top_level.vhd      |
| can_bus.can_top_level.store_data          | 0x460  | 4      | Auto-extracted signal store_data from can_top_level.vhd          |
| can_bus.can_top_level.rec_valid           | 0x464  | 4      | Auto-extracted signal rec_valid from can_top_level.vhd           |
| can_bus.can_top_level.rec_abort           | 0x468  | 4      | Auto-extracted signal rec_abort from can_top_level.vhd           |
| can_bus.can_top_level.store_metadata_f    | 0x46c  | 4      | Auto-extracted signal store_metadata_f from can_top_level.vhd    |
| can_bus.can_top_level.store_data_f        | 0x470  | 4      | Auto-extracted signal store_data_f from can_top_level.vhd        |
| can_bus.can_top_level.rec_valid_f         | 0x474  | 4      | Auto-extracted signal rec_valid_f from can_top_level.vhd         |
| can_bus.can_top_level.rec_abort_f         | 0x478  | 4      | Auto-extracted signal rec_abort_f from can_top_level.vhd         |
| can_bus.can_top_level.txtb_hw_cmd_int     | 0x47c  | 4      | Auto-extracted signal txtb_hw_cmd_int from can_top_level.vhd     |
| can_bus.can_top_level.is_bus_off          | 0x480  | 4      | Auto-extracted signal is_bus_off from can_top_level.vhd          |
| can_bus.can_top_level.txtb_available      | 0x484  | 4      | Auto-extracted signal txtb_available from can_top_level.vhd      |
| can_bus.can_top_level.txtb_port_b_clk_en  | 0x488  | 4      | Auto-extracted signal txtb_port_b_clk_en from can_top_level.vhd  |
| can_bus.can_top_level.tran_dlc            | 0x48c  | 4      | Auto-extracted signal tran_dlc from can_top_level.vhd            |
| can_bus.can_top_level.tran_is_rtr         | 0x490  | 4      | Auto-extracted signal tran_is_rtr from can_top_level.vhd         |
| can_bus.can_top_level.tran_ident_type     | 0x494  | 4      | Auto-extracted signal tran_ident_type from can_top_level.vhd     |
| can_bus.can_top_level.tran_frame_type     | 0x498  | 4      | Auto-extracted signal tran_frame_type from can_top_level.vhd     |
| can_bus.can_top_level.tran_brs            | 0x49c  | 4      | Auto-extracted signal tran_brs from can_top_level.vhd            |
| can_bus.can_top_level.tran_identifier     | 0x4a0  | 4      | Auto-extracted signal tran_identifier from can_top_level.vhd     |
| can_bus.can_top_level.tran_word           | 0x4a4  | 4      | Auto-extracted signal tran_word from can_top_level.vhd           |
| can_bus.can_top_level.tran_frame_valid    | 0x4a8  | 4      | Auto-extracted signal tran_frame_valid from can_top_level.vhd    |
| can_bus.can_top_level.txtb_changed        | 0x4ac  | 4      | Auto-extracted signal txtb_changed from can_top_level.vhd        |
| can_bus.can_top_level.txtb_clk_en         | 0x4b0  | 4      | Auto-extracted signal txtb_clk_en from can_top_level.vhd         |
| can_bus.can_top_level.err_detected        | 0x4b4  | 4      | Auto-extracted signal err_detected from can_top_level.vhd        |
| can_bus.can_top_level.fcs_changed         | 0x4b8  | 4      | Auto-extracted signal fcs_changed from can_top_level.vhd         |
| can_bus.can_top_level.err_warning_limit   | 0x4bc  | 4      | Auto-extracted signal err_warning_limit from can_top_level.vhd   |
| can_bus.can_top_level.arbitration_lost    | 0x4c0  | 4      | Auto-extracted signal arbitration_lost from can_top_level.vhd    |
| can_bus.can_top_level.tran_valid          | 0x4c4  | 4      | Auto-extracted signal tran_valid from can_top_level.vhd          |
| can_bus.can_top_level.br_shifted          | 0x4c8  | 4      | Auto-extracted signal br_shifted from can_top_level.vhd          |
| can_bus.can_top_level.is_overload         | 0x4cc  | 4      | Auto-extracted signal is_overload from can_top_level.vhd         |
| can_bus.can_top_level.rx_triggers         | 0x4d0  | 4      | Auto-extracted signal rx_triggers from can_top_level.vhd         |



| Name   | Offset | Length | Description   |
|--|--------|--------|---|
| can_bus.can_top_level_tx_trigger                   | 0x4d4  | 4      | Auto-extracted signal tx_trigger from can_top_level.vhd                   |
| can_bus.can_top_level_sync_control                 | 0x4d8  | 4      | Auto-extracted signal sync_control from can_top_level.vhd                 |
| can_bus.can_top_level_no_pos_resync                | 0x4dc  | 4      | Auto-extracted signal no_pos_resync from can_top_level.vhd                |
| can_bus.can_top_level_nbt_ctrs_en                  | 0x4e0  | 4      | Auto-extracted signal nbt_ctrs_en from can_top_level.vhd                  |
| can_bus.can_top_level_dbt_ctrs_en                  | 0x4e4  | 4      | Auto-extracted signal dbt_ctrs_en from can_top_level.vhd                  |
| can_bus.can_top_level_trv_delay                    | 0x4e8  | 4      | Auto-extracted signal trv_delay from can_top_level.vhd                    |
| can_bus.can_top_level_rx_data_wbs                  | 0x4ec  | 4      | Auto-extracted signal rx_data_wbs from can_top_level.vhd                  |
| can_bus.can_top_level_tx_data_wbs                  | 0x4f0  | 4      | Auto-extracted signal tx_data_wbs from can_top_level.vhd                  |
| can_bus.can_top_level_ssp_reset                    | 0x4f4  | 4      | Auto-extracted signal ssp_reset from can_top_level.vhd                    |
| can_bus.can_top_level_tran_delay_meas              | 0x4f8  | 4      | Auto-extracted signal tran_delay_meas from can_top_level.vhd              |
| can_bus.can_top_level_bit_err                      | 0x4fc  | 4      | Auto-extracted signal bit_err from can_top_level.vhd                      |
| can_bus.can_top_level_sample_sec                   | 0x500  | 4      | Auto-extracted signal sample_sec from can_top_level.vhd                   |
| can_bus.can_top_level_btmc_reset                   | 0x504  | 4      | Auto-extracted signal btmc_reset from can_top_level.vhd                   |
| can_bus.can_top_level_dbt_measure_start            | 0x508  | 4      | Auto-extracted signal dbt_measure_start from can_top_level.vhd            |
| can_bus.can_top_level_gen_first_ssp                | 0x50c  | 4      | Auto-extracted signal gen_first_ssp from can_top_level.vhd                |
| can_bus.can_top_level_sync_edge                    | 0x510  | 4      | Auto-extracted signal sync_edge from can_top_level.vhd                    |
| can_bus.can_top_level_tq_edge                      | 0x514  | 4      | Auto-extracted signal tq_edge from can_top_level.vhd                      |
| can_bus.can_top_level_tst_rdata_rx_buf             | 0x518  | 4      | Auto-extracted signal tst_rdata_rx_buf from can_top_level.vhd             |
| can_bus.clk_gate_clk_en_q                          | 0x51c  | 4      | Auto-extracted signal clk_en_q from clk_gate.vhd                          |
| can_bus.control_counter_ctrl_ctr_ce                | 0x520  | 4      | Auto-extracted signal ctrl_ctr_ce from control_counter.vhd                |
| can_bus.control_counter_compl_ctr_ce               | 0x524  | 4      | Auto-extracted signal compl_ctr_ce from control_counter.vhd               |
| can_bus.control_registers_reg_map_reg_sel          | 0x528  | 4      | Auto-extracted signal reg_sel from control_registers_reg_map.vhd          |
| can_bus.control_registers_reg_map_read_data_mux_in | 0x52c  | 4      | Auto-extracted signal read_data_mux_in from control_registers_reg_map.vhd |
| can_bus.control_registers_reg_map_read_data_mask_n | 0x530  | 4      | Auto-extracted signal read_data_mask_n from control_registers_reg_map.vhd |
| can_bus.control_registers_reg_map_read_mux_ena     | 0x534  | 4      | Auto-extracted signal read_mux_ena from control_registers_reg_map.vhd     |
| can_bus.crc_calc_crc_q                             | 0x538  | 4      | Auto-extracted signal crc_q from crc_calc.vhd                             |
| can_bus.crc_calc_crc_nxt                           | 0x53c  | 4      | Auto-extracted signal crc_nxt from crc_calc.vhd                           |
| can_bus.crc_calc_crc_shift                         | 0x540  | 4      | Auto-extracted signal crc_shift from crc_calc.vhd                         |
| can_bus.crc_calc_crc_shift_n_xor                   | 0x544  | 4      | Auto-extracted signal crc_shift_n_xor from crc_calc.vhd                   |
| can_bus.crc_calc_crc_d                             | 0x548  | 4      | Auto-extracted signal crc_d from crc_calc.vhd                             |
| can_bus.crc_calc_crc_ce                            | 0x54c  | 4      | Auto-extracted signal crc_ce from crc_calc.vhd                            |
| can_bus.data_edge_detector_rx_data_prev            | 0x550  | 4      | Auto-extracted signal rx_data_prev from data_edge_detector.vhd            |
| can_bus.data_edge_detector_tx_data_prev            | 0x554  | 4      | Auto-extracted signal tx_data_prev from data_edge_detector.vhd            |
| can_bus.data_edge_detector_rx_data_sync_prev       | 0x558  | 4      | Auto-extracted signal rx_data_sync_prev from data_edge_detector.vhd       |
| can_bus.data_edge_detector_rx_edge_i               | 0x55c  | 4      | Auto-extracted signal rx_edge_i from data_edge_detector.vhd               |
| can_bus.data_edge_detector_tx_edge_i               | 0x560  | 4      | Auto-extracted signal tx_edge_i from data_edge_detector.vhd               |
| can_bus.data_mux_sel_data                          | 0x564  | 4      | Auto-extracted signal sel_data from data_mux.vhd                          |
| can_bus.data_mux_saturated_data                    | 0x568  | 4      | Auto-extracted signal saturated_data from data_mux.vhd                    |
| can_bus.data_mux_masked_data                       | 0x56c  | 4      | Auto-extracted signal masked_data from data_mux.vhd                       |
| can_bus.dlc_decoder_data_len_8_to_64               | 0x570  | 4      | Auto-extracted signal data_len_8_to_64 from dlc_decoder.vhd               |
| can_bus.dlc_decoder_data_len_can_2_0               | 0x574  | 4      | Auto-extracted signal data_len_can_2_0 from dlc_decoder.vhd               |
| can_bus.dlc_decoder_data_len_can_fd                | 0x578  | 4      | Auto-extracted signal data_len_can_fd from dlc_decoder.vhd                |
| can_bus.endian_swapper_swapped                     | 0x57c  | 4      | Auto-extracted signal swapped from endian_swapper.vhd                     |
| can_bus.err_counters_tx_err_ctr_ce                 | 0x580  | 4      | Auto-extracted signal tx_err_ctr_ce from err_counters.vhd                 |
| can_bus.err_counters_rx_err_ctr_ce                 | 0x584  | 4      | Auto-extracted signal rx_err_ctr_ce from err_counters.vhd                 |
| can_bus.err_counters_modif_tx_ctr                  | 0x588  | 4      | Auto-extracted signal modif_tx_ctr from err_counters.vhd                  |
| can_bus.err_counters_modif_rx_ctr                  | 0x58c  | 4      | Auto-extracted signal modif_rx_ctr from err_counters.vhd                  |
| can_bus.err_counters_nom_err_ctr_ce                | 0x590  | 4      | Auto-extracted signal nom_err_ctr_ce from err_counters.vhd                |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus.err_counters_data_err_ctr_ce              | 0x594  | 4      | Auto-extracted signal data_err_ctr_ce from err_counters.vhd              |
| can_bus.err_counters_res_err_ctrs_d               | 0x598  | 4      | Auto-extracted signal res_err_ctrs_d from err_counters.vhd               |
| can_bus.err_counters_res_err_ctrs_q               | 0x59c  | 4      | Auto-extracted signal res_err_ctrs_q from err_counters.vhd               |
| can_bus.err_counters_res_err_ctrs_q_scan          | 0x5a0  | 4      | Auto-extracted signal res_err_ctrs_q_scan from err_counters.vhd          |
| can_bus.err_detector_err_frm_req_i                | 0x5a4  | 4      | Auto-extracted signal err_frm_req_i from err_detector.vhd                |
| can_bus.err_detector_err_type_d                   | 0x5a8  | 4      | Auto-extracted signal err_type_d from err_detector.vhd                   |
| can_bus.err_detector_err_type_q                   | 0x5ac  | 4      | Auto-extracted signal err_type_q from err_detector.vhd                   |
| can_bus.err_detector_err_pos_q                    | 0x5b0  | 4      | Auto-extracted signal err_pos_q from err_detector.vhd                    |
| can_bus.err_detector_form_err_i                   | 0x5b4  | 4      | Auto-extracted signal form_err_i from err_detector.vhd                   |
| can_bus.err_detector_crc_match_c                  | 0x5b8  | 4      | Auto-extracted signal crc_match_c from err_detector.vhd                  |
| can_bus.err_detector_crc_match_d                  | 0x5bc  | 4      | Auto-extracted signal crc_match_d from err_detector.vhd                  |
| can_bus.err_detector_crc_match_q                  | 0x5c0  | 4      | Auto-extracted signal crc_match_q from err_detector.vhd                  |
| can_bus.err_detector_dst_ctr_grey                 | 0x5c4  | 4      | Auto-extracted signal dst_ctr_grey from err_detector.vhd                 |
| can_bus.err_detector_dst_parity                   | 0x5c8  | 4      | Auto-extracted signal dst_parity from err_detector.vhd                   |
| can_bus.err_detector_stuff_count_check            | 0x5cc  | 4      | Auto-extracted signal stuff_count_check from err_detector.vhd            |
| can_bus.err_detector_crc_15_ok                    | 0x5d0  | 4      | Auto-extracted signal crc_15_ok from err_detector.vhd                    |
| can_bus.err_detector_crc_17_ok                    | 0x5d4  | 4      | Auto-extracted signal crc_17_ok from err_detector.vhd                    |
| can_bus.err_detector_crc_21_ok                    | 0x5d8  | 4      | Auto-extracted signal crc_21_ok from err_detector.vhd                    |
| can_bus.err_detector_stuff_count_ok               | 0x5dc  | 4      | Auto-extracted signal stuff_count_ok from err_detector.vhd               |
| can_bus.err_detector_rx_crc_15                    | 0x5e0  | 4      | Auto-extracted signal rx_crc_15 from err_detector.vhd                    |
| can_bus.err_detector_rx_crc_17                    | 0x5e4  | 4      | Auto-extracted signal rx_crc_17 from err_detector.vhd                    |
| can_bus.err_detector_rx_crc_21                    | 0x5e8  | 4      | Auto-extracted signal rx_crc_21 from err_detector.vhd                    |
| can_bus.fault_confinement_drv_ewl                 | 0x5ec  | 4      | Auto-extracted signal drv_ewl from fault_confinement.vhd                 |
| can_bus.fault_confinement_drv_erp                 | 0x5f0  | 4      | Auto-extracted signal drv_erp from fault_confinement.vhd                 |
| can_bus.fault_confinement_drv_ctr_val             | 0x5f4  | 4      | Auto-extracted signal drv_ctr_val from fault_confinement.vhd             |
| can_bus.fault_confinement_drv_ctr_sel             | 0x5f8  | 4      | Auto-extracted signal drv_ctr_sel from fault_confinement.vhd             |
| can_bus.fault_confinement_drv_ena                 | 0x5fc  | 4      | Auto-extracted signal drv_ena from fault_confinement.vhd                 |
| can_bus.fault_confinement_tx_err_ctr_i            | 0x600  | 4      | Auto-extracted signal tx_err_ctr_i from fault_confinement.vhd            |
| can_bus.fault_confinement_rx_err_ctr_i            | 0x604  | 4      | Auto-extracted signal rx_err_ctr_i from fault_confinement.vhd            |
| can_bus.fault_confinement_inc_one                 | 0x608  | 4      | Auto-extracted signal inc_one from fault_confinement.vhd                 |
| can_bus.fault_confinement_inc_eight               | 0x60c  | 4      | Auto-extracted signal inc_eight from fault_confinement.vhd               |
| can_bus.fault_confinement_dec_one                 | 0x610  | 4      | Auto-extracted signal dec_one from fault_confinement.vhd                 |
| can_bus.fault_confinement_drv_rom_ena             | 0x614  | 4      | Auto-extracted signal drv_rom_ena from fault_confinement.vhd             |
| can_bus.fault_confinement_fsm_tx_err_ctr_mt_erp   | 0x618  | 4      | Auto-extracted signal tx_err_ctr_mt_erp from fault_confinement_fsm.vhd   |
| can_bus.fault_confinement_fsm_rx_err_ctr_mt_erp   | 0x61c  | 4      | Auto-extracted signal rx_err_ctr_mt_erp from fault_confinement_fsm.vhd   |
| can_bus.fault_confinement_fsm_tx_err_ctr_mt_ewl   | 0x620  | 4      | Auto-extracted signal tx_err_ctr_mt_ewl from fault_confinement_fsm.vhd   |
| can_bus.fault_confinement_fsm_rx_err_ctr_mt_ewl   | 0x624  | 4      | Auto-extracted signal rx_err_ctr_mt_ewl from fault_confinement_fsm.vhd   |
| can_bus.fault_confinement_fsm_tx_err_ctr_mt_255   | 0x628  | 4      | Auto-extracted signal tx_err_ctr_mt_255 from fault_confinement_fsm.vhd   |
| can_bus.fault_confinement_fsm_err_warning_limit_d | 0x62c  | 4      | Auto-extracted signal err_warning_limit_d from fault_confinement_fsm.vhd |
| can_bus.fault_confinement_fsm_err_warning_limit_q | 0x630  | 4      | Auto-extracted signal err_warning_limit_q from fault_confinement_fsm.vhd |
| can_bus.fault_confinement_fsm_fc_fsm_res_d        | 0x634  | 4      | Auto-extracted signal fc_fsm_res_d from fault_confinement_fsm.vhd        |
| can_bus.fault_confinement_fsm_fc_fsm_res_q        | 0x638  | 4      | Auto-extracted signal fc_fsm_res_q from fault_confinement_fsm.vhd        |
| can_bus.fault_confinement_rules_inc_one_i         | 0x63c  | 4      | Auto-extracted signal inc_one_i from fault_confinement_rules.vhd         |
| can_bus.fault_confinement_rules_inc_eight_i       | 0x640  | 4      | Auto-extracted signal inc_eight_i from fault_confinement_rules.vhd       |
| can_bus.frame_filters_drv_filter_A_mask           | 0x644  | 4      | Auto-extracted signal drv_filter_A_mask from frame_filters.vhd           |

| Name  | Offset | Length | Description   |
|---|--------|--------|---|
| <u>can_bus.frame_filters_drv_filter_A_ctrl</u>      | 0x648  | 4      | Auto-extracted signal drv_filter_A_ctrl from frame_filters.vhd      |
| <u>can_bus.frame_filters_drv_filter_A_bits</u>      | 0x64c  | 4      | Auto-extracted signal drv_filter_A_bits from frame_filters.vhd      |
| <u>can_bus.frame_filters_int_filter_A_valid</u>     | 0x650  | 4      | Auto-extracted signal int_filter_A_valid from frame_filters.vhd     |
| <u>can_bus.frame_filters_drv_filter_B_mask</u>      | 0x654  | 4      | Auto-extracted signal drv_filter_B_mask from frame_filters.vhd      |
| <u>can_bus.frame_filters_drv_filter_B_ctrl</u>      | 0x658  | 4      | Auto-extracted signal drv_filter_B_ctrl from frame_filters.vhd      |
| <u>can_bus.frame_filters_drv_filter_B_bits</u>      | 0x65c  | 4      | Auto-extracted signal drv_filter_B_bits from frame_filters.vhd      |
| <u>can_bus.frame_filters_int_filter_B_valid</u>     | 0x660  | 4      | Auto-extracted signal int_filter_B_valid from frame_filters.vhd     |
| <u>can_bus.frame_filters_drv_filter_C_mask</u>      | 0x664  | 4      | Auto-extracted signal drv_filter_C_mask from frame_filters.vhd      |
| <u>can_bus.frame_filters_drv_filter_C_ctrl</u>      | 0x668  | 4      | Auto-extracted signal drv_filter_C_ctrl from frame_filters.vhd      |
| <u>can_bus.frame_filters_drv_filter_C_bits</u>      | 0x66c  | 4      | Auto-extracted signal drv_filter_C_bits from frame_filters.vhd      |
| <u>can_bus.frame_filters_int_filter_C_valid</u>     | 0x670  | 4      | Auto-extracted signal int_filter_C_valid from frame_filters.vhd     |
| <u>can_bus.frame_filters_drv_filter_ran_ctrl</u>    | 0x674  | 4      | Auto-extracted signal drv_filter_ran_ctrl from frame_filters.vhd    |
| <u>can_bus.frame_filters_drv_filter_ran_lo_th</u>   | 0x678  | 4      | Auto-extracted signal drv_filter_ran_lo_th from frame_filters.vhd   |
| <u>can_bus.frame_filters_drv_filter_ran_hi_th</u>   | 0x67c  | 4      | Auto-extracted signal drv_filter_ran_hi_th from frame_filters.vhd   |
| <u>can_bus.frame_filters_int_filter_ran_valid</u>   | 0x680  | 4      | Auto-extracted signal int_filter_ran_valid from frame_filters.vhd   |
| <u>can_bus.frame_filters_drv_filters_ena</u>        | 0x684  | 4      | Auto-extracted signal drv_filters_ena from frame_filters.vhd        |
| <u>can_bus.frame_filters_int_data_type</u>          | 0x688  | 4      | Auto-extracted signal int_data_type from frame_filters.vhd          |
| <u>can_bus.frame_filters_int_data_ctrl</u>          | 0x68c  | 4      | Auto-extracted signal int_data_ctrl from frame_filters.vhd          |
| <u>can_bus.frame_filters_filter_A_enable</u>        | 0x690  | 4      | Auto-extracted signal filter_A_enable from frame_filters.vhd        |
| <u>can_bus.frame_filters_filter_B_enable</u>        | 0x694  | 4      | Auto-extracted signal filter_B_enable from frame_filters.vhd        |
| <u>can_bus.frame_filters_filter_C_enable</u>        | 0x698  | 4      | Auto-extracted signal filter_C_enable from frame_filters.vhd        |
| <u>can_bus.frame_filters_filter_range_enable</u>    | 0x69c  | 4      | Auto-extracted signal filter_range_enable from frame_filters.vhd    |
| <u>can_bus.frame_filters_filter_result</u>          | 0x6a0  | 4      | Auto-extracted signal filter_result from frame_filters.vhd          |
| <u>can_bus.frame_filters_ident_valid_d</u>          | 0x6a4  | 4      | Auto-extracted signal ident_valid_d from frame_filters.vhd          |
| <u>can_bus.frame_filters_ident_valid_q</u>          | 0x6a8  | 4      | Auto-extracted signal ident_valid_q from frame_filters.vhd          |
| <u>can_bus.frame_filters_drv_drop_remote_frames</u> | 0x6ac  | 4      | Auto-extracted signal drv_drop_remote_frames from frame_filters.vhd |
| <u>can_bus.frame_filters_drop_rtr_frame</u>         | 0x6b0  | 4      | Auto-extracted signal drop_rtr_frame from frame_filters.vhd         |
| <u>can_bus.inf_ram_wrapper_int_read_data</u>        | 0x6b4  | 4      | Auto-extracted signal int_read_data from inf_ram_wrapper.vhd        |
| <u>can_bus.inf_ram_wrapper_byte_we</u>              | 0x6b8  | 4      | Auto-extracted signal byte_we from inf_ram_wrapper.vhd              |
| <u>can_bus.int_manager_drv_int_vect_clr</u>         | 0x6bc  | 4      | Auto-extracted signal drv_int_vect_clr from int_manager.vhd         |
| <u>can_bus.int_manager_drv_int_ena_set</u>          | 0x6c0  | 4      | Auto-extracted signal drv_int_ena_set from int_manager.vhd          |
| <u>can_bus.int_manager_drv_int_ena_clr</u>          | 0x6c4  | 4      | Auto-extracted signal drv_int_ena_clr from int_manager.vhd          |
| <u>can_bus.int_manager_drv_int_mask_set</u>         | 0x6c8  | 4      | Auto-extracted signal drv_int_mask_set from int_manager.vhd         |
| <u>can_bus.int_manager_drv_int_mask_clr</u>         | 0x6cc  | 4      | Auto-extracted signal drv_int_mask_clr from int_manager.vhd         |
| <u>can_bus.int_manager_int_ena_i</u>                | 0x6d0  | 4      | Auto-extracted signal int_ena_i from int_manager.vhd                |
| <u>can_bus.int_manager_int_mask_i</u>               | 0x6d4  | 4      | Auto-extracted signal int_mask_i from int_manager.vhd               |
| <u>can_bus.int_manager_int_vect_i</u>               | 0x6d8  | 4      | Auto-extracted signal int_vect_i from int_manager.vhd               |
| <u>can_bus.int_manager_int_input_active</u>         | 0x6dc  | 4      | Auto-extracted signal int_input_active from int_manager.vhd         |
| <u>can_bus.int_manager_int_i</u>                    | 0x6e0  | 4      | Auto-extracted signal int_i from int_manager.vhd                    |
| <u>can_bus.int_module_int_mask_i</u>                | 0x6e4  | 4      | Auto-extracted signal int_mask_i from int_module.vhd                |
| <u>can_bus.int_module_int_ena_i</u>                 | 0x6e8  | 4      | Auto-extracted signal int_ena_i from int_module.vhd                 |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus.int_module_int_mask_load                  | 0x6ec  | 4      | Auto-extracted signal int_mask_load from int_module.vhd                  |
| can_bus.int_module_int_mask_next                  | 0x6f0  | 4      | Auto-extracted signal int_mask_next from int_module.vhd                  |
| can_bus.memory_reg_reg_value_r                    | 0x6f4  | 4      | Auto-extracted signal reg_value_r from memory_reg.vhd                    |
| can_bus.memory_reg_wr_select                      | 0x6f8  | 4      | Auto-extracted signal wr_select from memory_reg.vhd                      |
| can_bus.memory_reg_wr_select_expanded             | 0x6fc  | 4      | Auto-extracted signal wr_select_expanded from memory_reg.vhd             |
| can_bus.memory_registers_status_comb              | 0x700  | 4      | Auto-extracted signal status_comb from memory_registers.vhd              |
| can_bus.memory_registers_can_core_cs              | 0x704  | 4      | Auto-extracted signal can_core_cs from memory_registers.vhd              |
| can_bus.memory_registers_control_registers_cs     | 0x708  | 4      | Auto-extracted signal control_registers_cs from memory_registers.vhd     |
| can_bus.memory_registers_control_registers_cs_reg | 0x70c  | 4      | Auto-extracted signal control_registers_cs_reg from memory_registers.vhd |
| can_bus.memory_registers_test_registers_cs        | 0x710  | 4      | Auto-extracted signal test_registers_cs from memory_registers.vhd        |
| can_bus.memory_registers_test_registers_cs_reg    | 0x714  | 4      | Auto-extracted signal test_registers_cs_reg from memory_registers.vhd    |
| can_bus.memory_registers_control_registers_rdata  | 0x718  | 4      | Auto-extracted signal control_registers_rdata from memory_registers.vhd  |
| can_bus.memory_registers_test_registers_rdata     | 0x71c  | 4      | Auto-extracted signal test_registers_rdata from memory_registers.vhd     |
| can_bus.memory_registers_is_err_active            | 0x720  | 4      | Auto-extracted signal is_err_active from memory_registers.vhd            |
| can_bus.memory_registers_is_err_passive           | 0x724  | 4      | Auto-extracted signal is_err_passive from memory_registers.vhd           |
| can_bus.memory_registers_is_bus_off               | 0x728  | 4      | Auto-extracted signal is_bus_off from memory_registers.vhd               |
| can_bus.memory_registers_is_transmitter           | 0x72c  | 4      | Auto-extracted signal is_transmitter from memory_registers.vhd           |
| can_bus.memory_registers_is_receiver              | 0x730  | 4      | Auto-extracted signal is_receiver from memory_registers.vhd              |
| can_bus.memory_registers_is_idle                  | 0x734  | 4      | Auto-extracted signal is_idle from memory_registers.vhd                  |
| can_bus.memory_registers_reg_lock_1_active        | 0x738  | 4      | Auto-extracted signal reg_lock_1_active from memory_registers.vhd        |
| can_bus.memory_registers_reg_lock_2_active        | 0x73c  | 4      | Auto-extracted signal reg_lock_2_active from memory_registers.vhd        |
| can_bus.memory_registers_soft_res_q_n             | 0x740  | 4      | Auto-extracted signal soft_res_q_n from memory_registers.vhd             |
| can_bus.memory_registers_ewl_padded               | 0x744  | 4      | Auto-extracted signal ewl_padded from memory_registers.vhd               |
| can_bus.memory_registers_control_regs_clk_en      | 0x748  | 4      | Auto-extracted signal control_regs_clk_en from memory_registers.vhd      |
| can_bus.memory_registers_test_regs_clk_en         | 0x74c  | 4      | Auto-extracted signal test_regs_clk_en from memory_registers.vhd         |
| can_bus.memory_registers_clk_control_regs         | 0x750  | 4      | Auto-extracted signal clk_control_regs from memory_registers.vhd         |
| can_bus.memory_registers_clk_test_regs            | 0x754  | 4      | Auto-extracted signal clk_test_regs from memory_registers.vhd            |
| can_bus.memory_registers_rx_buf_mode              | 0x758  | 4      | Auto-extracted signal rx_buf_mode from memory_registers.vhd              |
| can_bus.memory_registers_rx_move_cmd              | 0x75c  | 4      | Auto-extracted signal rx_move_cmd from memory_registers.vhd              |
| can_bus.memory_registers_ctr_pres_sel_q           | 0x760  | 4      | Auto-extracted signal ctr_pres_sel_q from memory_registers.vhd           |
| can_bus.operation_control_drv_ena                 | 0x764  | 4      | Auto-extracted signal drv_ena from operation_control.vhd                 |
| can_bus.operation_control_go_to_off               | 0x768  | 4      | Auto-extracted signal go_to_off from operation_control.vhd               |
| can_bus.prescaler_drv_ena                         | 0x76c  | 4      | Auto-extracted signal drv_ena from prescaler.vhd                         |
| can_bus.prescaler_tseg1_nbt                       | 0x770  | 4      | Auto-extracted signal tseg1_nbt from prescaler.vhd                       |
| can_bus.prescaler_tseg2_nbt                       | 0x774  | 4      | Auto-extracted signal tseg2_nbt from prescaler.vhd                       |
| can_bus.prescaler_brp_nbt                         | 0x778  | 4      | Auto-extracted signal brp_nbt from prescaler.vhd                         |
| can_bus.prescaler_sjw_nbt                         | 0x77c  | 4      | Auto-extracted signal sjw_nbt from prescaler.vhd                         |
| can_bus.prescaler_tseg1_dbt                       | 0x780  | 4      | Auto-extracted signal tseg1_dbt from prescaler.vhd                       |
| can_bus.prescaler_tseg2_dbt                       | 0x784  | 4      | Auto-extracted signal tseg2_dbt from prescaler.vhd                       |
| can_bus.prescaler_brp_dbt                         | 0x788  | 4      | Auto-extracted signal brp_dbt from prescaler.vhd                         |
| can_bus.prescaler_sjw_dbt                         | 0x78c  | 4      | Auto-extracted signal sjw_dbt from prescaler.vhd                         |
| can_bus.prescaler_segment_end                     | 0x790  | 4      | Auto-extracted signal segment_end from prescaler.vhd                     |
| can_bus.prescaler_h_sync_valid                    | 0x794  | 4      | Auto-extracted signal h_sync_valid from prescaler.vhd                    |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus.prescaler_is_tseq1                    | 0x798  | 4      | Auto-extracted signal is_tseq1 from prescaler.vhd                    |
| can_bus.prescaler_is_tseq2                    | 0x79c  | 4      | Auto-extracted signal is_tseq2 from prescaler.vhd                    |
| can_bus.prescaler_resync_edge_valid           | 0x7a0  | 4      | Auto-extracted signal resync_edge_valid from prescaler.vhd           |
| can_bus.prescaler_h_sync_edge_valid           | 0x7a4  | 4      | Auto-extracted signal h_sync_edge_valid from prescaler.vhd           |
| can_bus.prescaler_segmm_counter_nbt           | 0x7a8  | 4      | Auto-extracted signal segmm_counter_nbt from prescaler.vhd           |
| can_bus.prescaler_segmm_counter_dbt           | 0x7ac  | 4      | Auto-extracted signal segmm_counter_dbt from prescaler.vhd           |
| can_bus.prescaler_exit_segmm_req_nbt          | 0x7b0  | 4      | Auto-extracted signal exit_segmm_req_nbt from prescaler.vhd          |
| can_bus.prescaler_exit_segmm_req_dbt          | 0x7b4  | 4      | Auto-extracted signal exit_segmm_req_dbt from prescaler.vhd          |
| can_bus.prescaler_tq_edge_nbt                 | 0x7b8  | 4      | Auto-extracted signal tq_edge_nbt from prescaler.vhd                 |
| can_bus.prescaler_tq_edge_dbt                 | 0x7bc  | 4      | Auto-extracted signal tq_edge_dbt from prescaler.vhd                 |
| can_bus.prescaler_rx_trig_req                 | 0x7c0  | 4      | Auto-extracted signal rx_trig_req from prescaler.vhd                 |
| can_bus.prescaler_tx_trig_req                 | 0x7c4  | 4      | Auto-extracted signal tx_trig_req from prescaler.vhd                 |
| can_bus.prescaler_start_edge                  | 0x7c8  | 4      | Auto-extracted signal start_edge from prescaler.vhd                  |
| can_bus.prescaler_bt_ctr_clear                | 0x7cc  | 4      | Auto-extracted signal bt_ctr_clear from prescaler.vhd                |
| can_bus.priority_decoder_l0_valid             | 0x7d0  | 4      | Auto-extracted signal l0_valid from priority_decoder.vhd             |
| can_bus.priority_decoder_l1_valid             | 0x7d4  | 4      | Auto-extracted signal l1_valid from priority_decoder.vhd             |
| can_bus.priority_decoder_l1_winner            | 0x7d8  | 4      | Auto-extracted signal l1_winner from priority_decoder.vhd            |
| can_bus.priority_decoder_l2_valid             | 0x7dc  | 4      | Auto-extracted signal l2_valid from priority_decoder.vhd             |
| can_bus.priority_decoder_l2_winner            | 0x7e0  | 4      | Auto-extracted signal l2_winner from priority_decoder.vhd            |
| can_bus.priority_decoder_l3_valid             | 0x7e4  | 4      | Auto-extracted signal l3_valid from priority_decoder.vhd             |
| can_bus.priority_decoder_l3_winner            | 0x7e8  | 4      | Auto-extracted signal l3_winner from priority_decoder.vhd            |
| can_bus.protocol_control_drv_can_fd_ena       | 0x7ec  | 4      | Auto-extracted signal drv_can_fd_ena from protocol_control.vhd       |
| can_bus.protocol_control_drv_bus_mon_ena      | 0x7f0  | 4      | Auto-extracted signal drv_bus_mon_ena from protocol_control.vhd      |
| can_bus.protocol_control_drv_retr_lim_ena     | 0x7f4  | 4      | Auto-extracted signal drv_retr_lim_ena from protocol_control.vhd     |
| can_bus.protocol_control_drv_retr_th          | 0x7f8  | 4      | Auto-extracted signal drv_retr_th from protocol_control.vhd          |
| can_bus.protocol_control_drv_self_test_ena    | 0x7fc  | 4      | Auto-extracted signal drv_self_test_ena from protocol_control.vhd    |
| can_bus.protocol_control_drv_ack_forb         | 0x800  | 4      | Auto-extracted signal drv_ack_forb from protocol_control.vhd         |
| can_bus.protocol_control_drv_ena              | 0x804  | 4      | Auto-extracted signal drv_ena from protocol_control.vhd              |
| can_bus.protocol_control_drv_fd_type          | 0x808  | 4      | Auto-extracted signal drv_fd_type from protocol_control.vhd          |
| can_bus.protocol_control_drv_int_loopback_ena | 0x80c  | 4      | Auto-extracted signal drv_int_loopback_ena from protocol_control.vhd |
| can_bus.protocol_control_drv_bus_off_reset    | 0x810  | 4      | Auto-extracted signal drv_bus_off_reset from protocol_control.vhd    |
| can_bus.protocol_control_drv_ssp_delay_select | 0x814  | 4      | Auto-extracted signal drv_ssp_delay_select from protocol_control.vhd |
| can_bus.protocol_control_drv_pex              | 0x818  | 4      | Auto-extracted signal drv_pex from protocol_control.vhd              |
| can_bus.protocol_control_drv_cpexs            | 0x81c  | 4      | Auto-extracted signal drv_cpexs from protocol_control.vhd            |
| can_bus.protocol_control_tran_word_swapped    | 0x820  | 4      | Auto-extracted signal tran_word_swapped from protocol_control.vhd    |
| can_bus.protocol_control_err_frm_req          | 0x824  | 4      | Auto-extracted signal err_frm_req from protocol_control.vhd          |
| can_bus.protocol_control_tx_load_base_id      | 0x828  | 4      | Auto-extracted signal tx_load_base_id from protocol_control.vhd      |
| can_bus.protocol_control_tx_load_ext_id       | 0x82c  | 4      | Auto-extracted signal tx_load_ext_id from protocol_control.vhd       |
| can_bus.protocol_control_tx_load_dlc          | 0x830  | 4      | Auto-extracted signal tx_load_dlc from protocol_control.vhd          |
| can_bus.protocol_control_tx_load_data_word    | 0x834  | 4      | Auto-extracted signal tx_load_data_word from protocol_control.vhd    |
| can_bus.protocol_control_tx_load_stuff_count  | 0x838  | 4      | Auto-extracted signal tx_load_stuff_count from protocol_control.vhd  |
| can_bus.protocol_control_tx_load_crc          | 0x83c  | 4      | Auto-extracted signal tx_load_crc from protocol_control.vhd          |
| can_bus.protocol_control_tx_shift_ena         | 0x840  | 4      | Auto-extracted signal tx_shift_ena from protocol_control.vhd         |
| can_bus.protocol_control_tx_dominant          | 0x844  | 4      | Auto-extracted signal tx_dominant from protocol_control.vhd          |

| Name   | Offset | Length | Description   |
|--|--------|--------|---|
| can_bus.protocol_control_rx_clear                | 0x848  | 4      | Auto-extracted signal rx_clear from protocol_control.vhd                |
| can_bus.protocol_control_rx_store_base_id        | 0x84c  | 4      | Auto-extracted signal rx_store_base_id from protocol_control.vhd        |
| can_bus.protocol_control_rx_store_ext_id         | 0x850  | 4      | Auto-extracted signal rx_store_ext_id from protocol_control.vhd         |
| can_bus.protocol_control_rx_store_ide            | 0x854  | 4      | Auto-extracted signal rx_store_ide from protocol_control.vhd            |
| can_bus.protocol_control_rx_store_rtr            | 0x858  | 4      | Auto-extracted signal rx_store_rtr from protocol_control.vhd            |
| can_bus.protocol_control_rx_store_edl            | 0x85c  | 4      | Auto-extracted signal rx_store_edl from protocol_control.vhd            |
| can_bus.protocol_control_rx_store_dlc            | 0x860  | 4      | Auto-extracted signal rx_store_dlc from protocol_control.vhd            |
| can_bus.protocol_control_rx_store_esi            | 0x864  | 4      | Auto-extracted signal rx_store_esi from protocol_control.vhd            |
| can_bus.protocol_control_rx_store_brs            | 0x868  | 4      | Auto-extracted signal rx_store_brs from protocol_control.vhd            |
| can_bus.protocol_control_rx_store_stuff_count    | 0x86c  | 4      | Auto-extracted signal rx_store_stuff_count from protocol_control.vhd    |
| can_bus.protocol_control_rx_shift_ena            | 0x870  | 4      | Auto-extracted signal rx_shift_ena from protocol_control.vhd            |
| can_bus.protocol_control_rx_shift_in_sel         | 0x874  | 4      | Auto-extracted signal rx_shift_in_sel from protocol_control.vhd         |
| can_bus.protocol_control_rec_is_rtr_i            | 0x878  | 4      | Auto-extracted signal rec_is_rtr_i from protocol_control.vhd            |
| can_bus.protocol_control_rec_dlc_d               | 0x87c  | 4      | Auto-extracted signal rec_dlc_d from protocol_control.vhd               |
| can_bus.protocol_control_rec_dlc_q               | 0x880  | 4      | Auto-extracted signal rec_dlc_q from protocol_control.vhd               |
| can_bus.protocol_control_rec_frame_type_i        | 0x884  | 4      | Auto-extracted signal rec_frame_type_i from protocol_control.vhd        |
| can_bus.protocol_control_ctrl_ctr_pload          | 0x888  | 4      | Auto-extracted signal ctrl_ctr_pload from protocol_control.vhd          |
| can_bus.protocol_control_ctrl_ctr_pload_val      | 0x88c  | 4      | Auto-extracted signal ctrl_ctr_pload_val from protocol_control.vhd      |
| can_bus.protocol_control_ctrl_ctr_ena            | 0x890  | 4      | Auto-extracted signal ctrl_ctr_ena from protocol_control.vhd            |
| can_bus.protocol_control_ctrl_ctr_zero           | 0x894  | 4      | Auto-extracted signal ctrl_ctr_zero from protocol_control.vhd           |
| can_bus.protocol_control_ctrl_ctr_one            | 0x898  | 4      | Auto-extracted signal ctrl_ctr_one from protocol_control.vhd            |
| can_bus.protocol_control_ctrl_counted_byte       | 0x89c  | 4      | Auto-extracted signal ctrl_counted_byte from protocol_control.vhd       |
| can_bus.protocol_control_ctrl_counted_byte_index | 0x8a0  | 4      | Auto-extracted signal ctrl_counted_byte_index from protocol_control.vhd |
| can_bus.protocol_control_ctrl_ctr_mem_index      | 0x8a4  | 4      | Auto-extracted signal ctrl_ctr_mem_index from protocol_control.vhd      |
| can_bus.protocol_control_compl_ctr_ena           | 0x8a8  | 4      | Auto-extracted signal compl_ctr_ena from protocol_control.vhd           |
| can_bus.protocol_control_reinteg_ctr_clr         | 0x8ac  | 4      | Auto-extracted signal reinteg_ctr_clr from protocol_control.vhd         |
| can_bus.protocol_control_reinteg_ctr_enable      | 0x8b0  | 4      | Auto-extracted signal reinteg_ctr_enable from protocol_control.vhd      |
| can_bus.protocol_control_reinteg_ctr_expired     | 0x8b4  | 4      | Auto-extracted signal reinteg_ctr_expired from protocol_control.vhd     |
| can_bus.protocol_control_retr_ctr_clear          | 0x8b8  | 4      | Auto-extracted signal retr_ctr_clear from protocol_control.vhd          |
| can_bus.protocol_control_retr_ctr_add            | 0x8bc  | 4      | Auto-extracted signal retr_ctr_add from protocol_control.vhd            |
| can_bus.protocol_control_retr_limit_reached      | 0x8c0  | 4      | Auto-extracted signal retr_limit_reached from protocol_control.vhd      |
| can_bus.protocol_control_form_err_i              | 0x8c4  | 4      | Auto-extracted signal form_err_i from protocol_control.vhd              |
| can_bus.protocol_control_ack_err_i               | 0x8c8  | 4      | Auto-extracted signal ack_err_i from protocol_control.vhd               |
| can_bus.protocol_control_crc_check               | 0x8cc  | 4      | Auto-extracted signal crc_check from protocol_control.vhd               |
| can_bus.protocol_control_bit_err_arb             | 0x8d0  | 4      | Auto-extracted signal bit_err_arb from protocol_control.vhd             |
| can_bus.protocol_control_crc_match               | 0x8d4  | 4      | Auto-extracted signal crc_match from protocol_control.vhd               |
| can_bus.protocol_control_crc_err_i               | 0x8d8  | 4      | Auto-extracted signal crc_err_i from protocol_control.vhd               |
| can_bus.protocol_control_crc_clear_match_flag    | 0x8dc  | 4      | Auto-extracted signal crc_clear_match_flag from protocol_control.vhd    |
| can_bus.protocol_control_crc_src                 | 0x8e0  | 4      | Auto-extracted signal crc_src from protocol_control.vhd                 |
| can_bus.protocol_control_err_pos                 | 0x8e4  | 4      | Auto-extracted signal err_pos from protocol_control.vhd                 |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus.protocol_control_is_arbitration_i               | 0x8e8  | 4      | Auto-extracted signal is_arbitration_i from protocol_control.vhd               |
| can_bus.protocol_control_bit_err_enable                 | 0x8ec  | 4      | Auto-extracted signal bit_err_enable from protocol_control.vhd                 |
| can_bus.protocol_control_tx_data_nbs_i                  | 0x8f0  | 4      | Auto-extracted signal tx_data_nbs_i from protocol_control.vhd                  |
| can_bus.protocol_control_rx_crc                         | 0x8f4  | 4      | Auto-extracted signal rx_crc from protocol_control.vhd                         |
| can_bus.protocol_control_rx_stuff_count                 | 0x8f8  | 4      | Auto-extracted signal rx_stuff_count from protocol_control.vhd                 |
| can_bus.protocol_control_fixed_stuff_i                  | 0x8fc  | 4      | Auto-extracted signal fixed_stuff_i from protocol_control.vhd                  |
| can_bus.protocol_control_arbitration_lost_i             | 0x900  | 4      | Auto-extracted signal arbitration_lost_i from protocol_control.vhd             |
| can_bus.protocol_control_alc_id_field                   | 0x904  | 4      | Auto-extracted signal alc_id_field from protocol_control.vhd                   |
| can_bus.protocol_control_drv_rom_ena                    | 0x908  | 4      | Auto-extracted signal drv_rom_ena from protocol_control.vhd                    |
| can_bus.protocol_control_fsm_state_reg_ce               | 0x90c  | 4      | Auto-extracted signal state_reg_ce from protocol_control_fsm.vhd               |
| can_bus.protocol_control_fsm_no_data_transmitter        | 0x910  | 4      | Auto-extracted signal no_data_transmitter from protocol_control_fsm.vhd        |
| can_bus.protocol_control_fsm_no_data_receiver           | 0x914  | 4      | Auto-extracted signal no_data_receiver from protocol_control_fsm.vhd           |
| can_bus.protocol_control_fsm_no_data_field              | 0x918  | 4      | Auto-extracted signal no_data_field from protocol_control_fsm.vhd              |
| can_bus.protocol_control_fsm_ctrl_ctr_pload_i           | 0x91c  | 4      | Auto-extracted signal ctrl_ctr_pload_i from protocol_control_fsm.vhd           |
| can_bus.protocol_control_fsm_ctrl_ctr_pload_unaligned   | 0x920  | 4      | Auto-extracted signal ctrl_ctr_pload_unaligned from protocol_control_fsm.vhd   |
| can_bus.protocol_control_fsm_crc_use_21                 | 0x924  | 4      | Auto-extracted signal crc_use_21 from protocol_control_fsm.vhd                 |
| can_bus.protocol_control_fsm_crc_use_17                 | 0x928  | 4      | Auto-extracted signal crc_use_17 from protocol_control_fsm.vhd                 |
| can_bus.protocol_control_fsm_crc_src_i                  | 0x92c  | 4      | Auto-extracted signal crc_src_i from protocol_control_fsm.vhd                  |
| can_bus.protocol_control_fsm_crc_length_i               | 0x930  | 4      | Auto-extracted signal crc_length_i from protocol_control_fsm.vhd               |
| can_bus.protocol_control_fsm_tran_data_length           | 0x934  | 4      | Auto-extracted signal tran_data_length from protocol_control_fsm.vhd           |
| can_bus.protocol_control_fsm_rec_data_length            | 0x938  | 4      | Auto-extracted signal rec_data_length from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_rec_data_length_c          | 0x93c  | 4      | Auto-extracted signal rec_data_length_c from protocol_control_fsm.vhd          |
| can_bus.protocol_control_fsm_data_length_c              | 0x940  | 4      | Auto-extracted signal data_length_c from protocol_control_fsm.vhd              |
| can_bus.protocol_control_fsm_data_length_shifted_c      | 0x944  | 4      | Auto-extracted signal data_length_shifted_c from protocol_control_fsm.vhd      |
| can_bus.protocol_control_fsm_data_length_bits_c         | 0x948  | 4      | Auto-extracted signal data_length_bits_c from protocol_control_fsm.vhd         |
| can_bus.protocol_control_fsm_is_fd_frame                | 0x94c  | 4      | Auto-extracted signal is_fd_frame from protocol_control_fsm.vhd                |
| can_bus.protocol_control_fsm_frame_start                | 0x950  | 4      | Auto-extracted signal frame_start from protocol_control_fsm.vhd                |
| can_bus.protocol_control_fsm_tx_frame_ready             | 0x954  | 4      | Auto-extracted signal tx_frame_ready from protocol_control_fsm.vhd             |
| can_bus.protocol_control_fsm_ide_is_arbitration         | 0x958  | 4      | Auto-extracted signal ide_is_arbitration from protocol_control_fsm.vhd         |
| can_bus.protocol_control_fsm_arbitration_lost_condition | 0x95c  | 4      | Auto-extracted signal arbitration_lost_condition from protocol_control_fsm.vhd |
| can_bus.protocol_control_fsm_arbitration_lost_i         | 0x960  | 4      | Auto-extracted signal arbitration_lost_i from protocol_control_fsm.vhd         |
| can_bus.protocol_control_fsm_tx_failed                  | 0x964  | 4      | Auto-extracted signal tx_failed from protocol_control_fsm.vhd                  |
| can_bus.protocol_control_fsm_store_metadata_d           | 0x968  | 4      | Auto-extracted signal store_metadata_d from protocol_control_fsm.vhd           |
| can_bus.protocol_control_fsm_store_data_d               | 0x96c  | 4      | Auto-extracted signal store_data_d from protocol_control_fsm.vhd               |
| can_bus.protocol_control_fsm_rec_valid_d                | 0x970  | 4      | Auto-extracted signal rec_valid_d from protocol_control_fsm.vhd                |
| can_bus.protocol_control_fsm_rec_abort_d                | 0x974  | 4      | Auto-extracted signal rec_abort_d from protocol_control_fsm.vhd                |

| Name   | Offset | Length | Description   |
|--|--------|--------|---|
| can_bus.protocol_control_fsm_go_to_suspend             | 0x978  | 4      | Auto-extracted signal go_to_suspend from protocol_control_fsm.vhd             |
| can_bus.protocol_control_fsm_go_to_stuff_count         | 0x97c  | 4      | Auto-extracted signal go_to_stuff_count from protocol_control_fsm.vhd         |
| can_bus.protocol_control_fsm_rx_store_base_id_i        | 0x980  | 4      | Auto-extracted signal rx_store_base_id_i from protocol_control_fsm.vhd        |
| can_bus.protocol_control_fsm_rx_store_ext_id_i         | 0x984  | 4      | Auto-extracted signal rx_store_ext_id_i from protocol_control_fsm.vhd         |
| can_bus.protocol_control_fsm_rx_store_ide_i            | 0x988  | 4      | Auto-extracted signal rx_store_ide_i from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_rx_store_rtr_i            | 0x98c  | 4      | Auto-extracted signal rx_store_rtr_i from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_rx_store_edl_i            | 0x990  | 4      | Auto-extracted signal rx_store_edl_i from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_rx_store_dlc_i            | 0x994  | 4      | Auto-extracted signal rx_store_dlc_i from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_rx_store_esi_i            | 0x998  | 4      | Auto-extracted signal rx_store_esi_i from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_rx_store_brs_i            | 0x99c  | 4      | Auto-extracted signal rx_store_brs_i from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_rx_store_stuff_count_i    | 0x9a0  | 4      | Auto-extracted signal rx_store_stuff_count_i from protocol_control_fsm.vhd    |
| can_bus.protocol_control_fsm_rx_clear_i                | 0x9a4  | 4      | Auto-extracted signal rx_clear_i from protocol_control_fsm.vhd                |
| can_bus.protocol_control_fsm_tx_load_base_id_i         | 0x9a8  | 4      | Auto-extracted signal tx_load_base_id_i from protocol_control_fsm.vhd         |
| can_bus.protocol_control_fsm_tx_load_ext_id_i          | 0x9ac  | 4      | Auto-extracted signal tx_load_ext_id_i from protocol_control_fsm.vhd          |
| can_bus.protocol_control_fsm_tx_load_dlc_i             | 0x9b0  | 4      | Auto-extracted signal tx_load_dlc_i from protocol_control_fsm.vhd             |
| can_bus.protocol_control_fsm_tx_load_data_word_i       | 0x9b4  | 4      | Auto-extracted signal tx_load_data_word_i from protocol_control_fsm.vhd       |
| can_bus.protocol_control_fsm_tx_load_stuff_count_i     | 0x9b8  | 4      | Auto-extracted signal tx_load_stuff_count_i from protocol_control_fsm.vhd     |
| can_bus.protocol_control_fsm_tx_load_crc_i             | 0x9bc  | 4      | Auto-extracted signal tx_load_crc_i from protocol_control_fsm.vhd             |
| can_bus.protocol_control_fsm_tx_shift_ena_i            | 0x9c0  | 4      | Auto-extracted signal tx_shift_ena_i from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_form_err_i                | 0x9c4  | 4      | Auto-extracted signal form_err_i from protocol_control_fsm.vhd                |
| can_bus.protocol_control_fsm_ack_err_i                 | 0x9c8  | 4      | Auto-extracted signal ack_err_i from protocol_control_fsm.vhd                 |
| can_bus.protocol_control_fsm_ack_err_flag              | 0x9cc  | 4      | Auto-extracted signal ack_err_flag from protocol_control_fsm.vhd              |
| can_bus.protocol_control_fsm_ack_err_flag_clr          | 0x9d0  | 4      | Auto-extracted signal ack_err_flag_clr from protocol_control_fsm.vhd          |
| can_bus.protocol_control_fsm_crc_err_i                 | 0x9d4  | 4      | Auto-extracted signal crc_err_i from protocol_control_fsm.vhd                 |
| can_bus.protocol_control_fsm_bit_err_arb_i             | 0x9d8  | 4      | Auto-extracted signal bit_err_arb_i from protocol_control_fsm.vhd             |
| can_bus.protocol_control_fsm_sp_control_switch_data    | 0x9dc  | 4      | Auto-extracted signal sp_control_switch_data from protocol_control_fsm.vhd    |
| can_bus.protocol_control_fsm_sp_control_switch_nominal | 0x9e0  | 4      | Auto-extracted signal sp_control_switch_nominal from protocol_control_fsm.vhd |
| can_bus.protocol_control_fsm_switch_to_ssp             | 0x9e4  | 4      | Auto-extracted signal switch_to_ssp from protocol_control_fsm.vhd             |
| can_bus.protocol_control_fsm_sp_control_ce             | 0x9e8  | 4      | Auto-extracted signal sp_control_ce from protocol_control_fsm.vhd             |
| can_bus.protocol_control_fsm_sp_control_d              | 0x9ec  | 4      | Auto-extracted signal sp_control_d from protocol_control_fsm.vhd              |
| can_bus.protocol_control_fsm_sp_control_q_i            | 0x9f0  | 4      | Auto-extracted signal sp_control_q_i from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_ssp_reset_i               | 0x9f4  | 4      | Auto-extracted signal ssp_reset_i from protocol_control_fsm.vhd               |
| can_bus.protocol_control_fsm_sync_control_d            | 0x9f8  | 4      | Auto-extracted signal sync_control_d from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_sync_control_q            | 0x9fc  | 4      | Auto-extracted signal sync_control_q from protocol_control_fsm.vhd            |
| can_bus.protocol_control_fsm_perform_hsync             | 0xa00  | 4      | Auto-extracted signal perform_hsync from protocol_control_fsm.vhd             |



| Name   | Offset | Length | Description  |
|--|--------|--------|--|
| <u>can_bus.protocol_control_fsm_primary_err_i</u>            | 0xa04  | 4      | Auto-extracted signal primary_err_i from protocol_control_fsm.vhd            |
| <u>can_bus.protocol_control_fsm_err_delim_late_i</u>         | 0xa08  | 4      | Auto-extracted signal err_delim_late_i from protocol_control_fsm.vhd         |
| <u>can_bus.protocol_control_fsm_set_err_active_i</u>         | 0xa0c  | 4      | Auto-extracted signal set_err_active_i from protocol_control_fsm.vhd         |
| <u>can_bus.protocol_control_fsm_set_transmitter_i</u>        | 0xa10  | 4      | Auto-extracted signal set_transmitter_i from protocol_control_fsm.vhd        |
| <u>can_bus.protocol_control_fsm_set_receiver_i</u>           | 0xa14  | 4      | Auto-extracted signal set_receiver_i from protocol_control_fsm.vhd           |
| <u>can_bus.protocol_control_fsm_set_idle_i</u>               | 0xa18  | 4      | Auto-extracted signal set_idle_i from protocol_control_fsm.vhd               |
| <u>can_bus.protocol_control_fsm_first_err_delim_d</u>        | 0xa1c  | 4      | Auto-extracted signal first_err_delim_d from protocol_control_fsm.vhd        |
| <u>can_bus.protocol_control_fsm_first_err_delim_q</u>        | 0xa20  | 4      | Auto-extracted signal first_err_delim_q from protocol_control_fsm.vhd        |
| <u>can_bus.protocol_control_fsm_stuff_enable_set</u>         | 0xa24  | 4      | Auto-extracted signal stuff_enable_set from protocol_control_fsm.vhd         |
| <u>can_bus.protocol_control_fsm_stuff_enable_clear</u>       | 0xa28  | 4      | Auto-extracted signal stuff_enable_clear from protocol_control_fsm.vhd       |
| <u>can_bus.protocol_control_fsm_destuff_enable_set</u>       | 0xa2c  | 4      | Auto-extracted signal destuff_enable_set from protocol_control_fsm.vhd       |
| <u>can_bus.protocol_control_fsm_destuff_enable_clear</u>     | 0xa30  | 4      | Auto-extracted signal destuff_enable_clear from protocol_control_fsm.vhd     |
| <u>can_bus.protocol_control_fsm_bit_err_disable</u>          | 0xa34  | 4      | Auto-extracted signal bit_err_disable from protocol_control_fsm.vhd          |
| <u>can_bus.protocol_control_fsm_bit_err_disable_receiver</u> | 0xa38  | 4      | Auto-extracted signal bit_err_disable_receiver from protocol_control_fsm.vhd |
| <u>can_bus.protocol_control_fsm_sof_pulse_i</u>              | 0xa3c  | 4      | Auto-extracted signal sof_pulse_i from protocol_control_fsm.vhd              |
| <u>can_bus.protocol_control_fsm_compl_ctr_ena_i</u>          | 0xa40  | 4      | Auto-extracted signal compl_ctr_ena_i from protocol_control_fsm.vhd          |
| <u>can_bus.protocol_control_fsm_tick_state_reg</u>           | 0xa44  | 4      | Auto-extracted signal tick_state_reg from protocol_control_fsm.vhd           |
| <u>can_bus.protocol_control_fsm_br_shifted_i</u>             | 0xa48  | 4      | Auto-extracted signal br_shifted_i from protocol_control_fsm.vhd             |
| <u>can_bus.protocol_control_fsm_is_arbitration_i</u>         | 0xa4c  | 4      | Auto-extracted signal is_arbitration_i from protocol_control_fsm.vhd         |
| <u>can_bus.protocol_control_fsm_crc_spec_enable_i</u>        | 0xa50  | 4      | Auto-extracted signal crc_spec_enable_i from protocol_control_fsm.vhd        |
| <u>can_bus.protocol_control_fsm_load_init_vect_i</u>         | 0xa54  | 4      | Auto-extracted signal load_init_vect_i from protocol_control_fsm.vhd         |
| <u>can_bus.protocol_control_fsm_drv_bus_off_reset_q</u>      | 0xa58  | 4      | Auto-extracted signal drv_bus_off_reset_q from protocol_control_fsm.vhd      |
| <u>can_bus.protocol_control_fsm_retr_ctr_clear_i</u>         | 0xa5c  | 4      | Auto-extracted signal retr_ctr_clear_i from protocol_control_fsm.vhd         |
| <u>can_bus.protocol_control_fsm_retr_ctr_add_i</u>           | 0xa60  | 4      | Auto-extracted signal retr_ctr_add_i from protocol_control_fsm.vhd           |
| <u>can_bus.protocol_control_fsm_decrement_rec_i</u>          | 0xa64  | 4      | Auto-extracted signal decrement_rec_i from protocol_control_fsm.vhd          |
| <u>can_bus.protocol_control_fsm_retr_ctr_add_block</u>       | 0xa68  | 4      | Auto-extracted signal retr_ctr_add_block from protocol_control_fsm.vhd       |
| <u>can_bus.protocol_control_fsm_retr_ctr_add_block_clr</u>   | 0xa6c  | 4      | Auto-extracted signal retr_ctr_add_block_clr from protocol_control_fsm.vhd   |
| <u>can_bus.protocol_control_fsm_block_txtb_unlock</u>        | 0xa70  | 4      | Auto-extracted signal block_txtb_unlock from protocol_control_fsm.vhd        |
| <u>can_bus.protocol_control_fsm_tx_frame_no_sof_d</u>        | 0xa74  | 4      | Auto-extracted signal tx_frame_no_sof_d from protocol_control_fsm.vhd        |
| <u>can_bus.protocol_control_fsm_tx_frame_no_sof_q</u>        | 0xa78  | 4      | Auto-extracted signal tx_frame_no_sof_q from protocol_control_fsm.vhd        |
| <u>can_bus.protocol_control_fsm_ctrl_signal_upd</u>          | 0xa7c  | 4      | Auto-extracted signal ctrl_signal_upd from protocol_control_fsm.vhd          |
| <u>can_bus.protocol_control_fsm_clr_bus_off_rst_flg</u>      | 0xa80  | 4      | Auto-extracted signal clr_bus_off_rst_flg from protocol_control_fsm.vhd      |
| <u>can_bus.protocol_control_fsm_pex_on_fdf_enable</u>        | 0xa84  | 4      | Auto-extracted signal pex_on_fdf_enable from protocol_control_fsm.vhd        |
| <u>can_bus.protocol_control_fsm_pex_on_res_enable</u>        | 0xa88  | 4      | Auto-extracted signal pex_on_res_enable from protocol_control_fsm.vhd        |
| <u>can_bus.protocol_control_fsm_rx_data_nbs_prev</u>         | 0xa8c  | 4      | Auto-extracted signal rx_data_nbs_prev from protocol_control_fsm.vhd         |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus.protocol_control_fsm_pexs_set           | 0xa90  | 4      | Auto-extracted signal pexs_set from protocol_control_fsm.vhd           |
| can_bus.protocol_control_fsm_tran_frame_type_i  | 0xa94  | 4      | Auto-extracted signal tran_frame_type_i from protocol_control_fsm.vhd  |
| can_bus.protocol_control_fsm_txtb_clk_en_d      | 0xa98  | 4      | Auto-extracted signal txtb_clk_en_d from protocol_control_fsm.vhd      |
| can_bus.protocol_control_fsm_txtb_clk_en_q      | 0xa9c  | 4      | Auto-extracted signal txtb_clk_en_q from protocol_control_fsm.vhd      |
| can_bus.reintegration_counter_reinteg_ctr_ce    | 0xaa0  | 4      | Auto-extracted signal reinteg_ctr_ce from reintegration_counter.vhd    |
| can_bus.retransmitt_counter_retr_ctr_ce         | 0xaa4  | 4      | Auto-extracted signal retr_ctr_ce from retransmitt_counter.vhd         |
| can_bus.rst_sync_rff                            | 0xaa8  | 4      | Auto-extracted signal rff from rst_sync.vhd                            |
| can_bus.rx_buffer_drv_erase_rx                  | 0xaac  | 4      | Auto-extracted signal drv_erase_rx from rx_buffer.vhd                  |
| can_bus.rx_buffer_drv_read_start                | 0xab0  | 4      | Auto-extracted signal drv_read_start from rx_buffer.vhd                |
| can_bus.rx_buffer_drv_clr_ovr                   | 0xab4  | 4      | Auto-extracted signal drv_clr_ovr from rx_buffer.vhd                   |
| can_bus.rx_buffer_drv_rtsopt                    | 0xab8  | 4      | Auto-extracted signal drv_rtsopt from rx_buffer.vhd                    |
| can_bus.rx_buffer_read_pointer                  | 0xabc  | 4      | Auto-extracted signal read_pointer from rx_buffer.vhd                  |
| can_bus.rx_buffer_read_pointer_inc_1            | 0xac0  | 4      | Auto-extracted signal read_pointer_inc_1 from rx_buffer.vhd            |
| can_bus.rx_buffer_write_pointer                 | 0xac4  | 4      | Auto-extracted signal write_pointer from rx_buffer.vhd                 |
| can_bus.rx_buffer_write_pointer_raw             | 0xac8  | 4      | Auto-extracted signal write_pointer_raw from rx_buffer.vhd             |
| can_bus.rx_buffer_write_pointer_ts              | 0xacc  | 4      | Auto-extracted signal write_pointer_ts from rx_buffer.vhd              |
| can_bus.rx_buffer_rx_mem_free_i                 | 0xad0  | 4      | Auto-extracted signal rx_mem_free_i from rx_buffer.vhd                 |
| can_bus.rx_buffer_memory_write_data             | 0xad4  | 4      | Auto-extracted signal memory_write_data from rx_buffer.vhd             |
| can_bus.rx_buffer_data_overrun_flg              | 0xad8  | 4      | Auto-extracted signal data_overrun_flg from rx_buffer.vhd              |
| can_bus.rx_buffer_data_overrun_i                | 0xadc  | 4      | Auto-extracted signal data_overrun_i from rx_buffer.vhd                |
| can_bus.rx_buffer_overrun_condition             | 0xae0  | 4      | Auto-extracted signal overrun_condition from rx_buffer.vhd             |
| can_bus.rx_buffer_rx_empty_i                    | 0xae4  | 4      | Auto-extracted signal rx_empty_i from rx_buffer.vhd                    |
| can_bus.rx_buffer_is_free_word                  | 0xae8  | 4      | Auto-extracted signal is_free_word from rx_buffer.vhd                  |
| can_bus.rx_buffer_commit_rx_frame               | 0xaec  | 4      | Auto-extracted signal commit_rx_frame from rx_buffer.vhd               |
| can_bus.rx_buffer_commit_overrun_abort          | 0xaf0  | 4      | Auto-extracted signal commit_overrun_abort from rx_buffer.vhd          |
| can_bus.rx_buffer_read_increment                | 0xaf4  | 4      | Auto-extracted signal read_increment from rx_buffer.vhd                |
| can_bus.rx_buffer_write_raw_OK                  | 0xaf8  | 4      | Auto-extracted signal write_raw_OK from rx_buffer.vhd                  |
| can_bus.rx_buffer_write_raw_intent              | 0xafc  | 4      | Auto-extracted signal write_raw_intent from rx_buffer.vhd              |
| can_bus.rx_buffer_write_ts                      | 0xb00  | 4      | Auto-extracted signal write_ts from rx_buffer.vhd                      |
| can_bus.rx_buffer_stored_ts                     | 0xb04  | 4      | Auto-extracted signal stored_ts from rx_buffer.vhd                     |
| can_bus.rx_buffer_data_selector                 | 0xb08  | 4      | Auto-extracted signal data_selector from rx_buffer.vhd                 |
| can_bus.rx_buffer_store_ts_wr_ptr               | 0xb0c  | 4      | Auto-extracted signal store_ts_wr_ptr from rx_buffer.vhd               |
| can_bus.rx_buffer_inc_ts_wr_ptr                 | 0xb10  | 4      | Auto-extracted signal inc_ts_wr_ptr from rx_buffer.vhd                 |
| can_bus.rx_buffer_reset_overrun_flag            | 0xb14  | 4      | Auto-extracted signal reset_overrun_flag from rx_buffer.vhd            |
| can_bus.rx_buffer_frame_form_w                  | 0xb18  | 4      | Auto-extracted signal frame_form_w from rx_buffer.vhd                  |
| can_bus.rx_buffer_timestamp_capture             | 0xb1c  | 4      | Auto-extracted signal timestamp_capture from rx_buffer.vhd             |
| can_bus.rx_buffer_timestamp_capture_ce          | 0xb20  | 4      | Auto-extracted signal timestamp_capture_ce from rx_buffer.vhd          |
| can_bus.rx_buffer_RAM_write                     | 0xb24  | 4      | Auto-extracted signal RAM_write from rx_buffer.vhd                     |
| can_bus.rx_buffer_RAM_data_out                  | 0xb28  | 4      | Auto-extracted signal RAM_data_out from rx_buffer.vhd                  |
| can_bus.rx_buffer_RAM_write_address             | 0xb2c  | 4      | Auto-extracted signal RAM_write_address from rx_buffer.vhd             |
| can_bus.rx_buffer_RAM_read_address              | 0xb30  | 4      | Auto-extracted signal RAM_read_address from rx_buffer.vhd              |
| can_bus.rx_buffer_rx_buf_res_n_d                | 0xb34  | 4      | Auto-extracted signal rx_buf_res_n_d from rx_buffer.vhd                |
| can_bus.rx_buffer_rx_buf_res_n_q                | 0xb38  | 4      | Auto-extracted signal rx_buf_res_n_q from rx_buffer.vhd                |
| can_bus.rx_buffer_rx_buf_res_n_q_scan           | 0xb3c  | 4      | Auto-extracted signal rx_buf_res_n_q_scan from rx_buffer.vhd           |
| can_bus.rx_buffer_rx_buf_ram_clk_en             | 0xb40  | 4      | Auto-extracted signal rx_buf_ram_clk_en from rx_buffer.vhd             |
| can_bus.rx_buffer_clk_ram                       | 0xb44  | 4      | Auto-extracted signal clk_ram from rx_buffer.vhd                       |
| can_bus.rx_buffer_fsm_rx_fsm_ce                 | 0xb48  | 4      | Auto-extracted signal rx_fsm_ce from rx_buffer_fsm.vhd                 |
| can_bus.rx_buffer_fsm_cmd_join                  | 0xb4c  | 4      | Auto-extracted signal cmd_join from rx_buffer_fsm.vhd                  |
| can_bus.rx_buffer_pointers_write_pointer_raw_ce | 0xb50  | 4      | Auto-extracted signal write_pointer_raw_ce from rx_buffer_pointers.vhd |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus. <u>rx_buffer_pointers_write_pointer_ts_ce</u>      | 0xb54  | 4      | Auto-extracted signal write_pointer_ts_ce from rx_buffer_pointers.vhd      |
| can_bus. <u>rx_buffer_ram_port_a_address_i</u>              | 0xb58  | 4      | Auto-extracted signal port_a_address_i from rx_buffer_ram.vhd              |
| can_bus. <u>rx_buffer_ram_port_a_write_i</u>                | 0xb5c  | 4      | Auto-extracted signal port_a_write_i from rx_buffer_ram.vhd                |
| can_bus. <u>rx_buffer_ram_port_a_data_in_i</u>              | 0xb60  | 4      | Auto-extracted signal port_a_data_in_i from rx_buffer_ram.vhd              |
| can_bus. <u>rx_buffer_ram_port_b_address_i</u>              | 0xb64  | 4      | Auto-extracted signal port_b_address_i from rx_buffer_ram.vhd              |
| can_bus. <u>rx_buffer_ram_port_b_data_out_i</u>             | 0xb68  | 4      | Auto-extracted signal port_b_data_out_i from rx_buffer_ram.vhd             |
| can_bus. <u>rx_buffer_ram_tst_ena</u>                       | 0xb6c  | 4      | Auto-extracted signal tst_ena from rx_buffer_ram.vhd                       |
| can_bus. <u>rx_buffer_ram_tst_addr</u>                      | 0xb70  | 4      | Auto-extracted signal tst_addr from rx_buffer_ram.vhd                      |
| can_bus. <u>rx_shift_reg_res_n_i_d</u>                      | 0xb74  | 4      | Auto-extracted signal res_n_i_d from rx_shift_reg.vhd                      |
| can_bus. <u>rx_shift_reg_res_n_i_q</u>                      | 0xb78  | 4      | Auto-extracted signal res_n_i_q from rx_shift_reg.vhd                      |
| can_bus. <u>rx_shift_reg_res_n_i_q_scan</u>                 | 0xb7c  | 4      | Auto-extracted signal res_n_i_q_scan from rx_shift_reg.vhd                 |
| can_bus. <u>rx_shift_reg_rx_shift_reg_q</u>                 | 0xb80  | 4      | Auto-extracted signal rx_shift_reg_q from rx_shift_reg.vhd                 |
| can_bus. <u>rx_shift_reg_rx_shift_cmd</u>                   | 0xb84  | 4      | Auto-extracted signal rx_shift_cmd from rx_shift_reg.vhd                   |
| can_bus. <u>rx_shift_reg_rx_shift_in_sel_demuxed</u>        | 0xb88  | 4      | Auto-extracted signal rx_shift_in_sel_demuxed from rx_shift_reg.vhd        |
| can_bus. <u>rx_shift_reg_rec_is_rtr_i</u>                   | 0xb8c  | 4      | Auto-extracted signal rec_is_rtr_i from rx_shift_reg.vhd                   |
| can_bus. <u>rx_shift_reg_rec_frame_type_i</u>               | 0xb90  | 4      | Auto-extracted signal rec_frame_type_i from rx_shift_reg.vhd               |
| can_bus. <u>sample_mux_sample</u>                           | 0xb94  | 4      | Auto-extracted signal sample from sample_mux.vhd                           |
| can_bus. <u>sample_mux_prev_sample_d</u>                    | 0xb98  | 4      | Auto-extracted signal prev_sample_d from sample_mux.vhd                    |
| can_bus. <u>sample_mux_prev_sample_q</u>                    | 0xb9c  | 4      | Auto-extracted signal prev_sample_q from sample_mux.vhd                    |
| can_bus. <u>segment_end_detector_req_input</u>              | 0xba0  | 4      | Auto-extracted signal req_input from segment_end_detector.vhd              |
| can_bus. <u>segment_end_detector_segm_end_req_capt_d</u>    | 0xba4  | 4      | Auto-extracted signal segm_end_req_capt_d from segment_end_detector.vhd    |
| can_bus. <u>segment_end_detector_segm_end_req_capt_q</u>    | 0xba8  | 4      | Auto-extracted signal segm_end_req_capt_q from segment_end_detector.vhd    |
| can_bus. <u>segment_end_detector_segm_end_req_capt_ce</u>   | 0xbac  | 4      | Auto-extracted signal segm_end_req_capt_ce from segment_end_detector.vhd   |
| can_bus. <u>segment_end_detector_segm_end_req_capt_clr</u>  | 0xbb0  | 4      | Auto-extracted signal segm_end_req_capt_clr from segment_end_detector.vhd  |
| can_bus. <u>segment_end_detector_segm_end_req_capt_dq</u>   | 0xbb4  | 4      | Auto-extracted signal segm_end_req_capt_dq from segment_end_detector.vhd   |
| can_bus. <u>segment_end_detector_segm_end_nbt_valid</u>     | 0xbb8  | 4      | Auto-extracted signal segm_end_nbt_valid from segment_end_detector.vhd     |
| can_bus. <u>segment_end_detector_segm_end_dbt_valid</u>     | 0xbbc  | 4      | Auto-extracted signal segm_end_dbt_valid from segment_end_detector.vhd     |
| can_bus. <u>segment_end_detector_segm_end_nbt_dbt_valid</u> | 0xbc0  | 4      | Auto-extracted signal segm_end_nbt_dbt_valid from segment_end_detector.vhd |
| can_bus. <u>segment_end_detector_tseg1_end_req_valid</u>    | 0xbc4  | 4      | Auto-extracted signal tseg1_end_req_valid from segment_end_detector.vhd    |
| can_bus. <u>segment_end_detector_tseg2_end_req_valid</u>    | 0xbc8  | 4      | Auto-extracted signal tseg2_end_req_valid from segment_end_detector.vhd    |
| can_bus. <u>segment_end_detector_h_sync_valid_i</u>         | 0xbcc  | 4      | Auto-extracted signal h_sync_valid_i from segment_end_detector.vhd         |
| can_bus. <u>segment_end_detector_segment_end_i</u>          | 0xbd0  | 4      | Auto-extracted signal segment_end_i from segment_end_detector.vhd          |
| can_bus. <u>segment_end_detector_nbt_tq_active</u>          | 0xbd4  | 4      | Auto-extracted signal nbt_tq_active from segment_end_detector.vhd          |
| can_bus. <u>segment_end_detector_dbt_tq_active</u>          | 0xbd8  | 4      | Auto-extracted signal dbt_tq_active from segment_end_detector.vhd          |
| can_bus. <u>segment_end_detector_bt_ctr_clear_i</u>         | 0xbdc  | 4      | Auto-extracted signal bt_ctr_clear_i from segment_end_detector.vhd         |
| can_bus. <u>shift_reg_shift_regs</u>                        | 0xbe0  | 4      | Auto-extracted signal shift_regs from shift_reg.vhd                        |
| can_bus. <u>shift_reg_next_shift_reg_val</u>                | 0xbe4  | 4      | Auto-extracted signal next_shift_reg_val from shift_reg.vhd                |
| can_bus. <u>shift_reg_byte_shift_reg_in</u>                 | 0xbe8  | 4      | Auto-extracted signal shift_reg_in from shift_reg_byte.vhd                 |
| can_bus. <u>shift_reg_preload_shift_regs</u>                | 0xbec  | 4      | Auto-extracted signal shift_regs from shift_reg_preload.vhd                |
| can_bus. <u>shift_reg_preload_next_shift_reg_val</u>        | 0xbf0  | 4      | Auto-extracted signal next_shift_reg_val from shift_reg_preload.vhd        |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus.sig_sync_rff                              | 0xbf4  | 4      | Auto-extracted signal rff from sig_sync.vhd                              |
| can_bus.ssp_generator_btmc_d                      | 0xbf8  | 4      | Auto-extracted signal btmc_d from ssp_generator.vhd                      |
| can_bus.ssp_generator_btmc_q                      | 0xbfc  | 4      | Auto-extracted signal btmc_q from ssp_generator.vhd                      |
| can_bus.ssp_generator_btmc_add                    | 0xc00  | 4      | Auto-extracted signal btmc_add from ssp_generator.vhd                    |
| can_bus.ssp_generator_btmc_ce                     | 0xc04  | 4      | Auto-extracted signal btmc_ce from ssp_generator.vhd                     |
| can_bus.ssp_generator_btmc_meas_running_d         | 0xc08  | 4      | Auto-extracted signal btmc_meas_running_d from ssp_generator.vhd         |
| can_bus.ssp_generator_btmc_meas_running_q         | 0xc0c  | 4      | Auto-extracted signal btmc_meas_running_q from ssp_generator.vhd         |
| can_bus.ssp_generator_sspc_d                      | 0xc10  | 4      | Auto-extracted signal sspc_d from ssp_generator.vhd                      |
| can_bus.ssp_generator_sspc_q                      | 0xc14  | 4      | Auto-extracted signal sspc_q from ssp_generator.vhd                      |
| can_bus.ssp_generator_sspc_ce                     | 0xc18  | 4      | Auto-extracted signal sspc_ce from ssp_generator.vhd                     |
| can_bus.ssp_generator_sspc_expired                | 0xc1c  | 4      | Auto-extracted signal sspc_expired from ssp_generator.vhd                |
| can_bus.ssp_generator_sspc_threshold              | 0xc20  | 4      | Auto-extracted signal sspc_threshold from ssp_generator.vhd              |
| can_bus.ssp_generator_sspc_add                    | 0xc24  | 4      | Auto-extracted signal sspc_add from ssp_generator.vhd                    |
| can_bus.ssp_generator_first_ssp_d                 | 0xc28  | 4      | Auto-extracted signal first_ssp_d from ssp_generator.vhd                 |
| can_bus.ssp_generator_first_ssp_q                 | 0xc2c  | 4      | Auto-extracted signal first_ssp_q from ssp_generator.vhd                 |
| can_bus.ssp_generator_sspc_ena_d                  | 0xc30  | 4      | Auto-extracted signal sspc_ena_d from ssp_generator.vhd                  |
| can_bus.ssp_generator_sspc_ena_q                  | 0xc34  | 4      | Auto-extracted signal sspc_ena_q from ssp_generator.vhd                  |
| can_bus.ssp_generator_ssp_delay_padded            | 0xc38  | 4      | Auto-extracted signal ssp_delay_padded from ssp_generator.vhd            |
| can_bus.synchronisation_checker_resync_edge       | 0xc3c  | 4      | Auto-extracted signal resync_edge from synchronisation_checker.vhd       |
| can_bus.synchronisation_checker_h_sync_edge       | 0xc40  | 4      | Auto-extracted signal h_sync_edge from synchronisation_checker.vhd       |
| can_bus.synchronisation_checker_h_or_re_sync_edge | 0xc44  | 4      | Auto-extracted signal h_or_re_sync_edge from synchronisation_checker.vhd |
| can_bus.synchronisation_checker_sync_flag         | 0xc48  | 4      | Auto-extracted signal sync_flag from synchronisation_checker.vhd         |
| can_bus.synchronisation_checker_sync_flag_ce      | 0xc4c  | 4      | Auto-extracted signal sync_flag_ce from synchronisation_checker.vhd      |
| can_bus.synchronisation_checker_sync_flag_nxt     | 0xc50  | 4      | Auto-extracted signal sync_flag_nxt from synchronisation_checker.vhd     |
| can_bus.test_registers_reg_map_reg_sel            | 0xc54  | 4      | Auto-extracted signal reg_sel from test_registers_reg_map.vhd            |
| can_bus.test_registers_reg_map_read_data_mux_in   | 0xc58  | 4      | Auto-extracted signal read_data_mux_in from test_registers_reg_map.vhd   |
| can_bus.test_registers_reg_map_read_data_mask_n   | 0xc5c  | 4      | Auto-extracted signal read_data_mask_n from test_registers_reg_map.vhd   |
| can_bus.test_registers_reg_map_read_mux_ena       | 0xc60  | 4      | Auto-extracted signal read_mux_ena from test_registers_reg_map.vhd       |
| can_bus.trigger_generator_rx_trig_req_q           | 0xc64  | 4      | Auto-extracted signal rx_trig_req_q from trigger_generator.vhd           |
| can_bus.trigger_generator_tx_trig_req_flag_d      | 0xc68  | 4      | Auto-extracted signal tx_trig_req_flag_d from trigger_generator.vhd      |
| can_bus.trigger_generator_tx_trig_req_flag_q      | 0xc6c  | 4      | Auto-extracted signal tx_trig_req_flag_q from trigger_generator.vhd      |
| can_bus.trigger_generator_tx_trig_req_flag_dq     | 0xc70  | 4      | Auto-extracted signal tx_trig_req_flag_dq from trigger_generator.vhd     |
| can_bus.trigger_mux_tx_trigger_q                  | 0xc74  | 4      | Auto-extracted signal tx_trigger_q from trigger_mux.vhd                  |
| can_bus.trv_delay_meas_trv_meas_progress_d        | 0xc78  | 4      | Auto-extracted signal trv_meas_progress_d from trv_delay_meas.vhd        |
| can_bus.trv_delay_meas_trv_meas_progress_q        | 0xc7c  | 4      | Auto-extracted signal trv_meas_progress_q from trv_delay_meas.vhd        |
| can_bus.trv_delay_meas_trv_meas_progress_del      | 0xc80  | 4      | Auto-extracted signal trv_meas_progress_del from trv_delay_meas.vhd      |
| can_bus.trv_delay_meas_trv_delay_ctr_q            | 0xc84  | 4      | Auto-extracted signal trv_delay_ctr_q from trv_delay_meas.vhd            |
| can_bus.trv_delay_meas_trv_delay_ctr_d            | 0xc88  | 4      | Auto-extracted signal trv_delay_ctr_d from trv_delay_meas.vhd            |
| can_bus.trv_delay_meas_trv_delay_ctr_add          | 0xc8c  | 4      | Auto-extracted signal trv_delay_ctr_add from trv_delay_meas.vhd          |
| can_bus.trv_delay_meas_trv_delay_ctr_q_padded     | 0xc90  | 4      | Auto-extracted signal trv_delay_ctr_q_padded from trv_delay_meas.vhd     |
| can_bus.trv_delay_meas_trv_delay_ctr_rst_d        | 0xc94  | 4      | Auto-extracted signal trv_delay_ctr_rst_d from trv_delay_meas.vhd        |
| can_bus.trv_delay_meas_trv_delay_ctr_rst_q        | 0xc98  | 4      | Auto-extracted signal trv_delay_ctr_rst_q from trv_delay_meas.vhd        |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| can_bus. <a href="#"><u>trv_delay_meas_trv_delay_ctr_rst_q_scan</u></a> | 0xc9c  | 4      | Auto-extracted signal trv_delay_ctr_rst_q_scan from trv_delay_meas.vhd |
| can_bus. <a href="#"><u>trv_delay_meas_ssp_shadow_ce</u></a>            | 0xca0  | 4      | Auto-extracted signal ssp_shadow_ce from trv_delay_meas.vhd            |
| can_bus. <a href="#"><u>trv_delay_meas_ssp_delay_raw</u></a>            | 0xca4  | 4      | Auto-extracted signal ssp_delay_raw from trv_delay_meas.vhd            |
| can_bus. <a href="#"><u>trv_delay_meas_ssp_delay_saturated</u></a>      | 0xca8  | 4      | Auto-extracted signal ssp_delay_saturated from trv_delay_meas.vhd      |
| can_bus. <a href="#"><u>trv_delay_meas_trv_delay_sum</u></a>            | 0xcac  | 4      | Auto-extracted signal trv_delay_sum from trv_delay_meas.vhd            |
| can_bus. <a href="#"><u>tx_arbitrator_select_buf_avail</u></a>          | 0xcb0  | 4      | Auto-extracted signal select_buf_avail from tx_arbitrator.vhd          |
| can_bus. <a href="#"><u>tx_arbitrator_txtb_selected_input</u></a>       | 0xcb4  | 4      | Auto-extracted signal txtb_selected_input from tx_arbitrator.vhd       |
| can_bus. <a href="#"><u>tx_arbitrator_txtb_timestamp</u></a>            | 0xcb8  | 4      | Auto-extracted signal txtb_timestamp from tx_arbitrator.vhd            |
| can_bus. <a href="#"><u>tx_arbitrator_timestamp_valid</u></a>           | 0xcbc  | 4      | Auto-extracted signal timestamp_valid from tx_arbitrator.vhd           |
| can_bus. <a href="#"><u>tx_arbitrator_select_index_changed</u></a>      | 0xcc0  | 4      | Auto-extracted signal select_index_changed from tx_arbitrator.vhd      |
| can_bus. <a href="#"><u>tx_arbitrator_validated_buffer</u></a>          | 0xcc4  | 4      | Auto-extracted signal validated_buffer from tx_arbitrator.vhd          |
| can_bus. <a href="#"><u>tx_arbitrator_ts_low_internal</u></a>           | 0xcc8  | 4      | Auto-extracted signal ts_low_internal from tx_arbitrator.vhd           |
| can_bus. <a href="#"><u>tx_arbitrator_tran_dlc_dbl_buf</u></a>          | 0xccc  | 4      | Auto-extracted signal tran_dlc_dbl_buf from tx_arbitrator.vhd          |
| can_bus. <a href="#"><u>tx_arbitrator_tran_is_rtr_dbl_buf</u></a>       | 0xcd0  | 4      | Auto-extracted signal tran_is_rtr_dbl_buf from tx_arbitrator.vhd       |
| can_bus. <a href="#"><u>tx_arbitrator_tran_ident_type_dbl_buf</u></a>   | 0xcd4  | 4      | Auto-extracted signal tran_ident_type_dbl_buf from tx_arbitrator.vhd   |
| can_bus. <a href="#"><u>tx_arbitrator_tran_frame_type_dbl_buf</u></a>   | 0xcd8  | 4      | Auto-extracted signal tran_frame_type_dbl_buf from tx_arbitrator.vhd   |
| can_bus. <a href="#"><u>tx_arbitrator_tran_brs_dbl_buf</u></a>          | 0xcdc  | 4      | Auto-extracted signal tran_brs_dbl_buf from tx_arbitrator.vhd          |
| can_bus. <a href="#"><u>tx_arbitrator_tran_dlc_com</u></a>              | 0xce0  | 4      | Auto-extracted signal tran_dlc_com from tx_arbitrator.vhd              |
| can_bus. <a href="#"><u>tx_arbitrator_tran_is_rtr_com</u></a>           | 0xce4  | 4      | Auto-extracted signal tran_is_rtr_com from tx_arbitrator.vhd           |
| can_bus. <a href="#"><u>tx_arbitrator_tran_ident_type_com</u></a>       | 0xce8  | 4      | Auto-extracted signal tran_ident_type_com from tx_arbitrator.vhd       |
| can_bus. <a href="#"><u>tx_arbitrator_tran_frame_type_com</u></a>       | 0xcec  | 4      | Auto-extracted signal tran_frame_type_com from tx_arbitrator.vhd       |
| can_bus. <a href="#"><u>tx_arbitrator_tran_brs_com</u></a>              | 0xcf0  | 4      | Auto-extracted signal tran_brs_com from tx_arbitrator.vhd              |
| can_bus. <a href="#"><u>tx_arbitrator_tran_frame_valid_com</u></a>      | 0xcf4  | 4      | Auto-extracted signal tran_frame_valid_com from tx_arbitrator.vhd      |
| can_bus. <a href="#"><u>tx_arbitrator_tran_identifier_com</u></a>       | 0xcf8  | 4      | Auto-extracted signal tran_identifier_com from tx_arbitrator.vhd       |
| can_bus. <a href="#"><u>tx_arbitrator_load_ts_lw_addr</u></a>           | 0xcfc  | 4      | Auto-extracted signal load_ts_lw_addr from tx_arbitrator.vhd           |
| can_bus. <a href="#"><u>tx_arbitrator_load_ts_uw_addr</u></a>           | 0xd00  | 4      | Auto-extracted signal load_ts_uw_addr from tx_arbitrator.vhd           |
| can_bus. <a href="#"><u>tx_arbitrator_load_ffmt_w_addr</u></a>          | 0xd04  | 4      | Auto-extracted signal load_ffmt_w_addr from tx_arbitrator.vhd          |
| can_bus. <a href="#"><u>tx_arbitrator_load_ident_w_addr</u></a>         | 0xd08  | 4      | Auto-extracted signal load_ident_w_addr from tx_arbitrator.vhd         |
| can_bus. <a href="#"><u>tx_arbitrator_store_ts_l_w</u></a>              | 0xd0c  | 4      | Auto-extracted signal store_ts_l_w from tx_arbitrator.vhd              |
| can_bus. <a href="#"><u>tx_arbitrator_store_md_w</u></a>                | 0xd10  | 4      | Auto-extracted signal store_md_w from tx_arbitrator.vhd                |
| can_bus. <a href="#"><u>tx_arbitrator_store_ident_w</u></a>             | 0xd14  | 4      | Auto-extracted signal store_ident_w from tx_arbitrator.vhd             |
| can_bus. <a href="#"><u>tx_arbitrator_buffer_md_w</u></a>               | 0xd18  | 4      | Auto-extracted signal buffer_md_w from tx_arbitrator.vhd               |
| can_bus. <a href="#"><u>tx_arbitrator_store_last_txtb_index</u></a>     | 0xd1c  | 4      | Auto-extracted signal store_last_txtb_index from tx_arbitrator.vhd     |
| can_bus. <a href="#"><u>tx_arbitrator_frame_valid_com_set</u></a>       | 0xd20  | 4      | Auto-extracted signal frame_valid_com_set from tx_arbitrator.vhd       |
| can_bus. <a href="#"><u>tx_arbitrator_frame_valid_com_clear</u></a>     | 0xd24  | 4      | Auto-extracted signal frame_valid_com_clear from tx_arbitrator.vhd     |
| can_bus. <a href="#"><u>tx_arbitrator_tx_arb_locked</u></a>             | 0xd28  | 4      | Auto-extracted signal tx_arb_locked from tx_arbitrator.vhd             |
| can_bus. <a href="#"><u>tx_arbitrator_txtb_meta_clk_en</u></a>          | 0xd2c  | 4      | Auto-extracted signal txtb_meta_clk_en from tx_arbitrator.vhd          |
| can_bus. <a href="#"><u>tx_arbitrator_drv_tttm_ena</u></a>              | 0xd30  | 4      | Auto-extracted signal drv_tttm_ena from tx_arbitrator.vhd              |
| can_bus. <a href="#"><u>tx_arbitrator_fsm_tx_arb_fsm_ce</u></a>         | 0xd34  | 4      | Auto-extracted signal tx_arb_fsm_ce from tx_arbitrator_fsm.vhd         |

| Name                                       | Offset | Length | Description   |
|--|--------|--------|---|
| can_bus.tx_arbitrator_fsm_fsm_wait_state_d | 0xd38  | 4      | Auto-extracted signal fsm_wait_state_d from tx_arbitrator_fsm.vhd |
| can_bus.tx_arbitrator_fsm_fsm_wait_state_q | 0xd3c  | 4      | Auto-extracted signal fsm_wait_state_q from tx_arbitrator_fsm.vhd |
| can_bus.tx_data_cache_tx_cache_mem         | 0xd40  | 4      | Auto-extracted signal tx_cache_mem from tx_data_cache.vhd         |
| can_bus.tx_shift_reg_tx_sr_output          | 0xd44  | 4      | Auto-extracted signal tx_sr_output from tx_shift_reg.vhd          |
| can_bus.tx_shift_reg_tx_sr_ce              | 0xd48  | 4      | Auto-extracted signal tx_sr_ce from tx_shift_reg.vhd              |
| can_bus.tx_shift_reg_tx_sr_pload           | 0xd4c  | 4      | Auto-extracted signal tx_sr_pload from tx_shift_reg.vhd           |
| can_bus.tx_shift_reg_tx_sr_pload_val       | 0xd50  | 4      | Auto-extracted signal tx_sr_pload_val from tx_shift_reg.vhd       |
| can_bus.tx_shift_reg_tx_base_id            | 0xd54  | 4      | Auto-extracted signal tx_base_id from tx_shift_reg.vhd            |
| can_bus.tx_shift_reg_tx_ext_id             | 0xd58  | 4      | Auto-extracted signal tx_ext_id from tx_shift_reg.vhd             |
| can_bus.tx_shift_reg_tx_crc                | 0xd5c  | 4      | Auto-extracted signal tx_crc from tx_shift_reg.vhd                |
| can_bus.tx_shift_reg_bst_ctr_grey          | 0xd60  | 4      | Auto-extracted signal bst_ctr_grey from tx_shift_reg.vhd          |
| can_bus.tx_shift_reg_bst_parity            | 0xd64  | 4      | Auto-extracted signal bst_parity from tx_shift_reg.vhd            |
| can_bus.tx_shift_reg_stuff_count           | 0xd68  | 4      | Auto-extracted signal stuff_count from tx_shift_reg.vhd           |
| can_bus.txt_buffer_txtb_user_accessible    | 0xd6c  | 4      | Auto-extracted signal txtb_user_accessible from txt_buffer.vhd    |
| can_bus.txt_buffer_hw_cbs                  | 0xd70  | 4      | Auto-extracted signal hw_cbs from txt_buffer.vhd                  |
| can_bus.txt_buffer_sw_cbs                  | 0xd74  | 4      | Auto-extracted signal sw_cbs from txt_buffer.vhd                  |
| can_bus.txt_buffer_txtb_unmask_data_ram    | 0xd78  | 4      | Auto-extracted signal txtb_unmask_data_ram from txt_buffer.vhd    |
| can_bus.txt_buffer_txtb_port_b_data_i      | 0xd7c  | 4      | Auto-extracted signal txtb_port_b_data_i from txt_buffer.vhd      |
| can_bus.txt_buffer_ram_write               | 0xd80  | 4      | Auto-extracted signal ram_write from txt_buffer.vhd               |
| can_bus.txt_buffer_ram_read_address        | 0xd84  | 4      | Auto-extracted signal ram_read_address from txt_buffer.vhd        |
| can_bus.txt_buffer_txtb_ram_clk_en         | 0xd88  | 4      | Auto-extracted signal txtb_ram_clk_en from txt_buffer.vhd         |
| can_bus.txt_buffer_clk_ram                 | 0xd8c  | 4      | Auto-extracted signal clk_ram from txt_buffer.vhd                 |
| can_bus.txt_buffer_fsm_abort_applied       | 0xd90  | 4      | Auto-extracted signal abort_applied from txt_buffer_fsm.vhd       |
| can_bus.txt_buffer_fsm_txt_fsm_ce          | 0xd94  | 4      | Auto-extracted signal txt_fsm_ce from txt_buffer_fsm.vhd          |
| can_bus.txt_buffer_fsm_go_to_failed        | 0xd98  | 4      | Auto-extracted signal go_to_failed from txt_buffer_fsm.vhd        |
| can_bus.txt_buffer_fsm_transient_state     | 0xd9c  | 4      | Auto-extracted signal transient_state from txt_buffer_fsm.vhd     |
| can_bus.txt_buffer_ram_port_a_address_i    | 0xda0  | 4      | Auto-extracted signal port_a_address_i from txt_buffer_ram.vhd    |
| can_bus.txt_buffer_ram_port_a_write_i      | 0xda4  | 4      | Auto-extracted signal port_a_write_i from txt_buffer_ram.vhd      |
| can_bus.txt_buffer_ram_port_a_data_in_i    | 0xda8  | 4      | Auto-extracted signal port_a_data_in_i from txt_buffer_ram.vhd    |
| can_bus.txt_buffer_ram_port_b_address_i    | 0xdac  | 4      | Auto-extracted signal port_b_address_i from txt_buffer_ram.vhd    |
| can_bus.txt_buffer_ram_port_b_data_out_i   | 0xdb0  | 4      | Auto-extracted signal port_b_data_out_i from txt_buffer_ram.vhd   |
| can_bus.txt_buffer_ram_tst_ena             | 0xdb4  | 4      | Auto-extracted signal tst_ena from txt_buffer_ram.vhd             |
| can_bus.txt_buffer_ram_tst_addr            | 0xdb8  | 4      | Auto-extracted signal tst_addr from txt_buffer_ram.vhd            |
| can_bus.access_signaler_be_active          | 0xdc0  | 4      | Auto-extracted signal be_active from access_signaler.vhd          |
| can_bus.access_signaler_access_in          | 0xdc0  | 4      | Auto-extracted signal access_in from access_signaler.vhd          |
| can_bus.access_signaler_access_active      | 0xdc4  | 4      | Auto-extracted signal access_active from access_signaler.vhd      |
| can_bus.access_signaler_access_active_reg  | 0xdc8  | 4      | Auto-extracted signal access_active_reg from access_signaler.vhd  |
| can_bus.address_decoder_addr_dec_i         | 0xdcc  | 4      | Auto-extracted signal addr_dec_i from address_decoder.vhd         |
| can_bus.address_decoder_addr_dec_enabled_i | 0xdd0  | 4      | Auto-extracted signal addr_dec_enabled_i from address_decoder.vhd |

## ahb\_ifc\_hsel\_valid

Auto-extracted signal hsel\_valid from ahb\_ifc.vhd

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## ahb\_ifc\_write\_acc\_d

Auto-extracted signal write\_acc\_d from ahb\_ifc.vhd

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## ahb\_ifc\_write\_acc\_q

Auto-extracted signal write\_acc\_q from ahb\_ifc.vhd

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## ahb\_ifc\_haddr\_q

Auto-extracted signal haddr\_q from ahb\_ifc.vhd

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## ahb\_ifc\_h\_ready\_raw

Auto-extracted signal h\_ready\_raw from ahb\_ifc.vhd

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

ahb\_ifc\_sbe\_d

Auto-extracted signal sbe\_d from ahb\_ifc.vhd

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

ahb\_ifc\_sbe\_q

Auto-extracted signal sbe\_q from ahb\_ifc.vhd

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

ahb\_ifc\_swr\_i

Auto-extracted signal swr\_i from ahb\_ifc.vhd

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

ahb\_ifc\_srd\_i

Auto-extracted signal srd\_i from ahb\_ifc.vhd

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal



# bit\_destuffing\_discard\_stuff\_bit

Auto-extracted signal discard\_stuff\_bit from bit\_destuffing.vhd

- Offset: 0x24
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_destuffing\_non\_fix\_to\_fix\_chng

Auto-extracted signal non\_fix\_to\_fix\_chng from bit\_destuffing.vhd

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_destuffing\_stuff\_lvl\_reached

Auto-extracted signal stuff\_lvl\_reached from bit\_destuffing.vhd

- Offset: 0x2c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_destuffing\_stuff\_rule\_violate

Auto-extracted signal stuff\_rule\_violate from bit\_destuffing.vhd

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_destuffing\_enable\_prev

Auto-extracted signal enable\_prev from bit\_destuffing.vhd

- Offset: 0x34
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_destuffing\_fixed\_prev\_q

Auto-extracted signal fixed\_prev\_q from bit\_destuffing.vhd

- Offset: 0x38
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_destuffing\_fixed\_prev\_d

Auto-extracted signal fixed\_prev\_d from bit\_destuffing.vhd

- Offset: 0x3c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_destuffing\_same\_bits\_erase

Auto-extracted signal same\_bits\_erase from bit\_destuffing.vhd

- Offset: 0x40
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_destuffing\_destuffed\_q

Auto-extracted signal destuffed\_q from bit\_destuffing.vhd

- **Offset:** 0x44
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_destuffing\_destuffed\_d

Auto-extracted signal destuffed\_d from bit\_destuffing.vhd

- **Offset:** 0x48
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_destuffing\_stuff\_err\_q

Auto-extracted signal stuff\_err\_q from bit\_destuffing.vhd

- **Offset:** 0x4c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_destuffing\_stuff\_err\_d

Auto-extracted signal stuff\_err\_d from bit\_destuffing.vhd

- **Offset:** 0x50
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_destuffing\_prev\_val\_q

Auto-extracted signal prev\_val\_q from bit\_destuffing.vhd

- **Offset:** 0x54
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## bit\_destuffing\_prev\_val\_d

Auto-extracted signal prev\_val\_d from bit\_destuffing.vhd

- **Offset:** 0x58
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## bit\_err\_detector\_bit\_err\_d

Auto-extracted signal bit\_err\_d from bit\_err\_detector.vhd

- **Offset:** 0x5c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## bit\_err\_detector\_bit\_err\_q

Auto-extracted signal bit\_err\_q from bit\_err\_detector.vhd

- **Offset:** 0x60
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## bit\_err\_detector\_bit\_err\_ssp\_capt\_d

Auto-extracted signal bit\_err\_ssp\_capt\_d from bit\_err\_detector.vhd

- **Offset:** 0x64
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_err\_detector\_bit\_err\_ssp\_capt\_q

Auto-extracted signal bit\_err\_ssp\_capt\_q from bit\_err\_detector.vhd

- Offset: 0x68
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_err\_detector\_bit\_err\_ssp\_valid

Auto-extracted signal bit\_err\_ssp\_valid from bit\_err\_detector.vhd

- Offset: 0x6c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_err\_detector\_bit\_err\_ssp\_condition

Auto-extracted signal bit\_err\_ssp\_condition from bit\_err\_detector.vhd

- Offset: 0x70
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_err\_detector\_bit\_err\_norm\_valid

Auto-extracted signal bit\_err\_norm\_valid from bit\_err\_detector.vhd

- Offset: 0x74
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_filter\_masked\_input

Auto-extracted signal masked\_input from bit\_filter.vhd

- Offset: 0x78
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_filter\_masked\_value

Auto-extracted signal masked\_value from bit\_filter.vhd

- Offset: 0x7c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_segment\_meter\_sel\_tseg1

Auto-extracted signal sel\_tseg1 from bit\_segment\_meter.vhd

- Offset: 0x80
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_segment\_meter\_exp\_seg\_length\_ce

Auto-extracted signal exp\_seg\_length\_ce from bit\_segment\_meter.vhd

- Offset: 0x84
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_segment\_meter\_phase\_err\_mt\_sjw

Auto-extracted signal phase\_err\_mt\_sjw from bit\_segment\_meter.vhd

- Offset: 0x88
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_segment\_meter\_phase\_err\_eq\_sjw

Auto-extracted signal phase\_err\_eq\_sjw from bit\_segment\_meter.vhd

- Offset: 0x8c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_segment\_meter\_exit\_ph2\_immediate

Auto-extracted signal exit\_ph2\_immediate from bit\_segment\_meter.vhd

- Offset: 0x90
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_segment\_meter\_exit\_segmn\_regular

Auto-extracted signal exit\_segmn\_regular from bit\_segment\_meter.vhd

- Offset: 0x94
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_segment\_meter\_exit\_segregular\_tseg1

Auto-extracted signal exit\_segregular\_tseg1 from bit\_segment\_meter.vhd

- **Offset:** 0x98
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_segment\_meter\_exit\_segregular\_tseg2

Auto-extracted signal exit\_segregular\_tseg2 from bit\_segment\_meter.vhd

- **Offset:** 0x9c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_segment\_meter\_sjw\_mt\_zero

Auto-extracted signal sjw\_mt\_zero from bit\_segment\_meter.vhd

- **Offset:** 0xa0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_segment\_meter\_use\_basic\_segregular\_length

Auto-extracted signal use\_basic\_segregular\_length from bit\_segment\_meter.vhd

- **Offset:** 0xa4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_segment\_meter\_phase\_err\_sjw\_by\_one



Auto-extracted signal phase\_err\_sjw\_by\_one from bit\_segment\_meter.vhd

- **Offset:** 0xa8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_segment\_meter\_shorten\_tseg1\_after\_tseg2

Auto-extracted signal shorten\_tseg1\_after\_tseg2 from bit\_segment\_meter.vhd

- **Offset:** 0xac
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_stuffing\_data\_out\_i

Auto-extracted signal data\_out\_i from bit\_stuffing.vhd

- **Offset:** 0xb0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_stuffing\_data\_halt\_q

Auto-extracted signal data\_halt\_q from bit\_stuffing.vhd

- **Offset:** 0xb4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_stuffing\_data\_halt\_d

Auto-extracted signal data\_halt\_d from bit\_stuffing.vhd

- **Offset:** 0xb8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_stuffing\_fixed\_reg\_q

Auto-extracted signal fixed\_reg\_q from bit\_stuffing.vhd

- **Offset:** 0xbc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_stuffing\_fixed\_reg\_d

Auto-extracted signal fixed\_reg\_d from bit\_stuffing.vhd

- **Offset:** 0xc0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_stuffing\_enable\_prev

Auto-extracted signal enable\_prev from bit\_stuffing.vhd

- **Offset:** 0xc4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_stuffing\_non\_fix\_to\_fix\_chng

Auto-extracted signal non\_fix\_to\_fix\_chng from bit\_stuffing.vhd

- **Offset:** 0xc8
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_stuffing\_stuff\_lvl\_reached

Auto-extracted signal stuff\_lvl\_reached from bit\_stuffing.vhd

- **Offset:** 0xcc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_stuffing\_same\_bits\_rst\_trig

Auto-extracted signal same\_bits\_rst\_trig from bit\_stuffing.vhd

- **Offset:** 0xd0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_stuffing\_same\_bits\_rst

Auto-extracted signal same\_bits\_rst from bit\_stuffing.vhd

- **Offset:** 0xd4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_stuffing\_insert\_stuff\_bit

Auto-extracted signal insert\_stuff\_bit from bit\_stuffing.vhd

- **Offset:** 0xd8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_stuffing\_data\_out\_d\_ena

Auto-extracted signal data\_out\_d\_ena from bit\_stuffing.vhd

- Offset: 0xdc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_stuffing\_data\_out\_d

Auto-extracted signal data\_out\_d from bit\_stuffing.vhd

- Offset: 0xe0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_stuffing\_data\_out\_ce

Auto-extracted signal data\_out\_ce from bit\_stuffing.vhd

- Offset: 0xe4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_time\_cfg\_capture\_drv\_tq\_nbt

Auto-extracted signal drv\_tq\_nbt from bit\_time\_cfg\_capture.vhd

- Offset: 0xe8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_time\_cfg\_capture\_drv\_prs\_nbt

Auto-extracted signal drv\_prs\_nbt from bit\_time\_cfg\_capture.vhd

- Offset: 0xec
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_time\_cfg\_capture\_drv\_ph1\_nbt

Auto-extracted signal drv\_ph1\_nbt from bit\_time\_cfg\_capture.vhd

- Offset: 0xf0
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_time\_cfg\_capture\_drv\_ph2\_nbt

Auto-extracted signal drv\_ph2\_nbt from bit\_time\_cfg\_capture.vhd

- Offset: 0xf4
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_time\_cfg\_capture\_drv\_sjw\_nbt

Auto-extracted signal drv\_sjw\_nbt from bit\_time\_cfg\_capture.vhd

- Offset: 0xf8
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_time\_cfg\_capture\_drv\_tq\_dbt

Auto-extracted signal drv\_tq\_dbt from bit\_time\_cfg\_capture.vhd

- Offset: 0xfc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_time\_cfg\_capture\_drv\_prs\_dbt

Auto-extracted signal drv\_prs\_dbt from bit\_time\_cfg\_capture.vhd

- Offset: 0x100
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_time\_cfg\_capture\_drv\_ph1\_dbt

Auto-extracted signal drv\_ph1\_dbt from bit\_time\_cfg\_capture.vhd

- Offset: 0x104
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_time\_cfg\_capture\_drv\_ph2\_dbt

Auto-extracted signal drv\_ph2\_dbt from bit\_time\_cfg\_capture.vhd

- Offset: 0x108
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_time\_cfg\_capture\_drv\_sjw\_dbt

Auto-extracted signal drv\_sjw\_dbt from bit\_time\_cfg\_capture.vhd

- **Offset:** 0x10c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_time\_cfg\_capture\_tseg1\_nbt\_d

Auto-extracted signal tseg1\_nbt\_d from bit\_time\_cfg\_capture.vhd

- **Offset:** 0x110
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_time\_cfg\_capture\_tseg1\_dbt\_d

Auto-extracted signal tseg1\_dbt\_d from bit\_time\_cfg\_capture.vhd

- **Offset:** 0x114
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_time\_cfg\_capture\_drv\_ena

Auto-extracted signal drv\_ena from bit\_time\_cfg\_capture.vhd

- **Offset:** 0x118
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bit\_time\_cfg\_capture\_drv\_ena\_reg

Auto-extracted signal drv\_ena\_reg from bit\_time\_cfg\_capture.vhd

- Offset: 0x11c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_time\_cfg\_capture\_drv\_ena\_reg\_2

Auto-extracted signal drv\_ena\_reg\_2 from bit\_time\_cfg\_capture.vhd

- Offset: 0x120
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_time\_cfg\_capture\_capture

Auto-extracted signal capture from bit\_time\_cfg\_capture.vhd

- Offset: 0x124
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_time\_counters\_tq\_counter\_d

Auto-extracted signal tq\_counter\_d from bit\_time\_counters.vhd

- Offset: 0x128
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bit\_time\_counters\_tq\_counter\_q

Auto-extracted signal tq\_counter\_q from bit\_time\_counters.vhd



- **Offset:** 0x12c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_time\_counters\_tq\_counter\_ce

Auto-extracted signal tq\_counter\_ce from bit\_time\_counters.vhd

- **Offset:** 0x130
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_time\_counters\_tq\_counter\_allow

Auto-extracted signal tq\_counter\_allow from bit\_time\_counters.vhd

- **Offset:** 0x134
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_time\_counters\_tq\_edge\_i

Auto-extracted signal tq\_edge\_i from bit\_time\_counters.vhd

- **Offset:** 0x138
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bit\_time\_counters\_segm\_counter\_d

Auto-extracted signal segm\_counter\_d from bit\_time\_counters.vhd

- **Offset:** 0x13c
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_time\_counters\_segmem\_counter\_q

Auto-extracted signal segmem\_counter\_q from bit\_time\_counters.vhd

- **Offset:** 0x140
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_time\_counters\_segmem\_counter\_ce

Auto-extracted signal segmem\_counter\_ce from bit\_time\_counters.vhd

- **Offset:** 0x144
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bit\_time\_fsm\_bt\_fsm\_ce

Auto-extracted signal bt\_fsm\_ce from bit\_time\_fsm.vhd

- **Offset:** 0x148
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bus\_sampling\_drv\_ena

Auto-extracted signal drv\_ena from bus\_sampling.vhd

- **Offset:** 0x14c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bus\_sampling\_drv\_ssp\_offset

Auto-extracted signal drv\_ssp\_offset from bus\_sampling.vhd

- Offset: 0x150
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bus\_sampling\_drv\_ssp\_delay\_select

Auto-extracted signal drv\_ssp\_delay\_select from bus\_sampling.vhd

- Offset: 0x154
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bus\_sampling\_data\_rx\_synced

Auto-extracted signal data\_rx\_synced from bus\_sampling.vhd

- Offset: 0x158
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## bus\_sampling\_prev\_Sample

Auto-extracted signal prev\_Sample from bus\_sampling.vhd

- Offset: 0x15c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bus\_sampling\_sample\_sec\_i

Auto-extracted signal sample\_sec\_i from bus\_sampling.vhd

- **Offset:** 0x160
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bus\_sampling\_data\_tx\_delayed

Auto-extracted signal data\_tx\_delayed from bus\_sampling.vhd

- **Offset:** 0x164
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bus\_sampling\_edge\_rx\_valid

Auto-extracted signal edge\_rx\_valid from bus\_sampling.vhd

- **Offset:** 0x168
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## bus\_sampling\_edge\_tx\_valid

Auto-extracted signal edge\_tx\_valid from bus\_sampling.vhd

- **Offset:** 0x16c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_sampling\_ssp\_delay

Auto-extracted signal ssp\_delay from bus\_sampling.vhd

- Offset: 0x170
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_sampling\_tx\_trigger\_q

Auto-extracted signal tx\_trigger\_q from bus\_sampling.vhd

- Offset: 0x174
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_sampling\_tx\_trigger\_ssp

Auto-extracted signal tx\_trigger\_ssp from bus\_sampling.vhd

- Offset: 0x178
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_sampling\_shift\_regs\_res\_d

Auto-extracted signal shift\_regs\_res\_d from bus\_sampling.vhd

- Offset: 0x17c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bus\_sampling\_shift\_regs\_res\_q

Auto-extracted signal shift\_regs\_res\_q from bus\_sampling.vhd

- Offset: 0x180
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bus\_sampling\_shift\_regs\_res\_q\_scan

Auto-extracted signal shift\_regs\_res\_q\_scan from bus\_sampling.vhd

- Offset: 0x184
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bus\_sampling\_ssp\_enable

Auto-extracted signal ssp\_enable from bus\_sampling.vhd

- Offset: 0x188
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bus\_traffic\_counters\_tx\_ctr\_i

Auto-extracted signal tx\_ctr\_i from bus\_traffic\_counters.vhd

- Offset: 0x18c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# bus\_traffic\_counters\_rx\_ctr\_i

- **Offset:** 0x190
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_traffic\_counters\_tx\_ctr\_rst\_n\_d

Auto-extracted signal tx\_ctr\_rst\_n\_d from bus\_traffic\_counters.vhd

- **Offset:** 0x194
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_traffic\_counters\_tx\_ctr\_rst\_n\_q

Auto-extracted signal tx\_ctr\_rst\_n\_q from bus\_traffic\_counters.vhd

- **Offset:** 0x198
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_traffic\_counters\_tx\_ctr\_rst\_n\_q\_scan

Auto-extracted signal tx\_ctr\_rst\_n\_q\_scan from bus\_traffic\_counters.vhd

- **Offset:** 0x19c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_traffic\_counters\_rx\_ctr\_rst\_n\_d

Auto-extracted signal rx\_ctr\_rst\_n\_d from bus\_traffic\_counters.vhd

- **Offset:** 0x1a0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_traffic\_counters\_rx\_ctr\_rst\_n\_q

Auto-extracted signal rx\_ctr\_rst\_n\_q from bus\_traffic\_counters.vhd

- **Offset:** 0x1a4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

bus\_traffic\_counters\_rx\_ctr\_rst\_n\_q\_scan

Auto-extracted signal rx\_ctr\_rst\_n\_q\_scan from bus\_traffic\_counters.vhd

- **Offset:** 0x1a8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_apb\_tb\_s\_apb\_paddr

Auto-extracted signal s\_apb\_paddr from can\_apb\_tb.vhd

- **Offset:** 0x1ac
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_apb\_tb\_s\_apb\_penable

Auto-extracted signal s\_apb\_penable from can\_apb\_tb.vhd

- **Offset:** 0x1b0
- **Reset default:** 0x0



- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## can\_apb\_tb\_s\_apb\_pprot

Auto-extracted signal s\_apb\_pprot from can\_apb\_tb.vhd

- **Offset:** 0x1b4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## can\_apb\_tb\_s\_apb\_prdata

Auto-extracted signal s\_apb\_prdata from can\_apb\_tb.vhd

- **Offset:** 0x1b8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## can\_apb\_tb\_s\_apb\_pready

Auto-extracted signal s\_apb\_pready from can\_apb\_tb.vhd

- **Offset:** 0x1bc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## can\_apb\_tb\_s\_apb\_psel

Auto-extracted signal s\_apb\_psel from can\_apb\_tb.vhd

- **Offset:** 0x1c0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_apb\_tb\_s\_apb\_pslverr

Auto-extracted signal s\_apb\_pslverr from can\_apb\_tb.vhd

- Offset: 0x1c4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_apb\_tb\_s\_apb\_pstrb

Auto-extracted signal s\_apb\_pstrb from can\_apb\_tb.vhd

- Offset: 0x1c8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_apb\_tb\_s\_apb\_pwdata

Auto-extracted signal s\_apb\_pwdata from can\_apb\_tb.vhd

- Offset: 0x1cc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_apb\_tb\_s\_apb\_pwrite

Auto-extracted signal s\_apb\_pwrite from can\_apb\_tb.vhd

- Offset: 0x1d0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_drv\_clr\_rx\_ctr

Auto-extracted signal drv\_clr\_rx\_ctr from can\_core.vhd

- Offset: 0x1d4
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_drv\_clr\_tx\_ctr

Auto-extracted signal drv\_clr\_tx\_ctr from can\_core.vhd

- Offset: 0x1d8
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_drv\_bus\_mon\_ena

Auto-extracted signal drv\_bus\_mon\_ena from can\_core.vhd

- Offset: 0x1dc
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_drv\_ena

Auto-extracted signal drv\_ena from can\_core.vhd

- Offset: 0x1e0
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_rec\_ident\_i

Auto-extracted signal rec\_ident\_i from can\_core.vhd

- Offset: 0x1e4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_rec\_dlc\_i

Auto-extracted signal rec\_dlc\_i from can\_core.vhd

- Offset: 0x1e8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_rec\_ident\_type\_i

Auto-extracted signal rec\_ident\_type\_i from can\_core.vhd

- Offset: 0x1ec
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_rec\_frame\_type\_i

Auto-extracted signal rec\_frame\_type\_i from can\_core.vhd

- Offset: 0x1f0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_rec\_is\_rtr\_i

Auto-extracted signal rec\_is\_rtr\_i from can\_core.vhd

- Offset: 0x1f4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_rec\_brs\_i

Auto-extracted signal rec\_brs\_i from can\_core.vhd

- Offset: 0x1f8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_rec\_esi\_i

Auto-extracted signal rec\_esi\_i from can\_core.vhd

- Offset: 0x1fc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_alc

Auto-extracted signal alc from can\_core.vhd

- Offset: 0x200
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_erc\_capture

Auto-extracted signal erc\_capture from can\_core.vhd

- **Offset:** 0x204
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_transmitter

Auto-extracted signal is\_transmitter from can\_core.vhd

- **Offset:** 0x208
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_receiver

Auto-extracted signal is\_receiver from can\_core.vhd

- **Offset:** 0x20c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_idle

Auto-extracted signal is\_idle from can\_core.vhd

- **Offset:** 0x210
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_arbitration\_lost\_i

Auto-extracted signal arbitration\_lost\_i from can\_core.vhd

- **Offset:** 0x214
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_set\_transmitter

Auto-extracted signal set\_transmitter from can\_core.vhd

- **Offset:** 0x218
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_set\_receiver

Auto-extracted signal set\_receiver from can\_core.vhd

- **Offset:** 0x21c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_set\_idle

Auto-extracted signal set\_idle from can\_core.vhd

- **Offset:** 0x220
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_is\_err\_active

Auto-extracted signal is\_err\_active from can\_core.vhd

- **Offset:** 0x224
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_err\_passive

Auto-extracted signal is\_err\_passive from can\_core.vhd

- **Offset:** 0x228
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_bus\_off\_i

Auto-extracted signal is\_bus\_off\_i from can\_core.vhd

- **Offset:** 0x22c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_err\_detected\_i

Auto-extracted signal err\_detected\_i from can\_core.vhd

- **Offset:** 0x230
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_primary\_err

Auto-extracted signal primary\_err from can\_core.vhd

- **Offset:** 0x234
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff



## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_act\_err\_ovr\_flag

Auto-extracted signal act\_err\_ovr\_flag from can\_core.vhd

- Offset: 0x238
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_err\_delim\_late

Auto-extracted signal err\_delim\_late from can\_core.vhd

- Offset: 0x23c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_set\_err\_active

Auto-extracted signal set\_err\_active from can\_core.vhd

- Offset: 0x240
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_err\_ctrs\_unchanged

Auto-extracted signal err\_ctrs\_unchanged from can\_core.vhd

- Offset: 0x244
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_stuff\_enable

Auto-extracted signal stuff\_enable from can\_core.vhd

- Offset: 0x248
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_destuff\_enable

Auto-extracted signal destuff\_enable from can\_core.vhd

- Offset: 0x24c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_fixed\_stuff

Auto-extracted signal fixed\_stuff from can\_core.vhd

- Offset: 0x250
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_tx\_frame\_no\_sof

Auto-extracted signal tx\_frame\_no\_sof from can\_core.vhd

- Offset: 0x254
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_stuff\_length

Auto-extracted signal stuff\_length from can\_core.vhd

- Offset: 0x258
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_dst\_ctr

Auto-extracted signal dst\_ctr from can\_core.vhd

- Offset: 0x25c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_bst\_ctr

Auto-extracted signal bst\_ctr from can\_core.vhd

- Offset: 0x260
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_stuff\_err

Auto-extracted signal stuff\_err from can\_core.vhd

- Offset: 0x264
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_crc\_enable

Auto-extracted signal crc\_enable from can\_core.vhd

- Offset: 0x268
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_crc\_spec\_enable

Auto-extracted signal crc\_spec\_enable from can\_core.vhd

- Offset: 0x26c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_crc\_calc\_from\_rx

Auto-extracted signal crc\_calc\_from\_rx from can\_core.vhd

- Offset: 0x270
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_crc\_15

Auto-extracted signal crc\_15 from can\_core.vhd

- Offset: 0x274
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_crc\_17

Auto-extracted signal crc\_17 from can\_core.vhd

- **Offset:** 0x278
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_crc\_21

Auto-extracted signal crc\_21 from can\_core.vhd

- **Offset:** 0x27c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_sp\_control\_i

Auto-extracted signal sp\_control\_i from can\_core.vhd

- **Offset:** 0x280
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_sp\_control\_q

Auto-extracted signal sp\_control\_q from can\_core.vhd

- **Offset:** 0x284
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_sync\_control\_i

Auto-extracted signal sync\_control\_i from can\_core.vhd

- **Offset:** 0x288
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## can\_core\_ssp\_reset\_i

Auto-extracted signal ssp\_reset\_i from can\_core.vhd

- **Offset:** 0x28c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## can\_core\_tran\_delay\_meas\_i

Auto-extracted signal tran\_delay\_meas\_i from can\_core.vhd

- **Offset:** 0x290
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## can\_core\_tran\_valid\_i

Auto-extracted signal tran\_valid\_i from can\_core.vhd

- **Offset:** 0x294
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## can\_core\_rec\_valid\_i

Auto-extracted signal rec\_valid\_i from can\_core.vhd

- **Offset:** 0x298
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## can\_core\_br\_shifted\_i

Auto-extracted signal br\_shifted\_i from can\_core.vhd

- **Offset:** 0x29c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## can\_core\_fcs\_changed\_i

Auto-extracted signal fcs\_changed\_i from can\_core.vhd

- **Offset:** 0x2a0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## can\_core\_err\_warning\_limit\_i

Auto-extracted signal err\_warning\_limit\_i from can\_core.vhd

- **Offset:** 0x2a4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## can\_core\_tx\_err\_ctr

Auto-extracted signal tx\_err\_ctr from can\_core.vhd

- **Offset:** 0x2a8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_rx\_err\_ctr

Auto-extracted signal rx\_err\_ctr from can\_core.vhd

- Offset: 0x2ac
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_norm\_err\_ctr

Auto-extracted signal norm\_err\_ctr from can\_core.vhd

- Offset: 0x2b0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_data\_err\_ctr

Auto-extracted signal data\_err\_ctr from can\_core.vhd

- Offset: 0x2b4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_pc\_tx\_trigger

Auto-extracted signal pc\_tx\_trigger from can\_core.vhd

- Offset: 0x2b8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields



```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_pc\_rx\_trigger

Auto-extracted signal pc\_rx\_trigger from can\_core.vhd

- **Offset:** 0x2bc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_pc\_tx\_data\_nbs

Auto-extracted signal pc\_tx\_data\_nbs from can\_core.vhd

- **Offset:** 0x2c0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_pc\_rx\_data\_nbs

Auto-extracted signal pc\_rx\_data\_nbs from can\_core.vhd

- **Offset:** 0x2c4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_crc\_data\_tx\_wbs

Auto-extracted signal crc\_data\_tx\_wbs from can\_core.vhd

- **Offset:** 0x2c8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_crc\_data\_tx\_nbs

Auto-extracted signal crc\_data\_tx\_nbs from can\_core.vhd

- **Offset:** 0x2cc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_crc\_data\_rx\_wbs

Auto-extracted signal crc\_data\_rx\_wbs from can\_core.vhd

- **Offset:** 0x2d0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_crc\_data\_rx\_nbs

Auto-extracted signal crc\_data\_rx\_nbs from can\_core.vhd

- **Offset:** 0x2d4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_crc\_trig\_tx\_wbs

Auto-extracted signal crc\_trig\_tx\_wbs from can\_core.vhd

- **Offset:** 0x2d8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_crc\_trig\_tx\_nbs

Auto-extracted signal crc\_trig\_tx\_nbs from can\_core.vhd

- **Offset:** 0x2dc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_crc\_trig\_rx\_wbs

Auto-extracted signal crc\_trig\_rx\_wbs from can\_core.vhd

- **Offset:** 0x2e0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_crc\_trig\_rx\_nbs

Auto-extracted signal crc\_trig\_rx\_nbs from can\_core.vhd

- **Offset:** 0x2e4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_bst\_data\_in

Auto-extracted signal bst\_data\_in from can\_core.vhd

- **Offset:** 0x2e8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_bst\_data\_out

Auto-extracted signal bst\_data\_out from can\_core.vhd

- **Offset:** 0x2ec
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_bst\_trigger

Auto-extracted signal bst\_trigger from can\_core.vhd

- **Offset:** 0x2f0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_data\_halt

Auto-extracted signal data\_halt from can\_core.vhd

- **Offset:** 0x2f4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_bds\_data\_in

Auto-extracted signal bds\_data\_in from can\_core.vhd

- **Offset:** 0x2f8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_bds\_data\_out

Auto-extracted signal bds\_data\_out from can\_core.vhd

- **Offset:** 0x2fc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_bds\_trigger

Auto-extracted signal bds\_trigger from can\_core.vhd

- **Offset:** 0x300
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_destuffed

Auto-extracted signal destuffed from can\_core.vhd

- **Offset:** 0x304
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_tx\_ctr

Auto-extracted signal tx\_ctr from can\_core.vhd

- **Offset:** 0x308
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_core\_rx\_ctr

Auto-extracted signal rx\_ctr from can\_core.vhd

- **Offset:** 0x30c
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_tx\_data\_wbs\_i

Auto-extracted signal tx\_data\_wbs\_i from can\_core.vhd

- **Offset:** 0x310
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_lpb\_dominant

Auto-extracted signal lpb\_dominant from can\_core.vhd

- **Offset:** 0x314
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_form\_err

Auto-extracted signal form\_err from can\_core.vhd

- **Offset:** 0x318
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_ack\_err

Auto-extracted signal ack\_err from can\_core.vhd

- **Offset:** 0x31c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_crc\_err

Auto-extracted signal crc\_err from can\_core.vhd

- Offset: 0x320
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_arbitration

Auto-extracted signal is\_arbitration from can\_core.vhd

- Offset: 0x324
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_control

Auto-extracted signal is\_control from can\_core.vhd

- Offset: 0x328
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_data

Auto-extracted signal is\_data from can\_core.vhd

- Offset: 0x32c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_stuff\_count

Auto-extracted signal is\_stuff\_count from can\_core.vhd

- Offset: 0x330
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_crc

Auto-extracted signal is\_crc from can\_core.vhd

- Offset: 0x334
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_crc\_delim

Auto-extracted signal is\_crc\_delim from can\_core.vhd

- Offset: 0x338
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_core\_is\_ack\_field

Auto-extracted signal is\_ack\_field from can\_core.vhd

- Offset: 0x33c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```



Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_is\_ack\_delim

Auto-extracted signal is\_ack\_delim from can\_core.vhd

- Offset: 0x340
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_is\_eof

Auto-extracted signal is\_eof from can\_core.vhd

- Offset: 0x344
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_is\_err\_frm

Auto-extracted signal is\_err\_frm from can\_core.vhd

- Offset: 0x348
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_is\_intermission

Auto-extracted signal is\_intermission from can\_core.vhd

- Offset: 0x34c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_is\_suspend

Auto-extracted signal is\_suspend from can\_core.vhd

- **Offset:** 0x350
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_is\_overload\_i

Auto-extracted signal is\_overload\_i from can\_core.vhd

- **Offset:** 0x354
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_is\_sof

Auto-extracted signal is\_sof from can\_core.vhd

- **Offset:** 0x358
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_sof\_pulse\_i

Auto-extracted signal sof\_pulse\_i from can\_core.vhd

- **Offset:** 0x35c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_core\_load\_init\_vect

Auto-extracted signal load\_init\_vect from can\_core.vhd

- **Offset:** 0x360
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_retr\_ctr\_i

Auto-extracted signal retr\_ctr\_i from can\_core.vhd

- **Offset:** 0x364
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_decrement\_rec

Auto-extracted signal decrement\_rec from can\_core.vhd

- **Offset:** 0x368
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_bit\_err\_after\_ack\_err

Auto-extracted signal bit\_err\_after\_ack\_err from can\_core.vhd

- **Offset:** 0x36c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_core\_is\_pexs

Auto-extracted signal is\_pexs from can\_core.vhd

- **Offset:** 0x370
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_crc\_drv\_fd\_type

Auto-extracted signal drv\_fd\_type from can\_crc.vhd

- **Offset:** 0x374
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_crc\_init\_vect\_15

Auto-extracted signal init\_vect\_15 from can\_crc.vhd

- **Offset:** 0x378
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_crc\_init\_vect\_17

Auto-extracted signal init\_vect\_17 from can\_crc.vhd

- **Offset:** 0x37c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_crc\_init\_vect\_21

Auto-extracted signal init\_vect\_21 from can\_crc.vhd

- **Offset:** 0x380
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_crc\_crc\_17\_21\_data\_in

Auto-extracted signal crc\_17\_21\_data\_in from can\_crc.vhd

- **Offset:** 0x384
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_crc\_crc\_17\_21\_trigger

Auto-extracted signal crc\_17\_21\_trigger from can\_crc.vhd

- **Offset:** 0x388
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_crc\_crc\_15\_data\_in

Auto-extracted signal crc\_15\_data\_in from can\_crc.vhd

- **Offset:** 0x38c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_crc\_crc\_15\_trigger

Auto-extracted signal crc\_15\_trigger from can\_crc.vhd

- **Offset:** 0x390
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_crc\_crc\_ena\_15

Auto-extracted signal crc\_ena\_15 from can\_crc.vhd

- Offset: 0x394
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_crc\_crc\_ena\_17\_21

Auto-extracted signal crc\_ena\_17\_21 from can\_crc.vhd

- Offset: 0x398
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_ahb\_ctu\_can\_data\_in

Auto-extracted signal ctu\_can\_data\_in from can\_top\_ahb.vhd

- Offset: 0x39c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_ahb\_ctu\_can\_data\_out

Auto-extracted signal ctu\_can\_data\_out from can\_top\_ahb.vhd

- Offset: 0x3a0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_ahb\_ctu\_can\_adress

Auto-extracted signal ctu\_can\_adress from can\_top\_ahb.vhd

- Offset: 0x3a4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_ahb\_ctu\_can\_scs

Auto-extracted signal ctu\_can\_scs from can\_top\_ahb.vhd

- Offset: 0x3a8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_ahb\_ctu\_can\_srd

Auto-extracted signal ctu\_can\_srd from can\_top\_ahb.vhd

- Offset: 0x3ac
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_ahb\_ctu\_can\_swr

Auto-extracted signal ctu\_can\_swr from can\_top\_ahb.vhd

- Offset: 0x3b0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_ahb\_ctu\_can\_sbe

Auto-extracted signal ctu\_can\_sbe from can\_top\_ahb.vhd

- Offset: 0x3b4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_ahb\_res\_n\_out\_i

Auto-extracted signal res\_n\_out\_i from can\_top\_ahb.vhd

- Offset: 0x3b8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_apb\_reg\_data\_in

Auto-extracted signal reg\_data\_in from can\_top\_apb.vhd

- Offset: 0x3bc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_apb\_reg\_data\_out

Auto-extracted signal reg\_data\_out from can\_top\_apb.vhd

- Offset: 0x3c0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal



# can\_top\_apb\_reg\_addr

Auto-extracted signal reg\_addr from can\_top\_apb.vhd

- **Offset:** 0x3c4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_apb\_reg\_be

Auto-extracted signal reg\_be from can\_top\_apb.vhd

- **Offset:** 0x3c8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_apb\_reg\_rden

Auto-extracted signal reg\_rden from can\_top\_apb.vhd

- **Offset:** 0x3cc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_apb\_reg\_wren

Auto-extracted signal reg\_wren from can\_top\_apb.vhd

- **Offset:** 0x3d0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_drv\_bus

Auto-extracted signal drv\_bus from can\_top\_level.vhd

- **Offset:** 0x3d4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_stat\_bus

Auto-extracted signal stat\_bus from can\_top\_level.vhd

- **Offset:** 0x3d8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_res\_n\_sync

Auto-extracted signal res\_n\_sync from can\_top\_level.vhd

- **Offset:** 0x3dc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_res\_core\_n

Auto-extracted signal res\_core\_n from can\_top\_level.vhd

- **Offset:** 0x3e0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_res\_soft\_n

Auto-extracted signal res\_soft\_n from can\_top\_level.vhd

- **Offset:** 0x3e4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_sp\_control

Auto-extracted signal sp\_control from can\_top\_level.vhd

- **Offset:** 0x3e8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_rx\_buf\_size

Auto-extracted signal rx\_buf\_size from can\_top\_level.vhd

- **Offset:** 0x3ec
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_rx\_full

Auto-extracted signal rx\_full from can\_top\_level.vhd

- **Offset:** 0x3f0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_rx\_empty

Auto-extracted signal rx\_empty from can\_top\_level.vhd

- **Offset:** 0x3f4
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rx\_frame\_count

Auto-extracted signal rx\_frame\_count from can\_top\_level.vhd

- **Offset:** 0x3f8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rx\_mem\_free

Auto-extracted signal rx\_mem\_free from can\_top\_level.vhd

- **Offset:** 0x3fc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rx\_read\_pointer

Auto-extracted signal rx\_read\_pointer from can\_top\_level.vhd

- **Offset:** 0x400
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rx\_write\_pointer

Auto-extracted signal rx\_write\_pointer from can\_top\_level.vhd

- **Offset:** 0x404
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rx\_data\_overrun

Auto-extracted signal rx\_data\_overrun from can\_top\_level.vhd

- Offset: 0x408
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rx\_read\_buff

Auto-extracted signal rx\_read\_buff from can\_top\_level.vhd

- Offset: 0x40c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rx\_mof

Auto-extracted signal rx\_mof from can\_top\_level.vhd

- Offset: 0x410
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_txtb\_port\_a\_data

Auto-extracted signal txtb\_port\_a\_data from can\_top\_level.vhd

- Offset: 0x414
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## can\_top\_level\_txtb\_port\_a\_address

Auto-extracted signal txtb\_port\_a\_address from can\_top\_level.vhd

- Offset: 0x418
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## can\_top\_level\_txtb\_port\_a\_cs

Auto-extracted signal txtb\_port\_a\_cs from can\_top\_level.vhd

- Offset: 0x41c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## can\_top\_level\_txtb\_port\_a\_be

Auto-extracted signal txtb\_port\_a\_be from can\_top\_level.vhd

- Offset: 0x420
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## can\_top\_level\_txtb\_sw\_cmd\_index

Auto-extracted signal txtb\_sw\_cmd\_index from can\_top\_level.vhd

- Offset: 0x424
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_txt\_buf\_failed\_bof

Auto-extracted signal txt\_buf\_failed\_bof from can\_top\_level.vhd

- Offset: 0x428
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_int\_vector

Auto-extracted signal int\_vector from can\_top\_level.vhd

- Offset: 0x42c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_int\_ena

Auto-extracted signal int\_ena from can\_top\_level.vhd

- Offset: 0x430
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_int\_mask

Auto-extracted signal int\_mask from can\_top\_level.vhd

- Offset: 0x434
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_rec\_ident

Auto-extracted signal rec\_ident from can\_top\_level.vhd

- Offset: 0x438
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_top\_level\_rec\_dlc

Auto-extracted signal rec\_dlc from can\_top\_level.vhd

- Offset: 0x43c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_top\_level\_rec\_ident\_type

Auto-extracted signal rec\_ident\_type from can\_top\_level.vhd

- Offset: 0x440
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_top\_level\_rec\_frame\_type

Auto-extracted signal rec\_frame\_type from can\_top\_level.vhd

- Offset: 0x444
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# can\_top\_level\_rec\_is\_rtr



Auto-extracted signal rec\_is\_rtr from can\_top\_level.vhd

- **Offset:** 0x448
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_rec\_brs

Auto-extracted signal rec\_brs from can\_top\_level.vhd

- **Offset:** 0x44c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_rec\_esi

Auto-extracted signal rec\_esi from can\_top\_level.vhd

- **Offset:** 0x450
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_store\_data\_word

Auto-extracted signal store\_data\_word from can\_top\_level.vhd

- **Offset:** 0x454
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_sof\_pulse

Auto-extracted signal sof\_pulse from can\_top\_level.vhd

- **Offset:** 0x458
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_store\_metadata

Auto-extracted signal store\_metadata from can\_top\_level.vhd

- **Offset:** 0x45c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_store\_data

Auto-extracted signal store\_data from can\_top\_level.vhd

- **Offset:** 0x460
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rec\_valid

Auto-extracted signal rec\_valid from can\_top\_level.vhd

- **Offset:** 0x464
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rec\_abort

Auto-extracted signal rec\_abort from can\_top\_level.vhd

- **Offset:** 0x468
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_store\_metadata\_f

Auto-extracted signal store\_metadata\_f from can\_top\_level.vhd

- **Offset:** 0x46c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_store\_data\_f

Auto-extracted signal store\_data\_f from can\_top\_level.vhd

- **Offset:** 0x470
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rec\_valid\_f

Auto-extracted signal rec\_valid\_f from can\_top\_level.vhd

- **Offset:** 0x474
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rec\_abort\_f

Auto-extracted signal rec\_abort\_f from can\_top\_level.vhd

- **Offset:** 0x478
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_txtb\_hw\_cmd\_int

Auto-extracted signal txtb\_hw\_cmd\_int from can\_top\_level.vhd

- Offset: 0x47c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_is\_bus\_off

Auto-extracted signal is\_bus\_off from can\_top\_level.vhd

- Offset: 0x480
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_txtb\_available

Auto-extracted signal txtb\_available from can\_top\_level.vhd

- Offset: 0x484
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_txtb\_port\_b\_clk\_en

Auto-extracted signal txtb\_port\_b\_clk\_en from can\_top\_level.vhd

- Offset: 0x488
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_tran\_dlc

Auto-extracted signal tran\_dlc from can\_top\_level.vhd

- Offset: 0x48c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_tran\_is\_rtr

Auto-extracted signal tran\_is\_rtr from can\_top\_level.vhd

- Offset: 0x490
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_tran\_ident\_type

Auto-extracted signal tran\_ident\_type from can\_top\_level.vhd

- Offset: 0x494
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_tran\_frame\_type

Auto-extracted signal tran\_frame\_type from can\_top\_level.vhd

- Offset: 0x498
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_tran\_brs

Auto-extracted signal tran\_brs from can\_top\_level.vhd

- Offset: 0x49c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_tran\_identifier

Auto-extracted signal tran\_identifier from can\_top\_level.vhd

- Offset: 0x4a0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_tran\_word

Auto-extracted signal tran\_word from can\_top\_level.vhd

- Offset: 0x4a4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_tran\_frame\_valid

Auto-extracted signal tran\_frame\_valid from can\_top\_level.vhd

- Offset: 0x4a8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_txtb\_changed

Auto-extracted signal txtb\_changed from can\_top\_level.vhd

- **Offset:** 0x4ac
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_txtb\_clk\_en

Auto-extracted signal txtb\_clk\_en from can\_top\_level.vhd

- **Offset:** 0x4b0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_err\_detected

Auto-extracted signal err\_detected from can\_top\_level.vhd

- **Offset:** 0x4b4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_fcs\_changed

Auto-extracted signal fcs\_changed from can\_top\_level.vhd

- **Offset:** 0x4b8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# can\_top\_level\_err\_warning\_limit

Auto-extracted signal err\_warning\_limit from can\_top\_level.vhd

- **Offset:** 0x4bc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_arbitration\_lost

Auto-extracted signal arbitration\_lost from can\_top\_level.vhd

- **Offset:** 0x4c0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_tran\_valid

Auto-extracted signal tran\_valid from can\_top\_level.vhd

- **Offset:** 0x4c4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_br\_shifted

Auto-extracted signal br\_shifted from can\_top\_level.vhd

- **Offset:** 0x4c8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_is\_overload

Auto-extracted signal is\_overload from can\_top\_level.vhd



- **Offset:** 0x4cc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rx\_triggers

Auto-extracted signal rx\_triggers from can\_top\_level.vhd

- **Offset:** 0x4d0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_tx\_trigger

Auto-extracted signal tx\_trigger from can\_top\_level.vhd

- **Offset:** 0x4d4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_sync\_control

Auto-extracted signal sync\_control from can\_top\_level.vhd

- **Offset:** 0x4d8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_no\_pos\_resync

Auto-extracted signal no\_pos\_resync from can\_top\_level.vhd

- **Offset:** 0x4dc
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_nbt\_ctrs\_en

Auto-extracted signal nbt\_ctrs\_en from can\_top\_level.vhd

- **Offset:** 0x4e0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_dbt\_ctrs\_en

Auto-extracted signal dbt\_ctrs\_en from can\_top\_level.vhd

- **Offset:** 0x4e4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_trv\_delay

Auto-extracted signal trv\_delay from can\_top\_level.vhd

- **Offset:** 0x4e8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_rx\_data\_wbs

Auto-extracted signal rx\_data\_wbs from can\_top\_level.vhd

- **Offset:** 0x4ec
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_tx\_data\_wbs

Auto-extracted signal tx\_data\_wbs from can\_top\_level.vhd

- Offset: 0x4f0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_ssp\_reset

Auto-extracted signal ssp\_reset from can\_top\_level.vhd

- Offset: 0x4f4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_tran\_delay\_meas

Auto-extracted signal tran\_delay\_meas from can\_top\_level.vhd

- Offset: 0x4f8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_bit\_err

Auto-extracted signal bit\_err from can\_top\_level.vhd

- Offset: 0x4fc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_sample\_sec

Auto-extracted signal sample\_sec from can\_top\_level.vhd

- Offset: 0x500
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_btmc\_reset

Auto-extracted signal btmc\_reset from can\_top\_level.vhd

- Offset: 0x504
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_dbt\_measure\_start

Auto-extracted signal dbt\_measure\_start from can\_top\_level.vhd

- Offset: 0x508
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## can\_top\_level\_gen\_first\_ssp

Auto-extracted signal gen\_first\_ssp from can\_top\_level.vhd

- Offset: 0x50c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_sync\_edge

Auto-extracted signal sync\_edge from can\_top\_level.vhd

- Offset: 0x510
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_tq\_edge

Auto-extracted signal tq\_edge from can\_top\_level.vhd

- Offset: 0x514
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

can\_top\_level\_tst\_rdata\_rx\_buf

Auto-extracted signal tst\_rdata\_rx\_buf from can\_top\_level.vhd

- Offset: 0x518
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

clk\_gate\_clk\_en\_q

Auto-extracted signal clk\_en\_q from clk\_gate.vhd

- Offset: 0x51c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# control\_counter\_ctrl\_ctr\_ce

Auto-extracted signal ctrl\_ctr\_ce from control\_counter.vhd

- Offset: 0x520
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# control\_counter\_compl\_ctr\_ce

Auto-extracted signal compl\_ctr\_ce from control\_counter.vhd

- Offset: 0x524
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# control\_registers\_reg\_map\_reg\_sel

Auto-extracted signal reg\_sel from control\_registers\_reg\_map.vhd

- Offset: 0x528
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# control\_registers\_reg\_map\_read\_data\_mux\_in

Auto-extracted signal read\_data\_mux\_in from control\_registers\_reg\_map.vhd

- Offset: 0x52c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# control\_registers\_reg\_map\_read\_data\_mask\_n

Auto-extracted signal read\_data\_mask\_n from control\_registers\_reg\_map.vhd

- **Offset:** 0x530
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

control\_registers\_reg\_map\_read\_mux\_ena

Auto-extracted signal read\_mux\_ena from control\_registers\_reg\_map.vhd

- **Offset:** 0x534
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

crc\_calc\_crc\_q

Auto-extracted signal crc\_q from crc\_calc.vhd

- **Offset:** 0x538
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

crc\_calc\_crc\_nxt

Auto-extracted signal crc\_nxt from crc\_calc.vhd

- **Offset:** 0x53c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

crc\_calc\_crc\_shift

Auto-extracted signal crc\_shift from crc\_calc.vhd

- **Offset:** 0x540
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## crc\_calc\_crc\_shift\_n\_xor

Auto-extracted signal `crc_shift_n_xor` from `crc_calc.vhd`

- **Offset:** 0x544
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## crc\_calc\_crc\_d

Auto-extracted signal `crc_d` from `crc_calc.vhd`

- **Offset:** 0x548
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## crc\_calc\_crc\_ce

Auto-extracted signal `crc_ce` from `crc_calc.vhd`

- **Offset:** 0x54c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## data\_edge\_detector\_rx\_data\_prev

Auto-extracted signal `rx_data_prev` from `data_edge_detector.vhd`

- **Offset:** 0x550
- **Reset default:** 0x0



- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## data\_edge\_detector\_tx\_data\_prev

Auto-extracted signal tx\_data\_prev from data\_edge\_detector.vhd

- **Offset:** 0x554
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## data\_edge\_detector\_rx\_data\_sync\_prev

Auto-extracted signal rx\_data\_sync\_prev from data\_edge\_detector.vhd

- **Offset:** 0x558
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## data\_edge\_detector\_rx\_edge\_i

Auto-extracted signal rx\_edge\_i from data\_edge\_detector.vhd

- **Offset:** 0x55c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## data\_edge\_detector\_tx\_edge\_i

Auto-extracted signal tx\_edge\_i from data\_edge\_detector.vhd

- **Offset:** 0x560
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## data\_mux\_sel\_data

Auto-extracted signal sel\_data from data\_mux.vhd

- Offset: 0x564
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## data\_mux\_saturated\_data

Auto-extracted signal saturated\_data from data\_mux.vhd

- Offset: 0x568
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## data\_mux\_masked\_data

Auto-extracted signal masked\_data from data\_mux.vhd

- Offset: 0x56c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## dlc\_decoder\_data\_len\_8\_to\_64

Auto-extracted signal data\_len\_8\_to\_64 from dlc\_decoder.vhd

- Offset: 0x570
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## dlc\_decoder\_data\_len\_can\_2\_0

Auto-extracted signal data\_len\_can\_2\_0 from dlc\_decoder.vhd

- Offset: 0x574
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## dlc\_decoder\_data\_len\_can\_fd

Auto-extracted signal data\_len\_can\_fd from dlc\_decoder.vhd

- Offset: 0x578
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## endian\_swapper\_swapped

Auto-extracted signal swapped from endian\_swapper.vhd

- Offset: 0x57c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_counters\_tx\_err\_ctr\_ce

Auto-extracted signal tx\_err\_ctr\_ce from err\_counters.vhd

- Offset: 0x580
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# err\_counters\_rx\_err\_ctr\_ce

Auto-extracted signal rx\_err\_ctr\_ce from err\_counters.vhd

- Offset: 0x584
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# err\_counters\_modif\_tx\_ctr

Auto-extracted signal modif\_tx\_ctr from err\_counters.vhd

- Offset: 0x588
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# err\_counters\_modif\_rx\_ctr

Auto-extracted signal modif\_rx\_ctr from err\_counters.vhd

- Offset: 0x58c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# err\_counters\_nom\_err\_ctr\_ce

Auto-extracted signal nom\_err\_ctr\_ce from err\_counters.vhd

- Offset: 0x590
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# err\_counters\_data\_err\_ctr\_ce

Auto-extracted signal data\_err\_ctr\_ce from err\_counters.vhd

- Offset: 0x594
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# err\_counters\_res\_err\_ctrs\_d

Auto-extracted signal res\_err\_ctrs\_d from err\_counters.vhd

- Offset: 0x598
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# err\_counters\_res\_err\_ctrs\_q

Auto-extracted signal res\_err\_ctrs\_q from err\_counters.vhd

- Offset: 0x59c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# err\_counters\_res\_err\_ctrs\_q\_scan

Auto-extracted signal res\_err\_ctrs\_q\_scan from err\_counters.vhd

- Offset: 0x5a0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# err\_detector\_err\_frm\_req\_i

- Offset: 0x5a4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

err\_detector\_err\_type\_d

Auto-extracted signal err\_type\_d from err\_detector.vhd

- Offset: 0x5a8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

err\_detector\_err\_type\_q

Auto-extracted signal err\_type\_q from err\_detector.vhd

- Offset: 0x5ac
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

err\_detector\_err\_pos\_q

Auto-extracted signal err\_pos\_q from err\_detector.vhd

- Offset: 0x5b0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

err\_detector\_form\_err\_i

Auto-extracted signal form\_err\_i from err\_detector.vhd

- **Offset:** 0x5b4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## err\_detector\_crc\_match\_c

Auto-extracted signal crc\_match\_c from err\_detector.vhd

- **Offset:** 0x5b8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## err\_detector\_crc\_match\_d

Auto-extracted signal crc\_match\_d from err\_detector.vhd

- **Offset:** 0x5bc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## err\_detector\_crc\_match\_q

Auto-extracted signal crc\_match\_q from err\_detector.vhd

- **Offset:** 0x5c0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## err\_detector\_dst\_ctr\_grey

Auto-extracted signal dst\_ctr\_grey from err\_detector.vhd

- **Offset:** 0x5c4
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_detector\_dst\_parity

Auto-extracted signal dst\_parity from err\_detector.vhd

- **Offset:** 0x5c8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_detector\_stuff\_count\_check

Auto-extracted signal stuff\_count\_check from err\_detector.vhd

- **Offset:** 0x5cc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_detector\_crc\_15\_ok

Auto-extracted signal crc\_15\_ok from err\_detector.vhd

- **Offset:** 0x5d0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_detector\_crc\_17\_ok

Auto-extracted signal crc\_17\_ok from err\_detector.vhd

- **Offset:** 0x5d4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff



## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_detector\_crc\_21\_ok

Auto-extracted signal crc\_21\_ok from err\_detector.vhd

- Offset: 0x5d8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_detector\_stuff\_count\_ok

Auto-extracted signal stuff\_count\_ok from err\_detector.vhd

- Offset: 0x5dc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_detector\_rx\_crc\_15

Auto-extracted signal rx\_crc\_15 from err\_detector.vhd

- Offset: 0x5e0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_detector\_rx\_crc\_17

Auto-extracted signal rx\_crc\_17 from err\_detector.vhd

- Offset: 0x5e4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## err\_detector\_rx\_crc\_21

Auto-extracted signal rx\_crc\_21 from err\_detector.vhd

- Offset: 0x5e8
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## fault\_confinement\_drv\_ewl

Auto-extracted signal drv\_ewl from fault\_confinement.vhd

- Offset: 0x5ec
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## fault\_confinement\_drv\_erp

Auto-extracted signal drv\_erp from fault\_confinement.vhd

- Offset: 0x5f0
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## fault\_confinement\_drv\_ctr\_val

Auto-extracted signal drv\_ctr\_val from fault\_confinement.vhd

- Offset: 0x5f4
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_drv\_ctr\_sel

Auto-extracted signal drv\_ctr\_sel from fault\_confinement.vhd

- Offset: 0x5f8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_drv\_ena

Auto-extracted signal drv\_ena from fault\_confinement.vhd

- Offset: 0x5fc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_tx\_err\_ctr\_i

Auto-extracted signal tx\_err\_ctr\_i from fault\_confinement.vhd

- Offset: 0x600
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_rx\_err\_ctr\_i

Auto-extracted signal rx\_err\_ctr\_i from fault\_confinement.vhd

- Offset: 0x604
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# fault\_confinement\_inc\_one

Auto-extracted signal inc\_one from fault\_confinement.vhd

- Offset: 0x608
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# fault\_confinement\_inc\_eight

Auto-extracted signal inc\_eight from fault\_confinement.vhd

- Offset: 0x60c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# fault\_confinement\_dec\_one

Auto-extracted signal dec\_one from fault\_confinement.vhd

- Offset: 0x610
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# fault\_confinement\_drv\_rom\_ena

Auto-extracted signal drv\_rom\_ena from fault\_confinement.vhd

- Offset: 0x614
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# fault\_confinement\_fsm\_tx\_err\_ctr\_mt\_erp

Auto-extracted signal tx\_err\_ctr\_mt\_erp from fault\_confinement\_fsm.vhd

- Offset: 0x618
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_fsm\_rx\_err\_ctr\_mt\_erp

Auto-extracted signal rx\_err\_ctr\_mt\_erp from fault\_confinement\_fsm.vhd

- Offset: 0x61c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_fsm\_tx\_err\_ctr\_mt\_ewl

Auto-extracted signal tx\_err\_ctr\_mt\_ewl from fault\_confinement\_fsm.vhd

- Offset: 0x620
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_fsm\_rx\_err\_ctr\_mt\_ewl

Auto-extracted signal rx\_err\_ctr\_mt\_ewl from fault\_confinement\_fsm.vhd

- Offset: 0x624
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_fsm\_tx\_err\_ctr\_mt\_255

Auto-extracted signal tx\_err\_ctr\_mt\_255 from fault\_confinement\_fsm.vhd

- **Offset:** 0x628
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

**Bits Type Reset Name Description**  
31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_fsm\_err\_warning\_limit\_d

Auto-extracted signal err\_warning\_limit\_d from fault\_confinement\_fsm.vhd

- **Offset:** 0x62c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

**Bits Type Reset Name Description**  
31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_fsm\_err\_warning\_limit\_q

Auto-extracted signal err\_warning\_limit\_q from fault\_confinement\_fsm.vhd

- **Offset:** 0x630
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

**Bits Type Reset Name Description**  
31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_fsm\_fc\_fsm\_res\_d

Auto-extracted signal fc\_fsm\_res\_d from fault\_confinement\_fsm.vhd

- **Offset:** 0x634
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

**Bits Type Reset Name Description**  
31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

fault\_confinement\_fsm\_fc\_fsm\_res\_q

Auto-extracted signal fc\_fsm\_res\_q from fault\_confinement\_fsm.vhd

- **Offset:** 0x638
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# fault\_confinement\_rules\_inc\_one\_i

Auto-extracted signal inc\_one\_i from fault\_confinement\_rules.vhd

- **Offset:** 0x63c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# fault\_confinement\_rules\_inc\_eight\_i

Auto-extracted signal inc\_eight\_i from fault\_confinement\_rules.vhd

- **Offset:** 0x640
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# frame\_filters\_drv\_filter\_A\_mask

Auto-extracted signal drv\_filter\_A\_mask from frame\_filters.vhd

- **Offset:** 0x644
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# frame\_filters\_drv\_filter\_A\_ctrl

Auto-extracted signal drv\_filter\_A\_ctrl from frame\_filters.vhd

- **Offset:** 0x648
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## frame\_filters\_drv\_filter\_A\_bits

Auto-extracted signal drv\_filter\_A\_bits from frame\_filters.vhd

- Offset: 0x64c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## frame\_filters\_int\_filter\_A\_valid

Auto-extracted signal int\_filter\_A\_valid from frame\_filters.vhd

- Offset: 0x650
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## frame\_filters\_drv\_filter\_B\_mask

Auto-extracted signal drv\_filter\_B\_mask from frame\_filters.vhd

- Offset: 0x654
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## frame\_filters\_drv\_filter\_B\_ctrl

Auto-extracted signal drv\_filter\_B\_ctrl from frame\_filters.vhd

- Offset: 0x658
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields



```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## frame\_filters\_drv\_filter\_B\_bits

Auto-extracted signal drv\_filter\_B\_bits from frame\_filters.vhd

- Offset: 0x65c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## frame\_filters\_int\_filter\_B\_valid

Auto-extracted signal int\_filter\_B\_valid from frame\_filters.vhd

- Offset: 0x660
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## frame\_filters\_drv\_filter\_C\_mask

Auto-extracted signal drv\_filter\_C\_mask from frame\_filters.vhd

- Offset: 0x664
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## frame\_filters\_drv\_filter\_C\_ctrl

Auto-extracted signal drv\_filter\_C\_ctrl from frame\_filters.vhd

- Offset: 0x668
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

frame\_filters\_drv\_filter\_C\_bits

Auto-extracted signal drv\_filter\_C\_bits from frame\_filters.vhd

- Offset: 0x66c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

frame\_filters\_int\_filter\_C\_valid

Auto-extracted signal int\_filter\_C\_valid from frame\_filters.vhd

- Offset: 0x670
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

frame\_filters\_drv\_filter\_ran\_ctrl

Auto-extracted signal drv\_filter\_ran\_ctrl from frame\_filters.vhd

- Offset: 0x674
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

frame\_filters\_drv\_filter\_ran\_lo\_th

Auto-extracted signal drv\_filter\_ran\_lo\_th from frame\_filters.vhd

- Offset: 0x678
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# frame\_filters\_drv\_filter\_ran\_hi\_th

Auto-extracted signal drv\_filter\_ran\_hi\_th from frame\_filters.vhd

- **Offset:** 0x67c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# frame\_filters\_int\_filter\_ran\_valid

Auto-extracted signal int\_filter\_ran\_valid from frame\_filters.vhd

- **Offset:** 0x680
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# frame\_filters\_drv\_filters\_ena

Auto-extracted signal drv\_filters\_ena from frame\_filters.vhd

- **Offset:** 0x684
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# frame\_filters\_int\_data\_type

Auto-extracted signal int\_data\_type from frame\_filters.vhd

- **Offset:** 0x688
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# frame\_filters\_int\_data\_ctrl

Auto-extracted signal int\_data\_ctrl from frame\_filters.vhd

- **Offset:** 0x68c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

frame\_filters\_filter\_A\_enable

Auto-extracted signal filter\_A\_enable from frame\_filters.vhd

- **Offset:** 0x690
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

frame\_filters\_filter\_B\_enable

Auto-extracted signal filter\_B\_enable from frame\_filters.vhd

- **Offset:** 0x694
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

frame\_filters\_filter\_C\_enable

Auto-extracted signal filter\_C\_enable from frame\_filters.vhd

- **Offset:** 0x698
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

frame\_filters\_filter\_range\_enable

Auto-extracted signal filter\_range\_enable from frame\_filters.vhd

- **Offset:** 0x69c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# frame\_filters\_filter\_result

Auto-extracted signal filter\_result from frame\_filters.vhd

- **Offset:** 0x6a0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# frame\_filters\_ident\_valid\_d

Auto-extracted signal ident\_valid\_d from frame\_filters.vhd

- **Offset:** 0x6a4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# frame\_filters\_ident\_valid\_q

Auto-extracted signal ident\_valid\_q from frame\_filters.vhd

- **Offset:** 0x6a8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# frame\_filters\_drv\_drop\_remote\_frames

Auto-extracted signal drv\_drop\_remote\_frames from frame\_filters.vhd

- **Offset:** 0x6ac
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# frame\_filters\_drop\_rtr\_frame

Auto-extracted signal drop\_rtr\_frame from frame\_filters.vhd

- **Offset:** 0x6b0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# inf\_ram\_wrapper\_int\_read\_data

Auto-extracted signal int\_read\_data from inf\_ram\_wrapper.vhd

- **Offset:** 0x6b4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# inf\_ram\_wrapper\_byte\_we

Auto-extracted signal byte\_we from inf\_ram\_wrapper.vhd

- **Offset:** 0x6b8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# int\_manager\_drv\_int\_vect\_clr

Auto-extracted signal drv\_int\_vect\_clr from int\_manager.vhd

- **Offset:** 0x6bc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## int\_manager\_drv\_int\_ena\_set

Auto-extracted signal drv\_int\_ena\_set from int\_manager.vhd

- Offset: 0x6c0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## int\_manager\_drv\_int\_ena\_clr

Auto-extracted signal drv\_int\_ena\_clr from int\_manager.vhd

- Offset: 0x6c4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## int\_manager\_drv\_int\_mask\_set

Auto-extracted signal drv\_int\_mask\_set from int\_manager.vhd

- Offset: 0x6c8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## int\_manager\_drv\_int\_mask\_clr

Auto-extracted signal drv\_int\_mask\_clr from int\_manager.vhd

- Offset: 0x6cc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## int\_manager\_int\_ena\_i

Auto-extracted signal int\_ena\_i from int\_manager.vhd

- **Offset:** 0x6d0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## int\_manager\_int\_mask\_i

Auto-extracted signal int\_mask\_i from int\_manager.vhd

- **Offset:** 0x6d4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## int\_manager\_int\_vect\_i

Auto-extracted signal int\_vect\_i from int\_manager.vhd

- **Offset:** 0x6d8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## int\_manager\_int\_input\_active

Auto-extracted signal int\_input\_active from int\_manager.vhd

- **Offset:** 0x6dc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```



Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

int\_manager\_int\_i

Auto-extracted signal int\_i from int\_manager.vhd

- Offset: 0x6e0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

int\_module\_int\_mask\_i

Auto-extracted signal int\_mask\_i from int\_module.vhd

- Offset: 0x6e4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

int\_module\_int\_ena\_i

Auto-extracted signal int\_ena\_i from int\_module.vhd

- Offset: 0x6e8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

int\_module\_int\_mask\_load

Auto-extracted signal int\_mask\_load from int\_module.vhd

- Offset: 0x6ec
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# int\_module\_int\_mask\_next

Auto-extracted signal int\_mask\_next from int\_module.vhd

- **Offset:** 0x6f0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# memory\_reg\_reg\_value\_r

Auto-extracted signal reg\_value\_r from memory\_reg.vhd

- **Offset:** 0x6f4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# memory\_reg\_wr\_select

Auto-extracted signal wr\_select from memory\_reg.vhd

- **Offset:** 0x6f8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# memory\_reg\_wr\_select\_expanded

Auto-extracted signal wr\_select\_expanded from memory\_reg.vhd

- **Offset:** 0x6fc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# memory\_registers\_status\_comb

Auto-extracted signal status\_comb from memory\_registers.vhd

- **Offset:** 0x700
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_can\_core\_cs

Auto-extracted signal can\_core\_cs from memory\_registers.vhd

- **Offset:** 0x704
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_control\_registers\_cs

Auto-extracted signal control\_registers\_cs from memory\_registers.vhd

- **Offset:** 0x708
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_control\_registers\_cs\_reg

Auto-extracted signal control\_registers\_cs\_reg from memory\_registers.vhd

- **Offset:** 0x70c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_test\_registers\_cs

Auto-extracted signal test\_registers\_cs from memory\_registers.vhd

- **Offset:** 0x710
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_test\_registers\_cs\_reg

Auto-extracted signal test\_registers\_cs\_reg from memory\_registers.vhd

- **Offset:** 0x714
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_control\_registers\_rdata

Auto-extracted signal control\_registers\_rdata from memory\_registers.vhd

- **Offset:** 0x718
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_test\_registers\_rdata

Auto-extracted signal test\_registers\_rdata from memory\_registers.vhd

- **Offset:** 0x71c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_is\_err\_active

Auto-extracted signal is\_err\_active from memory\_registers.vhd

- **Offset:** 0x720
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_is\_err\_passive

Auto-extracted signal is\_err\_passive from memory\_registers.vhd

- **Offset:** 0x724
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_is\_bus\_off

Auto-extracted signal is\_bus\_off from memory\_registers.vhd

- **Offset:** 0x728
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_is\_transmitter

Auto-extracted signal is\_transmitter from memory\_registers.vhd

- **Offset:** 0x72c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_is\_receiver

Auto-extracted signal is\_receiver from memory\_registers.vhd

- **Offset:** 0x730
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_is\_idle

Auto-extracted signal is\_idle from memory\_registers.vhd

- Offset: 0x734
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_reg\_lock\_1\_active

Auto-extracted signal reg\_lock\_1\_active from memory\_registers.vhd

- Offset: 0x738
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_reg\_lock\_2\_active

Auto-extracted signal reg\_lock\_2\_active from memory\_registers.vhd

- Offset: 0x73c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## memory\_registers\_soft\_res\_q\_n

Auto-extracted signal soft\_res\_q\_n from memory\_registers.vhd

- Offset: 0x740
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## memory\_registers\_ewl\_padded

Auto-extracted signal ewl\_padded from memory\_registers.vhd

- Offset: 0x744
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## memory\_registers\_control\_regs\_clk\_en

Auto-extracted signal control\_regs\_clk\_en from memory\_registers.vhd

- Offset: 0x748
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## memory\_registers\_test\_regs\_clk\_en

Auto-extracted signal test\_regs\_clk\_en from memory\_registers.vhd

- Offset: 0x74c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## memory\_registers\_clk\_control\_regs

Auto-extracted signal clk\_control\_regs from memory\_registers.vhd

- Offset: 0x750
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## memory\_registers\_clk\_test\_regs

Auto-extracted signal clk\_test\_regs from memory\_registers.vhd

- Offset: 0x754
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## memory\_registers\_rx\_buf\_mode

Auto-extracted signal rx\_buf\_mode from memory\_registers.vhd

- Offset: 0x758
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## memory\_registers\_rx\_move\_cmd

Auto-extracted signal rx\_move\_cmd from memory\_registers.vhd

- Offset: 0x75c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## memory\_registers\_ctr\_pres\_sel\_q

Auto-extracted signal ctr\_pres\_sel\_q from memory\_registers.vhd

- Offset: 0x760
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |



# operation\_control\_drv\_ena

Auto-extracted signal drv\_ena from operation\_control.vhd

- **Offset:** 0x764
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# operation\_control\_go\_to\_off

Auto-extracted signal go\_to\_off from operation\_control.vhd

- **Offset:** 0x768
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# prescaler\_drv\_ena

Auto-extracted signal drv\_ena from prescaler.vhd

- **Offset:** 0x76c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# prescaler\_tseg1\_nbt

Auto-extracted signal tseg1\_nbt from prescaler.vhd

- **Offset:** 0x770
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# prescaler\_tseg2\_nbt

Auto-extracted signal tseg2\_nbt from prescaler.vhd

- **Offset:** 0x774
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

prescaler\_brp\_nbt

Auto-extracted signal brp\_nbt from prescaler.vhd

- **Offset:** 0x778
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

prescaler\_sjw\_nbt

Auto-extracted signal sjw\_nbt from prescaler.vhd

- **Offset:** 0x77c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

prescaler\_tseg1\_dbt

Auto-extracted signal tseg1\_dbt from prescaler.vhd

- **Offset:** 0x780
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

prescaler\_tseg2\_dbt

Auto-extracted signal tseg2\_dbt from prescaler.vhd

- **Offset:** 0x784
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## prescaler\_brp\_dbt

Auto-extracted signal brp\_dbt from prescaler.vhd

- **Offset:** 0x788
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## prescaler\_sjw\_dbt

Auto-extracted signal sjw\_dbt from prescaler.vhd

- **Offset:** 0x78c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## prescaler\_segment\_end

Auto-extracted signal segment\_end from prescaler.vhd

- **Offset:** 0x790
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## prescaler\_h\_sync\_valid

Auto-extracted signal h\_sync\_valid from prescaler.vhd

- **Offset:** 0x794
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## prescaler\_is\_tseg1

Auto-extracted signal is\_tseg1 from prescaler.vhd

- **Offset:** 0x798
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## prescaler\_is\_tseg2

Auto-extracted signal is\_tseg2 from prescaler.vhd

- **Offset:** 0x79c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## prescaler\_resync\_edge\_valid

Auto-extracted signal resync\_edge\_valid from prescaler.vhd

- **Offset:** 0x7a0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## prescaler\_h\_sync\_edge\_valid

Auto-extracted signal h\_sync\_edge\_valid from prescaler.vhd

- **Offset:** 0x7a4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## prescaler\_seg\_counter\_nbt

Auto-extracted signal segm\_counter\_nbt from prescaler.vhd

- Offset: 0x7a8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## prescaler\_seg\_counter\_dbt

Auto-extracted signal segm\_counter\_dbt from prescaler.vhd

- Offset: 0x7ac
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## prescaler\_exit\_seg\_req\_nbt

Auto-extracted signal exit\_seg\_req\_nbt from prescaler.vhd

- Offset: 0x7b0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## prescaler\_exit\_seg\_req\_dbt

Auto-extracted signal exit\_seg\_req\_dbt from prescaler.vhd

- Offset: 0x7b4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## prescaler\_tq\_edge\_nbt

Auto-extracted signal tq\_edge\_nbt from prescaler.vhd

- **Offset:** 0x7b8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## prescaler\_tq\_edge\_dbt

Auto-extracted signal tq\_edge\_dbt from prescaler.vhd

- **Offset:** 0x7bc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## prescaler\_rx\_trig\_req

Auto-extracted signal rx\_trig\_req from prescaler.vhd

- **Offset:** 0x7c0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## prescaler\_tx\_trig\_req

Auto-extracted signal tx\_trig\_req from prescaler.vhd

- **Offset:** 0x7c4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

prescaler\_start\_edge

Auto-extracted signal start\_edge from prescaler.vhd

- Offset: 0x7c8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

prescaler\_bt\_ctr\_clear

Auto-extracted signal bt\_ctr\_clear from prescaler.vhd

- Offset: 0x7cc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

priority\_decoder\_l0\_valid

Auto-extracted signal l0\_valid from priority\_decoder.vhd

- Offset: 0x7d0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

priority\_decoder\_l1\_valid

Auto-extracted signal l1\_valid from priority\_decoder.vhd

- Offset: 0x7d4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# priority\_decoder\_l1\_winner

Auto-extracted signal l1\_winner from priority\_decoder.vhd

- **Offset:** 0x7d8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# priority\_decoder\_l2\_valid

Auto-extracted signal l2\_valid from priority\_decoder.vhd

- **Offset:** 0x7dc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# priority\_decoder\_l2\_winner

Auto-extracted signal l2\_winner from priority\_decoder.vhd

- **Offset:** 0x7e0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# priority\_decoder\_l3\_valid

Auto-extracted signal l3\_valid from priority\_decoder.vhd

- **Offset:** 0x7e4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# priority\_decoder\_l3\_winner



Auto-extracted signal l3\_winner from priority\_decoder.vhd

- **Offset:** 0x7e8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_can\_fd\_ena

Auto-extracted signal drv\_can\_fd\_ena from protocol\_control.vhd

- **Offset:** 0x7ec
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_bus\_mon\_ena

Auto-extracted signal drv\_bus\_mon\_ena from protocol\_control.vhd

- **Offset:** 0x7f0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_retr\_lim\_ena

Auto-extracted signal drv\_retr\_lim\_ena from protocol\_control.vhd

- **Offset:** 0x7f4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_retr\_th

Auto-extracted signal drv\_retr\_th from protocol\_control.vhd

- **Offset:** 0x7f8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_self\_test\_ena

Auto-extracted signal drv\_self\_test\_ena from protocol\_control.vhd

- **Offset:** 0x7fc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_ack\_forb

Auto-extracted signal drv\_ack\_forb from protocol\_control.vhd

- **Offset:** 0x800
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_ena

Auto-extracted signal drv\_ena from protocol\_control.vhd

- **Offset:** 0x804
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_fd\_type

Auto-extracted signal drv\_fd\_type from protocol\_control.vhd

- **Offset:** 0x808
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_int\_loopback\_ena

Auto-extracted signal drv\_int\_loopback\_ena from protocol\_control.vhd

- **Offset:** 0x80c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_bus\_off\_reset

Auto-extracted signal drv\_bus\_off\_reset from protocol\_control.vhd

- **Offset:** 0x810
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_ssp\_delay\_select

Auto-extracted signal drv\_ssp\_delay\_select from protocol\_control.vhd

- **Offset:** 0x814
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_pex

Auto-extracted signal drv\_pex from protocol\_control.vhd

- **Offset:** 0x818
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_cpexs

Auto-extracted signal drv\_cpexs from protocol\_control.vhd

- Offset: 0x81c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_tran\_word\_swapped

Auto-extracted signal tran\_word\_swapped from protocol\_control.vhd

- Offset: 0x820
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_err\_frm\_req

Auto-extracted signal err\_frm\_req from protocol\_control.vhd

- Offset: 0x824
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_tx\_load\_base\_id

Auto-extracted signal tx\_load\_base\_id from protocol\_control.vhd

- Offset: 0x828
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_tx\_load\_ext\_id

Auto-extracted signal tx\_load\_ext\_id from protocol\_control.vhd

- Offset: 0x82c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_tx\_load\_dlc

Auto-extracted signal tx\_load\_dlc from protocol\_control.vhd

- Offset: 0x830
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_tx\_load\_data\_word

Auto-extracted signal tx\_load\_data\_word from protocol\_control.vhd

- Offset: 0x834
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_tx\_load\_stuff\_count

Auto-extracted signal tx\_load\_stuff\_count from protocol\_control.vhd

- Offset: 0x838
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_tx\_load\_crc

Auto-extracted signal tx\_load\_crc from protocol\_control.vhd

- Offset: 0x83c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_tx\_shift\_ena

Auto-extracted signal tx\_shift\_ena from protocol\_control.vhd

- Offset: 0x840
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_tx\_dominant

Auto-extracted signal tx\_dominant from protocol\_control.vhd

- Offset: 0x844
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_rx\_clear

Auto-extracted signal rx\_clear from protocol\_control.vhd

- Offset: 0x848
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_rx\_store\_base\_id

Auto-extracted signal rx\_store\_base\_id from protocol\_control.vhd

- **Offset:** 0x84c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_rx\_store\_ext\_id

Auto-extracted signal rx\_store\_ext\_id from protocol\_control.vhd

- **Offset:** 0x850
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_rx\_store\_id

Auto-extracted signal rx\_store\_id from protocol\_control.vhd

- **Offset:** 0x854
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_rx\_store\_rtr

Auto-extracted signal rx\_store\_rtr from protocol\_control.vhd

- **Offset:** 0x858
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_rx\_store\_edl

- **Offset:** 0x85c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_rx\_store\_dlc

- **Offset:** 0x860
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_rx\_store\_esi

- **Offset:** 0x864
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_rx\_store\_brs

- **Offset:** 0x868
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_rx\_store\_stuff\_count



- **Offset:** 0x86c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_rx\_shift\_ena

Auto-extracted signal rx\_shift\_ena from protocol\_control.vhd

- **Offset:** 0x870
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_rx\_shift\_in\_sel

Auto-extracted signal rx\_shift\_in\_sel from protocol\_control.vhd

- **Offset:** 0x874
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_rec\_is\_rtr\_i

Auto-extracted signal rec\_is\_rtr\_i from protocol\_control.vhd

- **Offset:** 0x878
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_rec\_dlc\_d

Auto-extracted signal rec\_dlc\_d from protocol\_control.vhd

- **Offset:** 0x87c
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## protocol\_control\_rec\_dlc\_q

Auto-extracted signal rec\_dlc\_q from protocol\_control.vhd

- **Offset:** 0x880
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## protocol\_control\_rec\_frame\_type\_i

Auto-extracted signal rec\_frame\_type\_i from protocol\_control.vhd

- **Offset:** 0x884
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## protocol\_control\_ctrl\_ctr\_pload

Auto-extracted signal ctrl\_ctr\_pload from protocol\_control.vhd

- **Offset:** 0x888
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## protocol\_control\_ctrl\_ctr\_pload\_val

Auto-extracted signal ctrl\_ctr\_pload\_val from protocol\_control.vhd

- **Offset:** 0x88c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_ctrl\_ctr\_ena

Auto-extracted signal ctrl\_ctr\_ena from protocol\_control.vhd

- Offset: 0x890
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_ctrl\_ctr\_zero

Auto-extracted signal ctrl\_ctr\_zero from protocol\_control.vhd

- Offset: 0x894
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_ctrl\_ctr\_one

Auto-extracted signal ctrl\_ctr\_one from protocol\_control.vhd

- Offset: 0x898
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_ctrl\_counted\_byte

Auto-extracted signal ctrl\_counted\_byte from protocol\_control.vhd

- Offset: 0x89c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{ "reg": [{ "name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": { "lanes": 1, "fontsize": 10, "vspace": 80} }
```

| Bits  | Type | Reset | Name     | Description                                  |
|-------|------|-------|----------|--|
| 31:24 | U    | 0     | RESERVED | Reserved for future use.                     |
| 23    | U    | 0     | EN       | Enable bit. When set, the device is enabled. |
| 22    | U    | 0     | RESERVED | Reserved for future use.                     |
| 21    | U    | 0     | RESERVED | Reserved for future use.                     |
| 20    | U    | 0     | RESERVED | Reserved for future use.                     |
| 19    | U    | 0     | RESERVED | Reserved for future use.                     |
| 18    | U    | 0     | RESERVED | Reserved for future use.                     |
| 17    | U    | 0     | RESERVED | Reserved for future use.                     |
| 16    | U    | 0     | RESERVED | Reserved for future use.                     |
| 15    | U    | 0     | RESERVED | Reserved for future use.                     |
| 14    | U    | 0     | RESERVED | Reserved for future use.                     |
| 13    | U    | 0     | RESERVED | Reserved for future use.                     |
| 12    | U    | 0     | RESERVED | Reserved for future use.                     |
| 11    | U    | 0     | RESERVED | Reserved for future use.                     |
| 10    | U    | 0     | RESERVED | Reserved for future use.                     |
| 9     | U    | 0     | RESERVED | Reserved for future use.                     |
| 8     | U    | 0     | RESERVED | Reserved for future use.                     |
| 7     | U    | 0     | RESERVED | Reserved for future use.                     |
| 6     | U    | 0     | RESERVED | Reserved for future use.                     |
| 5     | U    | 0     | RESERVED | Reserved for future use.                     |
| 4     | U    | 0     | RESERVED | Reserved for future use.                     |
| 3     | U    | 0     | RESERVED | Reserved for future use.                     |
| 2     | U    | 0     | RESERVED | Reserved for future use.                     |
| 1     | U    | 0     | RESERVED | Reserved for future use.                     |
| 0     | U    | 0     | RESERVED | Reserved for future use.                     |

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_ctrl\_counted\_byte\_index

Auto-extracted signal ctrl\_counted\_byte\_index from protocol\_control.vho

- Offset: 0x8a0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{ "reg": [{ "name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": { "lanes": 1, "fontsize": 10, "vspace": 80} }
```

| Bits  | Type | Reset | Name      | Description   |
|-------|------|-------|-----------|---|
| 31:24 | U    | 0     | RESERVED  | Reserved for future use.                            |
| 23    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 22    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 21    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 20    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 19    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 18    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 17    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 16    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 15    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 14    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 13    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 12    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 11    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 10    | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 9     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 8     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 7     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 6     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 5     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 4     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 3     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 2     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 1     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |
| 0     | U    | 0     | INTERRUPT | Interrupt flag. When set, the interrupt is pending. |

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_ctrl\_ctr\_mem\_index

Auto-extracted signal ctrl\_ctr\_mem\_index from protocol\_control.vhdl

- Offset: 0x8a4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{ "reg": [{ "name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": { "lanes": 1, "fontsize": 10, "vspace": 80} }
```

| Bits  | Type | Reset | Name              | Description   |
|-------|------|-------|-------------------|---|
| 31:24 | U    | 0     | RESERVED          | Reserved for future use.                                    |
| 23    | U    | 0     | INTERRUPT         | Interrupt flag. When set, the interrupt is pending.         |
| 22    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 21    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 20    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 19    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 18    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 17    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 16    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 15    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 14    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 13    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 12    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 11    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 10    | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 9     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 8     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 7     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 6     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 5     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 4     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 3     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 2     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 1     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |
| 0     | U    | 0     | INTERRUPT_PENDING | Interrupt pending flag. When set, the interrupt is pending. |

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

protocol\_control\_compl\_ctr\_ena

Auto-extracted signal compl ctr ena from protocol control.vho

- Offset: 0x8a8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{ "reg": [{ "name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": { "lanes": 1, "fontsize": 10, "vspace": 80} }
```

| Bits  | Type     | Reset | Name     | Description |
|-------|----------|-------|----------|-------------|
| 15:14 | Reserved | 0     | Reserved | Reserved    |
| 13    | Reserved | 0     | Reserved | Reserved    |
| 12    | Reserved | 0     | Reserved | Reserved    |
| 11    | Reserved | 0     | Reserved | Reserved    |
| 10    | Reserved | 0     | Reserved | Reserved    |
| 9     | Reserved | 0     | Reserved | Reserved    |
| 8     | Reserved | 0     | Reserved | Reserved    |
| 7     | Reserved | 0     | Reserved | Reserved    |
| 6     | Reserved | 0     | Reserved | Reserved    |
| 5     | Reserved | 0     | Reserved | Reserved    |
| 4     | Reserved | 0     | Reserved | Reserved    |
| 3     | Reserved | 0     | Reserved | Reserved    |
| 2     | Reserved | 0     | Reserved | Reserved    |
| 1     | Reserved | 0     | Reserved | Reserved    |
| 0     | Reserved | 0     | Reserved | Reserved    |

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_reinteg\_ctr\_clr

Auto-extracted signal reinteg\_ctr\_clr from protocol\_control.vhd

- Offset: 0x8ac
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{ "reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_reinteg\_ctr\_enable

Auto-extracted signal reinteg\_ctr\_enable from protocol\_control.vhd

- Offset: 0x8b0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_reinteg\_ctr\_expired

Auto-extracted signal reinteg\_ctr\_expired from protocol\_control.vhd

- Offset: 0x8b4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_retr\_ctr\_clear

Auto-extracted signal retr\_ctr\_clear from protocol\_control.vhd

- Offset: 0x8b8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_retr\_ctr\_add

Auto-extracted signal retr\_ctr\_add from protocol\_control.vhd

- Offset: 0x8bc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_retr\_limit\_reached

Auto-extracted signal retr\_limit\_reached from protocol\_control.vhd

- Offset: 0x8c0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# protocol\_control\_form\_err\_i

Auto-extracted signal form\_err\_i from protocol\_control.vhd

- Offset: 0x8c4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# protocol\_control\_ack\_err\_i

Auto-extracted signal ack\_err\_i from protocol\_control.vhd

- Offset: 0x8c8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# protocol\_control\_crc\_check

Auto-extracted signal crc\_check from protocol\_control.vhd

- Offset: 0x8cc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# protocol\_control\_bit\_err\_arb

- **Offset:** 0x8d0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_crc\_match

- **Offset:** 0x8d4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_crc\_err\_i

- **Offset:** 0x8d8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_crc\_clear\_match\_flag

- **Offset:** 0x8dc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_crc\_src

- **Offset:** 0x8e0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

protocol\_control\_err\_pos

Auto-extracted signal err\_pos from protocol\_control.vhd

- **Offset:** 0x8e4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

protocol\_control\_is\_arbitration\_i

Auto-extracted signal is\_arbitration\_i from protocol\_control.vhd

- **Offset:** 0x8e8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

protocol\_control\_bit\_err\_enable

Auto-extracted signal bit\_err\_enable from protocol\_control.vhd

- **Offset:** 0x8ec
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

protocol\_control\_tx\_data\_nbs\_i

Auto-extracted signal tx\_data\_nbs\_i from protocol\_control.vhd

- **Offset:** 0x8f0
- **Reset default:** 0x0



- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_rx\_crc

Auto-extracted signal rx\_crc from protocol\_control.vhd

- **Offset:** 0x8f4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_rx\_stuff\_count

Auto-extracted signal rx\_stuff\_count from protocol\_control.vhd

- **Offset:** 0x8f8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fixed\_stuff\_i

Auto-extracted signal fixed\_stuff\_i from protocol\_control.vhd

- **Offset:** 0x8fc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_arbitration\_lost\_i

Auto-extracted signal arbitration\_lost\_i from protocol\_control.vhd

- **Offset:** 0x900
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_alc\_id\_field

Auto-extracted signal alc\_id\_field from protocol\_control.vhd

- Offset: 0x904
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_drv\_rom\_ena

Auto-extracted signal drv\_rom\_ena from protocol\_control.vhd

- Offset: 0x908
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_state\_reg\_ce

Auto-extracted signal state\_reg\_ce from protocol\_control\_fsm.vhd

- Offset: 0x90c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_no\_data\_transmitter

Auto-extracted signal no\_data\_transmitter from protocol\_control\_fsm.vhd

- Offset: 0x910
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_no\_data\_receiver

Auto-extracted signal no\_data\_receiver from protocol\_control\_fsm.vhd

- Offset: 0x914
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_no\_data\_field

Auto-extracted signal no\_data\_field from protocol\_control\_fsm.vhd

- Offset: 0x918
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_ctrl\_ctr\_pload\_i

Auto-extracted signal ctrl\_ctr\_pload\_i from protocol\_control\_fsm.vhd

- Offset: 0x91c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_ctrl\_ctr\_pload\_unaliged

Auto-extracted signal ctrl\_ctr\_pload\_unaliged from protocol\_control\_fsm.vhd

- Offset: 0x920
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_crc\_use\_21

Auto-extracted signal crc\_use\_21 from protocol\_control\_fsm.vhd

- Offset: 0x924
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_crc\_use\_17

Auto-extracted signal crc\_use\_17 from protocol\_control\_fsm.vhd

- Offset: 0x928
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_crc\_src\_i

Auto-extracted signal crc\_src\_i from protocol\_control\_fsm.vhd

- Offset: 0x92c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_crc\_length\_i

Auto-extracted signal crc\_length\_i from protocol\_control\_fsm.vhd

- Offset: 0x930
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_tran\_data\_length

Auto-extracted signal tran\_data\_length from protocol\_control\_fsm.vhd

- Offset: 0x934
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_rec\_data\_length

Auto-extracted signal rec\_data\_length from protocol\_control\_fsm.vhd

- Offset: 0x938
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_rec\_data\_length\_c

Auto-extracted signal rec\_data\_length\_c from protocol\_control\_fsm.vhd

- Offset: 0x93c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_data\_length\_c

Auto-extracted signal data\_length\_c from protocol\_control\_fsm.vhd

- Offset: 0x940
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_data\_length\_shifted\_c

- Offset: 0x944
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

protocol\_control\_fsm\_data\_length\_bits\_c

- Offset: 0x948
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

protocol\_control\_fsm\_is\_fd\_frame

- Offset: 0x94c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

protocol\_control\_fsm\_frame\_start

- Offset: 0x950
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

protocol\_control\_fsm\_tx\_frame\_ready

- **Offset:** 0x954
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_ide\_is\_arbitration

Auto-extracted signal ide\_is\_arbitration from protocol\_control\_fsm.vhd

- **Offset:** 0x958
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_arbitration\_lost\_condition

Auto-extracted signal arbitration\_lost\_condition from protocol\_control\_fsm.vhd

- **Offset:** 0x95c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_arbitration\_lost\_i

Auto-extracted signal arbitration\_lost\_i from protocol\_control\_fsm.vhd

- **Offset:** 0x960
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_tx\_failed

Auto-extracted signal tx\_failed from protocol\_control\_fsm.vhd

- **Offset:** 0x964
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_store\_metadata\_d

Auto-extracted signal store\_metadata\_d from protocol\_control\_fsm.vhd

- **Offset:** 0x968
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_store\_data\_d

Auto-extracted signal store\_data\_d from protocol\_control\_fsm.vhd

- **Offset:** 0x96c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_rec\_valid\_d

Auto-extracted signal rec\_valid\_d from protocol\_control\_fsm.vhd

- **Offset:** 0x970
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_rec\_abort\_d

Auto-extracted signal rec\_abort\_d from protocol\_control\_fsm.vhd

- **Offset:** 0x974
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff



## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_go\_to\_suspend

Auto-extracted signal go\_to\_suspend from protocol\_control\_fsm.vhd

- Offset: 0x978
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_go\_to\_stuff\_count

Auto-extracted signal go\_to\_stuff\_count from protocol\_control\_fsm.vhd

- Offset: 0x97c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_rx\_store\_base\_id\_i

Auto-extracted signal rx\_store\_base\_id\_i from protocol\_control\_fsm.vhd

- Offset: 0x980
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_rx\_store\_ext\_id\_i

Auto-extracted signal rx\_store\_ext\_id\_i from protocol\_control\_fsm.vhd

- Offset: 0x984
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_rx\_store\_ide\_i

Auto-extracted signal rx\_store\_ide\_i from protocol\_control\_fsm.vhd

- Offset: 0x988
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_rx\_store\_rtr\_i

Auto-extracted signal rx\_store\_rtr\_i from protocol\_control\_fsm.vhd

- Offset: 0x98c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_rx\_store\_edl\_i

Auto-extracted signal rx\_store\_edl\_i from protocol\_control\_fsm.vhd

- Offset: 0x990
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_rx\_store\_dlc\_i

Auto-extracted signal rx\_store\_dlc\_i from protocol\_control\_fsm.vhd

- Offset: 0x994
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_rx\_store\_esi\_i

Auto-extracted signal rx\_store\_esi\_i from protocol\_control\_fsm.vhd

- Offset: 0x998
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_rx\_store\_brs\_i

Auto-extracted signal rx\_store\_brs\_i from protocol\_control\_fsm.vhd

- Offset: 0x99c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_rx\_store\_stuff\_count\_i

Auto-extracted signal rx\_store\_stuff\_count\_i from protocol\_control\_fsm.vhd

- Offset: 0x9a0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_rx\_clear\_i

Auto-extracted signal rx\_clear\_i from protocol\_control\_fsm.vhd

- Offset: 0x9a4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_tx\_load\_base\_id\_i

Auto-extracted signal tx\_load\_base\_id\_i from protocol\_control\_fsm.vhd

- Offset: 0x9a8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_tx\_load\_ext\_id\_i

Auto-extracted signal tx\_load\_ext\_id\_i from protocol\_control\_fsm.vhd

- Offset: 0x9ac
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_tx\_load\_dlc\_i

Auto-extracted signal tx\_load\_dlc\_i from protocol\_control\_fsm.vhd

- Offset: 0x9b0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_tx\_load\_data\_word\_i

Auto-extracted signal tx\_load\_data\_word\_i from protocol\_control\_fsm.vhd

- Offset: 0x9b4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_tx\_load\_stuff\_count\_i

Auto-extracted signal tx\_load\_stuff\_count\_i from protocol\_control\_fsm.vhd

- Offset: 0x9b8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_tx\_load\_crc\_i

Auto-extracted signal tx\_load\_crc\_i from protocol\_control\_fsm.vhd

- Offset: 0x9bc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_tx\_shift\_ena\_i

Auto-extracted signal tx\_shift\_ena\_i from protocol\_control\_fsm.vhd

- Offset: 0x9c0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_form\_err\_i

Auto-extracted signal form\_err\_i from protocol\_control\_fsm.vhd

- Offset: 0x9c4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_ack\_err\_i

Auto-extracted signal ack\_err\_i from protocol\_control\_fsm.vhd

- **Offset:** 0x9c8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# protocol\_control\_fsm\_ack\_err\_flag

Auto-extracted signal ack\_err\_flag from protocol\_control\_fsm.vhd

- **Offset:** 0x9cc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# protocol\_control\_fsm\_ack\_err\_flag\_clr

Auto-extracted signal ack\_err\_flag\_clr from protocol\_control\_fsm.vhd

- **Offset:** 0x9d0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# protocol\_control\_fsm\_crc\_err\_i

Auto-extracted signal crc\_err\_i from protocol\_control\_fsm.vhd

- **Offset:** 0x9d4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# protocol\_control\_fsm\_bit\_err\_arb\_i

Auto-extracted signal bit\_err\_arb\_i from protocol\_control\_fsm.vhd

- **Offset:** 0x9d8
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_sp\_control\_switch\_data

Auto-extracted signal sp\_control\_switch\_data from protocol\_control\_fsm.vhd

- **Offset:** 0x9dc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_sp\_control\_switch\_nominal

Auto-extracted signal sp\_control\_switch\_nominal from protocol\_control\_fsm.vhd

- **Offset:** 0x9e0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_switch\_to\_ssp

Auto-extracted signal switch\_to\_ssp from protocol\_control\_fsm.vhd

- **Offset:** 0x9e4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_sp\_control\_ce

Auto-extracted signal sp\_control\_ce from protocol\_control\_fsm.vhd

- **Offset:** 0x9e8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_sp\_control\_d

Auto-extracted signal sp\_control\_d from protocol\_control\_fsm.vhd

- Offset: 0x9ec
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_sp\_control\_q\_i

Auto-extracted signal sp\_control\_q\_i from protocol\_control\_fsm.vhd

- Offset: 0x9f0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_ssp\_reset\_i

Auto-extracted signal ssp\_reset\_i from protocol\_control\_fsm.vhd

- Offset: 0x9f4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_sync\_control\_d

Auto-extracted signal sync\_control\_d from protocol\_control\_fsm.vhd

- Offset: 0x9f8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields



```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_sync\_control\_q

Auto-extracted signal sync\_control\_q from protocol\_control\_fsm.vhd

- Offset: 0x9fc
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_perform\_hsync

Auto-extracted signal perform\_hsync from protocol\_control\_fsm.vhd

- Offset: 0xa00
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_primary\_err\_i

Auto-extracted signal primary\_err\_i from protocol\_control\_fsm.vhd

- Offset: 0xa04
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_err\_delim\_late\_i

Auto-extracted signal err\_delim\_late\_i from protocol\_control\_fsm.vhd

- Offset: 0xa08
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_set\_err\_active\_i

Auto-extracted signal set\_err\_active\_i from protocol\_control\_fsm.vhd

- Offset: 0xa0c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_set\_transmitter\_i

Auto-extracted signal set\_transmitter\_i from protocol\_control\_fsm.vhd

- Offset: 0xa10
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_set\_receiver\_i

Auto-extracted signal set\_receiver\_i from protocol\_control\_fsm.vhd

- Offset: 0xa14
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_set\_idle\_i

Auto-extracted signal set\_idle\_i from protocol\_control\_fsm.vhd

- Offset: 0xa18
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_first\_err\_delim\_d

Auto-extracted signal first\_err\_delim\_d from protocol\_control\_fsm.vhd

- **Offset:** 0xa1c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_first\_err\_delim\_q

Auto-extracted signal first\_err\_delim\_q from protocol\_control\_fsm.vhd

- **Offset:** 0xa20
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_stuff\_enable\_set

Auto-extracted signal stuff\_enable\_set from protocol\_control\_fsm.vhd

- **Offset:** 0xa24
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_stuff\_enable\_clear

Auto-extracted signal stuff\_enable\_clear from protocol\_control\_fsm.vhd

- **Offset:** 0xa28
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_destuff\_enable\_set

Auto-extracted signal destuff\_enable\_set from protocol\_control\_fsm.vhd

- **Offset:** 0xa2c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_destuff\_enable\_clear

Auto-extracted signal destuff\_enable\_clear from protocol\_control\_fsm.vhd

- **Offset:** 0xa30
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_bit\_err\_disable

Auto-extracted signal bit\_err\_disable from protocol\_control\_fsm.vhd

- **Offset:** 0xa34
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_bit\_err\_disable\_receiver

Auto-extracted signal bit\_err\_disable\_receiver from protocol\_control\_fsm.vhd

- **Offset:** 0xa38
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_sof\_pulse\_i

Auto-extracted signal sof\_pulse\_i from protocol\_control\_fsm.vhd

- **Offset:** 0xa3c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_compl\_ctr\_ena\_i

Auto-extracted signal compl\_ctr\_ena\_i from protocol\_control\_fsm.vhd

- **Offset:** 0xa40
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_tick\_state\_reg

Auto-extracted signal tick\_state\_reg from protocol\_control\_fsm.vhd

- **Offset:** 0xa44
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_br\_shifted\_i

Auto-extracted signal br\_shifted\_i from protocol\_control\_fsm.vhd

- **Offset:** 0xa48
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## protocol\_control\_fsm\_is\_arbitration\_i

Auto-extracted signal is\_arbitration\_i from protocol\_control\_fsm.vhd

- **Offset:** 0xa4c
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_crc\_spec\_enable\_i

Auto-extracted signal crc\_spec\_enable\_i from protocol\_control\_fsm.vhd

- **Offset:** 0xa50
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_load\_init\_vect\_i

Auto-extracted signal load\_init\_vect\_i from protocol\_control\_fsm.vhd

- **Offset:** 0xa54
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_drv\_bus\_off\_reset\_q

Auto-extracted signal drv\_bus\_off\_reset\_q from protocol\_control\_fsm.vhd

- **Offset:** 0xa58
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_retr\_ctr\_clear\_i

Auto-extracted signal retr\_ctr\_clear\_i from protocol\_control\_fsm.vhd

- **Offset:** 0xa5c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_retr\_ctr\_add\_i

Auto-extracted signal retr\_ctr\_add\_i from protocol\_control\_fsm.vhd

- Offset: 0xa60
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_decrement\_rec\_i

Auto-extracted signal decrement\_rec\_i from protocol\_control\_fsm.vhd

- Offset: 0xa64
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_retr\_ctr\_add\_block

Auto-extracted signal retr\_ctr\_add\_block from protocol\_control\_fsm.vhd

- Offset: 0xa68
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_retr\_ctr\_add\_block\_clr

Auto-extracted signal retr\_ctr\_add\_block\_clr from protocol\_control\_fsm.vhd

- Offset: 0xa6c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_block\_txtb\_unlock

Auto-extracted signal block\_txtb\_unlock from protocol\_control\_fsm.vhd

- Offset: 0xa70
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_tx\_frame\_no\_sof\_d

Auto-extracted signal tx\_frame\_no\_sof\_d from protocol\_control\_fsm.vhd

- Offset: 0xa74
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_tx\_frame\_no\_sof\_q

Auto-extracted signal tx\_frame\_no\_sof\_q from protocol\_control\_fsm.vhd

- Offset: 0xa78
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## protocol\_control\_fsm\_ctrl\_signal\_upd

Auto-extracted signal ctrl\_signal\_upd from protocol\_control\_fsm.vhd

- Offset: 0xa7c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```



**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_clr\_bus\_off\_rst\_flg

Auto-extracted signal clr\_bus\_off\_rst\_flg from protocol\_control\_fsm.vhd

- Offset: 0xa80
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_pex\_on\_fdf\_enable

Auto-extracted signal pex\_on\_fdf\_enable from protocol\_control\_fsm.vhd

- Offset: 0xa84
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_pex\_on\_res\_enable

Auto-extracted signal pex\_on\_res\_enable from protocol\_control\_fsm.vhd

- Offset: 0xa88
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

protocol\_control\_fsm\_rx\_data\_nbs\_prev

Auto-extracted signal rx\_data\_nbs\_prev from protocol\_control\_fsm.vhd

- Offset: 0xa8c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_pexs\_set

Auto-extracted signal pexs\_set from protocol\_control\_fsm.vhd

- Offset: 0xa90
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_tran\_frame\_type\_i

Auto-extracted signal tran\_frame\_type\_i from protocol\_control\_fsm.vhd

- Offset: 0xa94
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_txb\_clk\_en\_d

Auto-extracted signal txb\_clk\_en\_d from protocol\_control\_fsm.vhd

- Offset: 0xa98
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# protocol\_control\_fsm\_txb\_clk\_en\_q

Auto-extracted signal txb\_clk\_en\_q from protocol\_control\_fsm.vhd

- Offset: 0xa9c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# reintegration\_counter\_reinteg\_ctr\_ce

Auto-extracted signal reinteg\_ctr\_ce from reintegration\_counter.vhd

- **Offset:** 0xaa0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

retransmitt\_counter\_retr\_ctr\_ce

Auto-extracted signal retr\_ctr\_ce from retransmitt\_counter.vhd

- **Offset:** 0xaa4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rst\_sync\_rff

Auto-extracted signal rff from rst\_sync.vhd

- **Offset:** 0xaa8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_drv\_erase\_rx

Auto-extracted signal drv\_erase\_rx from rx\_buffer.vhd

- **Offset:** 0xaac
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_drv\_read\_start

Auto-extracted signal drv\_read\_start from rx\_buffer.vhd

- **Offset:** 0xab0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## rx\_buffer\_drv\_clr\_ovr

Auto-extracted signal drv\_clr\_ovr from rx\_buffer.vhd

- **Offset:** 0xab4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## rx\_buffer\_drv\_rtsopt

Auto-extracted signal drv\_rtsopt from rx\_buffer.vhd

- **Offset:** 0xab8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## rx\_buffer\_read\_pointer

Auto-extracted signal read\_pointer from rx\_buffer.vhd

- **Offset:** 0xabc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## rx\_buffer\_read\_pointer\_inc\_1

Auto-extracted signal read\_pointer\_inc\_1 from rx\_buffer.vhd

- **Offset:** 0xac0
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## rx\_buffer\_write\_pointer

Auto-extracted signal write\_pointer from rx\_buffer.vhd

- **Offset:** 0xac4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## rx\_buffer\_write\_pointer\_raw

Auto-extracted signal write\_pointer\_raw from rx\_buffer.vhd

- **Offset:** 0xac8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## rx\_buffer\_write\_pointer\_ts

Auto-extracted signal write\_pointer\_ts from rx\_buffer.vhd

- **Offset:** 0xacc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## rx\_buffer\_rx\_mem\_free\_i

Auto-extracted signal rx\_mem\_free\_i from rx\_buffer.vhd

- **Offset:** 0xad0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_memory\_write\_data

Auto-extracted signal memory\_write\_data from rx\_buffer.vhd

- Offset: 0xad4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_data\_overrun\_flg

Auto-extracted signal data\_overrun\_flg from rx\_buffer.vhd

- Offset: 0xad8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_data\_overrun\_i

Auto-extracted signal data\_overrun\_i from rx\_buffer.vhd

- Offset: 0xadc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_overrun\_condition

Auto-extracted signal overrun\_condition from rx\_buffer.vhd

- Offset: 0xae0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_rx\_empty\_i

Auto-extracted signal rx\_empty\_i from rx\_buffer.vhd

- Offset: 0xae4
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_is\_free\_word

Auto-extracted signal is\_free\_word from rx\_buffer.vhd

- Offset: 0xae8
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_commit\_rx\_frame

Auto-extracted signal commit\_rx\_frame from rx\_buffer.vhd

- Offset: 0xaec
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_commit\_overrun\_abort

Auto-extracted signal commit\_overrun\_abort from rx\_buffer.vhd

- Offset: 0xaf0
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_read\_increment

Auto-extracted signal read\_increment from rx\_buffer.vhd

- Offset: 0xaf4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_write\_raw\_OK

Auto-extracted signal write\_raw\_OK from rx\_buffer.vhd

- Offset: 0xaf8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_write\_raw\_intent

Auto-extracted signal write\_raw\_intent from rx\_buffer.vhd

- Offset: 0xafc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_write\_ts

Auto-extracted signal write\_ts from rx\_buffer.vhd

- Offset: 0xb00
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal



# rx\_buffer\_stored\_ts

Auto-extracted signal stored\_ts from rx\_buffer.vhd

- **Offset:** 0xb04
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# rx\_buffer\_data\_selector

Auto-extracted signal data\_selector from rx\_buffer.vhd

- **Offset:** 0xb08
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# rx\_buffer\_store\_ts\_wr\_ptr

Auto-extracted signal store\_ts\_wr\_ptr from rx\_buffer.vhd

- **Offset:** 0xb0c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# rx\_buffer\_inc\_ts\_wr\_ptr

Auto-extracted signal inc\_ts\_wr\_ptr from rx\_buffer.vhd

- **Offset:** 0xb10
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# rx\_buffer\_reset\_overrun\_flag

Auto-extracted signal reset\_overrun\_flag from rx\_buffer.vhd

- **Offset:** 0xb14
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_frame\_form\_w

Auto-extracted signal frame\_form\_w from rx\_buffer.vhd

- **Offset:** 0xb18
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_timestamp\_capture

Auto-extracted signal timestamp\_capture from rx\_buffer.vhd

- **Offset:** 0xb1c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_timestamp\_capture\_ce

Auto-extracted signal timestamp\_capture\_ce from rx\_buffer.vhd

- **Offset:** 0xb20
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_RAM\_write

Auto-extracted signal RAM\_write from rx\_buffer.vhd

- **Offset:** 0xb24
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_RAM\_data\_out

Auto-extracted signal RAM\_data\_out from rx\_buffer.vhd

- **Offset:** 0xb28
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_RAM\_write\_address

Auto-extracted signal RAM\_write\_address from rx\_buffer.vhd

- **Offset:** 0xb2c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_RAM\_read\_address

Auto-extracted signal RAM\_read\_address from rx\_buffer.vhd

- **Offset:** 0xb30
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_rx\_buf\_res\_n\_d

Auto-extracted signal rx\_buf\_res\_n\_d from rx\_buffer.vhd

- **Offset:** 0xb34
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# rx\_buffer\_rx\_buf\_res\_n\_q

Auto-extracted signal rx\_buf\_res\_n\_q from rx\_buffer.vhd

- **Offset:** 0xb38
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# rx\_buffer\_rx\_buf\_res\_n\_q\_scan

Auto-extracted signal rx\_buf\_res\_n\_q\_scan from rx\_buffer.vhd

- **Offset:** 0xb3c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# rx\_buffer\_rx\_buf\_ram\_clk\_en

Auto-extracted signal rx\_buf\_ram\_clk\_en from rx\_buffer.vhd

- **Offset:** 0xb40
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

# rx\_buffer\_clk\_ram

Auto-extracted signal clk\_ram from rx\_buffer.vhd

- **Offset:** 0xb44
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_fsm\_rx\_fsm\_ce

Auto-extracted signal rx\_fsm\_ce from rx\_buffer\_fsm.vhd

- Offset: 0xb48
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_fsm\_cmd\_join

Auto-extracted signal cmd\_join from rx\_buffer\_fsm.vhd

- Offset: 0xb4c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_pointers\_write\_pointer\_raw\_ce

Auto-extracted signal write\_pointer\_raw\_ce from rx\_buffer\_pointers.vhd

- Offset: 0xb50
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_pointers\_write\_pointer\_ts\_ce

Auto-extracted signal write\_pointer\_ts\_ce from rx\_buffer\_pointers.vhd

- Offset: 0xb54
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_ram\_port\_a\_address\_i

Auto-extracted signal port\_a\_address\_i from rx\_buffer\_ram.vhd

- Offset: 0xb58
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_ram\_port\_a\_write\_i

Auto-extracted signal port\_a\_write\_i from rx\_buffer\_ram.vhd

- Offset: 0xb5c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_ram\_port\_a\_data\_in\_i

Auto-extracted signal port\_a\_data\_in\_i from rx\_buffer\_ram.vhd

- Offset: 0xb60
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## rx\_buffer\_ram\_port\_b\_address\_i

Auto-extracted signal port\_b\_address\_i from rx\_buffer\_ram.vhd

- Offset: 0xb64
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_ram\_port\_b\_data\_out\_i

Auto-extracted signal port\_b\_data\_out\_i from rx\_buffer\_ram.vhd

- Offset: 0xb68
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_ram\_tst\_ena

Auto-extracted signal tst\_ena from rx\_buffer\_ram.vhd

- Offset: 0xb6c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_buffer\_ram\_tst\_addr

Auto-extracted signal tst\_addr from rx\_buffer\_ram.vhd

- Offset: 0xb70
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_shift\_reg\_res\_n\_i\_d

Auto-extracted signal res\_n\_i\_d from rx\_shift\_reg.vhd

- Offset: 0xb74
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# rx\_shift\_reg\_res\_n\_i\_q

Auto-extracted signal res\_n\_i\_q from rx\_shift\_reg.vhd

- **Offset:** 0xb78
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# rx\_shift\_reg\_res\_n\_i\_q\_scan

Auto-extracted signal res\_n\_i\_q\_scan from rx\_shift\_reg.vhd

- **Offset:** 0xb7c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# rx\_shift\_reg\_rx\_shift\_reg\_q

Auto-extracted signal rx\_shift\_reg\_q from rx\_shift\_reg.vhd

- **Offset:** 0xb80
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# rx\_shift\_reg\_rx\_shift\_cmd

Auto-extracted signal rx\_shift\_cmd from rx\_shift\_reg.vhd

- **Offset:** 0xb84
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# rx\_shift\_reg\_rx\_shift\_in\_sel\_demuxed



Auto-extracted signal rx\_shift\_in\_sel\_demuxed from rx\_shift\_reg.vhd

- **Offset:** 0xb88
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_shift\_reg\_rec\_is\_rtr\_i

Auto-extracted signal rec\_is\_rtr\_i from rx\_shift\_reg.vhd

- **Offset:** 0xb8c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

rx\_shift\_reg\_rec\_frame\_type\_i

Auto-extracted signal rec\_frame\_type\_i from rx\_shift\_reg.vhd

- **Offset:** 0xb90
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

sample\_mux\_sample

Auto-extracted signal sample from sample\_mux.vhd

- **Offset:** 0xb94
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

sample\_mux\_prev\_sample\_d

Auto-extracted signal prev\_sample\_d from sample\_mux.vhd

- **Offset:** 0xb98
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## sample\_mux\_prev\_sample\_q

Auto-extracted signal prev\_sample\_q from sample\_mux.vhd

- **Offset:** 0xb9c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_req\_input

Auto-extracted signal req\_input from segment\_end\_detector.vhd

- **Offset:** 0xba0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_segm\_end\_req\_capt\_d

Auto-extracted signal segm\_end\_req\_capt\_d from segment\_end\_detector.vhd

- **Offset:** 0xba4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_segm\_end\_req\_capt\_q

Auto-extracted signal segm\_end\_req\_capt\_q from segment\_end\_detector.vhd

- **Offset:** 0xba8
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_segm\_end\_req\_capt\_ce

Auto-extracted signal segm\_end\_req\_capt\_ce from segment\_end\_detector.vhd

- **Offset:** 0xbac
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_segm\_end\_req\_capt\_clr

Auto-extracted signal segm\_end\_req\_capt\_clr from segment\_end\_detector.vhd

- **Offset:** 0xbb0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_segm\_end\_req\_capt\_dq

Auto-extracted signal segm\_end\_req\_capt\_dq from segment\_end\_detector.vhd

- **Offset:** 0xbb4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_segm\_end\_nbt\_valid

Auto-extracted signal segm\_end\_nbt\_valid from segment\_end\_detector.vhd

- **Offset:** 0xbb8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_segm\_end\_dbt\_valid

Auto-extracted signal segm\_end\_dbt\_valid from segment\_end\_detector.vhd

- Offset: 0xbbc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_segm\_end\_nbt\_dbt\_valid

Auto-extracted signal segm\_end\_nbt\_dbt\_valid from segment\_end\_detector.vhd

- Offset: 0xbc0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_tseg1\_end\_req\_valid

Auto-extracted signal tseg1\_end\_req\_valid from segment\_end\_detector.vhd

- Offset: 0xbc4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## segment\_end\_detector\_tseg2\_end\_req\_valid

Auto-extracted signal tseg2\_end\_req\_valid from segment\_end\_detector.vhd

- Offset: 0xbc8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## segment\_end\_detector\_h\_sync\_valid\_i

Auto-extracted signal h\_sync\_valid\_i from segment\_end\_detector.vhd

- **Offset:** 0xbcc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## segment\_end\_detector\_segment\_end\_i

Auto-extracted signal segment\_end\_i from segment\_end\_detector.vhd

- **Offset:** 0xbd0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## segment\_end\_detector\_nbt\_tq\_active

Auto-extracted signal nbt\_tq\_active from segment\_end\_detector.vhd

- **Offset:** 0xbd4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## segment\_end\_detector\_dbt\_tq\_active

Auto-extracted signal dbt\_tq\_active from segment\_end\_detector.vhd

- **Offset:** 0xbd8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# segment\_end\_detector\_bt\_ctr\_clear\_i

Auto-extracted signal bt\_ctr\_clear\_i from segment\_end\_detector.vhd

- Offset: 0xbdc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# shift\_reg\_shift\_regs

Auto-extracted signal shift\_regs from shift\_reg.vhd

- Offset: 0xbe0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# shift\_reg\_next\_shift\_reg\_val

Auto-extracted signal next\_shift\_reg\_val from shift\_reg.vhd

- Offset: 0xbe4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# shift\_reg\_byte\_shift\_reg\_in

Auto-extracted signal shift\_reg\_in from shift\_reg\_byte.vhd

- Offset: 0xbe8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# shift\_reg\_preload\_shift\_regs

Auto-extracted signal shift\_regs from shift\_reg\_preload.vhd

- **Offset:** 0xbec
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# shift\_reg\_preload\_next\_shift\_reg\_val

Auto-extracted signal next\_shift\_reg\_val from shift\_reg\_preload.vhd

- **Offset:** 0xbf0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# sig\_sync\_rff

Auto-extracted signal rff from sig\_sync.vhd

- **Offset:** 0xbf4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# ssp\_generator\_btmc\_d

Auto-extracted signal btmc\_d from ssp\_generator.vhd

- **Offset:** 0xbf8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# ssp\_generator\_btmc\_q

Auto-extracted signal btmc\_q from ssp\_generator.vhd

- **Offset:** 0xbfc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_btmc\_add

Auto-extracted signal btmc\_add from ssp\_generator.vhd

- **Offset:** 0xc00
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_btmc\_ce

Auto-extracted signal btmc\_ce from ssp\_generator.vhd

- **Offset:** 0xc04
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_btmc\_meas\_running\_d

Auto-extracted signal btmc\_meas\_running\_d from ssp\_generator.vhd

- **Offset:** 0xc08
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_btmc\_meas\_running\_q

Auto-extracted signal btmc\_meas\_running\_q from ssp\_generator.vhd



- **Offset:** 0xc0c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## ssp\_generator\_sspc\_d

Auto-extracted signal sspc\_d from ssp\_generator.vhd

- **Offset:** 0xc10
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## ssp\_generator\_sspc\_q

Auto-extracted signal sspc\_q from ssp\_generator.vhd

- **Offset:** 0xc14
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## ssp\_generator\_sspc\_ce

Auto-extracted signal sspc\_ce from ssp\_generator.vhd

- **Offset:** 0xc18
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                                   |
|------|------|-------|-------|---|
| 31:0 | rw   | 0x0   | value | Placeholder 32-bit field for extracted signal |

## ssp\_generator\_sspc\_expired

Auto-extracted signal sspc\_expired from ssp\_generator.vhd

- **Offset:** 0xc1c
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_sspc\_threshold

Auto-extracted signal sspc\_threshold from ssp\_generator.vhd

- **Offset:** 0xc20
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_sspc\_add

Auto-extracted signal sspc\_add from ssp\_generator.vhd

- **Offset:** 0xc24
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_first\_ssp\_d

Auto-extracted signal first\_ssp\_d from ssp\_generator.vhd

- **Offset:** 0xc28
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_first\_ssp\_q

Auto-extracted signal first\_ssp\_q from ssp\_generator.vhd

- **Offset:** 0xc2c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_sspc\_ena\_d

Auto-extracted signal sspc\_ena\_d from ssp\_generator.vhd

- Offset: 0xc30
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_sspc\_ena\_q

Auto-extracted signal sspc\_ena\_q from ssp\_generator.vhd

- Offset: 0xc34
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## ssp\_generator\_ssp\_delay\_padded

Auto-extracted signal ssp\_delay\_padded from ssp\_generator.vhd

- Offset: 0xc38
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## synchronisation\_checker\_resync\_edge

Auto-extracted signal resync\_edge from synchronisation\_checker.vhd

- Offset: 0xc3c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## synchronisation\_checker\_h\_sync\_edge

Auto-extracted signal h\_sync\_edge from synchronisation\_checker.vhd

- Offset: 0xc40
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## synchronisation\_checker\_h\_or\_re\_sync\_edge

Auto-extracted signal h\_or\_re\_sync\_edge from synchronisation\_checker.vhd

- Offset: 0xc44
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## synchronisation\_checker\_sync\_flag

Auto-extracted signal sync\_flag from synchronisation\_checker.vhd

- Offset: 0xc48
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## synchronisation\_checker\_sync\_flag\_ce

Auto-extracted signal sync\_flag\_ce from synchronisation\_checker.vhd

- Offset: 0xc4c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# synchronisation\_checker\_sync\_flag\_nxt

Auto-extracted signal sync\_flag\_nxt from synchronisation\_checker.vhd

- Offset: 0xc50
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# test\_registers\_reg\_map\_reg\_sel

Auto-extracted signal reg\_sel from test\_registers\_reg\_map.vhd

- Offset: 0xc54
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# test\_registers\_reg\_map\_read\_data\_mux\_in

Auto-extracted signal read\_data\_mux\_in from test\_registers\_reg\_map.vhd

- Offset: 0xc58
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# test\_registers\_reg\_map\_read\_data\_mask\_n

Auto-extracted signal read\_data\_mask\_n from test\_registers\_reg\_map.vhd

- Offset: 0xc5c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# test\_registers\_reg\_map\_read\_mux\_ena

Auto-extracted signal read\_mux\_ena from test\_registers\_reg\_map.vhd

- **Offset:** 0xc60
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# trigger\_generator\_rx\_trig\_req\_q

Auto-extracted signal rx\_trig\_req\_q from trigger\_generator.vhd

- **Offset:** 0xc64
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# trigger\_generator\_tx\_trig\_req\_flag\_d

Auto-extracted signal tx\_trig\_req\_flag\_d from trigger\_generator.vhd

- **Offset:** 0xc68
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# trigger\_generator\_tx\_trig\_req\_flag\_q

Auto-extracted signal tx\_trig\_req\_flag\_q from trigger\_generator.vhd

- **Offset:** 0xc6c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# trigger\_generator\_tx\_trig\_req\_flag\_dq

Auto-extracted signal tx\_trig\_req\_flag\_dq from trigger\_generator.vhd

- **Offset:** 0xc70
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## trigger\_mux\_tx\_trigger\_q

Auto-extracted signal tx\_trigger\_q from trigger\_mux.vhd

- **Offset:** 0xc74
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## trv\_delay\_meas\_trv\_meas\_progress\_d

Auto-extracted signal trv\_meas\_progress\_d from trv\_delay\_meas.vhd

- **Offset:** 0xc78
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## trv\_delay\_meas\_trv\_meas\_progress\_q

Auto-extracted signal trv\_meas\_progress\_q from trv\_delay\_meas.vhd

- **Offset:** 0xc7c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## trv\_delay\_meas\_trv\_meas\_progress\_del

Auto-extracted signal trv\_meas\_progress\_del from trv\_delay\_meas.vhd

- **Offset:** 0xc80
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

trv\_delay\_meas\_trv\_delay\_ctr\_q

Auto-extracted signal trv\_delay\_ctr\_q from trv\_delay\_meas.vhd

- **Offset:** 0xc84
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

trv\_delay\_meas\_trv\_delay\_ctr\_d

Auto-extracted signal trv\_delay\_ctr\_d from trv\_delay\_meas.vhd

- **Offset:** 0xc88
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

trv\_delay\_meas\_trv\_delay\_ctr\_add

Auto-extracted signal trv\_delay\_ctr\_add from trv\_delay\_meas.vhd

- **Offset:** 0xc8c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

trv\_delay\_meas\_trv\_delay\_ctr\_q\_padded

Auto-extracted signal trv\_delay\_ctr\_q\_padded from trv\_delay\_meas.vhd

- **Offset:** 0xc90
- **Reset default:** 0x0



- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# trv\_delay\_meas\_trv\_delay\_ctr\_rst\_d

Auto-extracted signal trv\_delay\_ctr\_rst\_d from trv\_delay\_meas.vhd

- **Offset:** 0xc94
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# trv\_delay\_meas\_trv\_delay\_ctr\_rst\_q

Auto-extracted signal trv\_delay\_ctr\_rst\_q from trv\_delay\_meas.vhd

- **Offset:** 0xc98
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# trv\_delay\_meas\_trv\_delay\_ctr\_rst\_q\_scan

Auto-extracted signal trv\_delay\_ctr\_rst\_q\_scan from trv\_delay\_meas.vhd

- **Offset:** 0xc9c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# trv\_delay\_meas\_ssp\_shadow\_ce

Auto-extracted signal ssp\_shadow\_ce from trv\_delay\_meas.vhd

- **Offset:** 0xca0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## trv\_delay\_meas\_ssp\_delay\_raw

Auto-extracted signal ssp\_delay\_raw from trv\_delay\_meas.vhd

- Offset: 0xca4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## trv\_delay\_meas\_ssp\_delay\_saturated

Auto-extracted signal ssp\_delay\_saturated from trv\_delay\_meas.vhd

- Offset: 0xca8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## trv\_delay\_meas\_trv\_delay\_sum

Auto-extracted signal trv\_delay\_sum from trv\_delay\_meas.vhd

- Offset: 0xcac
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_select\_buf\_avail

Auto-extracted signal select\_buf\_avail from tx\_arbitrator.vhd

- Offset: 0xcb0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## tx\_arbitrator\_txtb\_selected\_input

Auto-extracted signal txtb\_selected\_input from tx\_arbitrator.vhd

- Offset: 0xcb4
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## tx\_arbitrator\_txtb\_timestamp

Auto-extracted signal txtb\_timestamp from tx\_arbitrator.vhd

- Offset: 0xcb8
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## tx\_arbitrator\_timestamp\_valid

Auto-extracted signal timestamp\_valid from tx\_arbitrator.vhd

- Offset: 0xcbc
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

## tx\_arbitrator\_select\_index\_changed

Auto-extracted signal select\_index\_changed from tx\_arbitrator.vhd

- Offset: 0xcc0
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_arbitrator\_validated\_buffer

Auto-extracted signal validated\_buffer from tx\_arbitrator.vhd

- Offset: 0xcc4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_arbitrator\_ts\_low\_internal

Auto-extracted signal ts\_low\_internal from tx\_arbitrator.vhd

- Offset: 0xcc8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_arbitrator\_tran\_dlc\_dbl\_buf

Auto-extracted signal tran\_dlc\_dbl\_buf from tx\_arbitrator.vhd

- Offset: 0xcc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_arbitrator\_tran\_is\_rtr\_dbl\_buf

Auto-extracted signal tran\_is\_rtr\_dbl\_buf from tx\_arbitrator.vhd

- Offset: 0xcd0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_arbitrator\_tran\_ident\_type\_dbl\_buf

Auto-extracted signal tran\_ident\_type\_dbl\_buf from tx\_arbitrator.vhd

- **Offset:** 0xcd4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# tx\_arbitrator\_tran\_frame\_type\_dbl\_buf

Auto-extracted signal tran\_frame\_type\_dbl\_buf from tx\_arbitrator.vhd

- **Offset:** 0xcd8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# tx\_arbitrator\_tran\_brs\_dbl\_buf

Auto-extracted signal tran\_brs\_dbl\_buf from tx\_arbitrator.vhd

- **Offset:** 0xcdc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# tx\_arbitrator\_tran\_dlc\_com

Auto-extracted signal tran\_dlc\_com from tx\_arbitrator.vhd

- **Offset:** 0xce0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# tx\_arbitrator\_tran\_is\_rtr\_com

- **Offset:** 0xce4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_arbitrator\_tran\_ident\_type\_com

Auto-extracted signal tran\_ident\_type\_com from tx\_arbitrator.vhd

- **Offset:** 0xce8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_arbitrator\_tran\_frame\_type\_com

Auto-extracted signal tran\_frame\_type\_com from tx\_arbitrator.vhd

- **Offset:** 0xcec
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_arbitrator\_tran\_brs\_com

Auto-extracted signal tran\_brs\_com from tx\_arbitrator.vhd

- **Offset:** 0xcf0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_arbitrator\_tran\_frame\_valid\_com

Auto-extracted signal tran\_frame\_valid\_com from tx\_arbitrator.vhd

- **Offset:** 0xcf4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# tx\_arbitrator\_tran\_identifier\_com

Auto-extracted signal tran\_identifier\_com from tx\_arbitrator.vhd

- **Offset:** 0xcf8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# tx\_arbitrator\_load\_ts\_lw\_addr

Auto-extracted signal load\_ts\_lw\_addr from tx\_arbitrator.vhd

- **Offset:** 0xcfc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# tx\_arbitrator\_load\_ts\_uw\_addr

Auto-extracted signal load\_ts\_uw\_addr from tx\_arbitrator.vhd

- **Offset:** 0xd00
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# tx\_arbitrator\_load\_ffmt\_w\_addr

Auto-extracted signal load\_ffmt\_w\_addr from tx\_arbitrator.vhd

- **Offset:** 0xd04
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_load\_ident\_w\_addr

Auto-extracted signal load\_ident\_w\_addr from tx\_arbitrator.vhd

- **Offset:** 0xd08
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_store\_ts\_l\_w

Auto-extracted signal store\_ts\_l\_w from tx\_arbitrator.vhd

- **Offset:** 0xd0c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_store\_md\_w

Auto-extracted signal store\_md\_w from tx\_arbitrator.vhd

- **Offset:** 0xd10
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_store\_ident\_w

Auto-extracted signal store\_ident\_w from tx\_arbitrator.vhd

- **Offset:** 0xd14
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff



## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_buffer\_md\_w

Auto-extracted signal buffer\_md\_w from tx\_arbitrator.vhd

- Offset: 0xd18
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_store\_last\_txtb\_index

Auto-extracted signal store\_last\_txtb\_index from tx\_arbitrator.vhd

- Offset: 0xd1c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_frame\_valid\_com\_set

Auto-extracted signal frame\_valid\_com\_set from tx\_arbitrator.vhd

- Offset: 0xd20
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_frame\_valid\_com\_clear

Auto-extracted signal frame\_valid\_com\_clear from tx\_arbitrator.vhd

- Offset: 0xd24
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_tx\_arb\_locked

Auto-extracted signal tx\_arb\_locked from tx\_arbitrator.vhd

- Offset: 0xd28
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_txb\_meta\_clk\_en

Auto-extracted signal txb\_meta\_clk\_en from tx\_arbitrator.vhd

- Offset: 0xd2c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_drv\_tttm\_ena

Auto-extracted signal drv\_tttm\_ena from tx\_arbitrator.vhd

- Offset: 0xd30
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## tx\_arbitrator\_fsm\_tx\_arb\_fsm\_ce

Auto-extracted signal tx\_arb\_fsm\_ce from tx\_arbitrator\_fsm.vhd

- Offset: 0xd34
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_arbitrator\_fsm\_fsm\_wait\_state\_d

Auto-extracted signal fsm\_wait\_state\_d from tx\_arbitrator\_fsm.vhd

- **Offset:** 0xd38
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_arbitrator\_fsm\_fsm\_wait\_state\_q

Auto-extracted signal fsm\_wait\_state\_q from tx\_arbitrator\_fsm.vhd

- **Offset:** 0xd3c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_data\_cache\_tx\_cache\_mem

Auto-extracted signal tx\_cache\_mem from tx\_data\_cache.vhd

- **Offset:** 0xd40
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_shift\_reg\_tx\_sr\_output

Auto-extracted signal tx\_sr\_output from tx\_shift\_reg.vhd

- **Offset:** 0xd44
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_shift\_reg\_tx\_sr\_ce

Auto-extracted signal tx\_sr\_ce from tx\_shift\_reg.vhd

- Offset: 0xd48
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_shift\_reg\_tx\_sr\_pload

Auto-extracted signal tx\_sr\_pload from tx\_shift\_reg.vhd

- Offset: 0xd4c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_shift\_reg\_tx\_sr\_pload\_val

Auto-extracted signal tx\_sr\_pload\_val from tx\_shift\_reg.vhd

- Offset: 0xd50
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_shift\_reg\_tx\_base\_id

Auto-extracted signal tx\_base\_id from tx\_shift\_reg.vhd

- Offset: 0xd54
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# tx\_shift\_reg\_tx\_ext\_id

Auto-extracted signal tx\_ext\_id from tx\_shift\_reg.vhd

- **Offset:** 0xd58
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_shift\_reg\_tx\_crc

Auto-extracted signal tx\_crc from tx\_shift\_reg.vhd

- **Offset:** 0xd5c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_shift\_reg\_bst\_ctr\_grey

Auto-extracted signal bst\_ctr\_grey from tx\_shift\_reg.vhd

- **Offset:** 0xd60
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_shift\_reg\_bst\_parity

Auto-extracted signal bst\_parity from tx\_shift\_reg.vhd

- **Offset:** 0xd64
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

tx\_shift\_reg\_stuff\_count

Auto-extracted signal stuff\_count from tx\_shift\_reg.vhd

- **Offset:** 0xd68
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# txt\_buffer\_txb\_user\_accessible

Auto-extracted signal txb\_user\_accessible from txt\_buffer.vhd

- **Offset:** 0xd6c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# txt\_buffer\_hw\_cbs

Auto-extracted signal hw\_cbs from txt\_buffer.vhd

- **Offset:** 0xd70
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# txt\_buffer\_sw\_cbs

Auto-extracted signal sw\_cbs from txt\_buffer.vhd

- **Offset:** 0xd74
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:0 | rw | 0x0 | value | Placeholder 32-bit field for extracted signal |
|------|----|-----|-------|---|

# txt\_buffer\_txb\_unmask\_data\_ram

Auto-extracted signal txb\_unmask\_data\_ram from txt\_buffer.vhd

- **Offset:** 0xd78
- **Reset default:** 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_txtb\_port\_b\_data\_i

Auto-extracted signal txtb\_port\_b\_data\_i from txt\_buffer.vhd

- **Offset:** 0xd7c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_ram\_write

Auto-extracted signal ram\_write from txt\_buffer.vhd

- **Offset:** 0xd80
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_ram\_read\_address

Auto-extracted signal ram\_read\_address from txt\_buffer.vhd

- **Offset:** 0xd84
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_txtb\_ram\_clk\_en

Auto-extracted signal txtb\_ram\_clk\_en from txt\_buffer.vhd

- **Offset:** 0xd88
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_clk\_ram

Auto-extracted signal clk\_ram from txt\_buffer.vhd

- Offset: 0xd8c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_fsm\_abort\_applied

Auto-extracted signal abort\_applied from txt\_buffer\_fsm.vhd

- Offset: 0xd90
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_fsm\_txt\_fsm\_ce

Auto-extracted signal txt\_fsm\_ce from txt\_buffer\_fsm.vhd

- Offset: 0xd94
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_fsm\_go\_to\_failed

Auto-extracted signal go\_to\_failed from txt\_buffer\_fsm.vhd

- Offset: 0xd98
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields



```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_fsm\_transient\_state

Auto-extracted signal transient\_state from txt\_buffer\_fsm.vhd

- Offset: 0xd9c
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_ram\_port\_a\_address\_i

Auto-extracted signal port\_a\_address\_i from txt\_buffer\_ram.vhd

- Offset: 0xda0
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_ram\_port\_a\_write\_i

Auto-extracted signal port\_a\_write\_i from txt\_buffer\_ram.vhd

- Offset: 0xda4
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

#### Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

## txt\_buffer\_ram\_port\_a\_data\_in\_i

Auto-extracted signal port\_a\_data\_in\_i from txt\_buffer\_ram.vhd

- Offset: 0xda8
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

txt\_buffer\_ram\_port\_b\_address\_i

Auto-extracted signal port\_b\_address\_i from txt\_buffer\_ram.vhd

- Offset: 0xdac
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

txt\_buffer\_ram\_port\_b\_data\_out\_i

Auto-extracted signal port\_b\_data\_out\_i from txt\_buffer\_ram.vhd

- Offset: 0xdb0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

txt\_buffer\_ram\_tst\_ena

Auto-extracted signal tst\_ena from txt\_buffer\_ram.vhd

- Offset: 0xdb4
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

txt\_buffer\_ram\_tst\_addr

Auto-extracted signal tst\_addr from txt\_buffer\_ram.vhd

- Offset: 0xdb8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# access\_signaler\_be\_active

Auto-extracted signal be\_active from access\_signaler.vhd

- Offset: 0xdc0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# access\_signaler\_access\_in

Auto-extracted signal access\_in from access\_signaler.vhd

- Offset: 0xdc0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# access\_signaler\_access\_active

Auto-extracted signal access\_active from access\_signaler.vhd

- Offset: 0xdc4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# access\_signaler\_access\_active\_reg

Auto-extracted signal access\_active\_reg from access\_signaler.vhd

- Offset: 0xdc8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

# address\_decoder\_addr\_dec\_i

- Offset: 0xdc0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

address\_decoder\_addr\_dec\_enabled\_i

- Offset: 0xdd0
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "value", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 rw 0x0 value Placeholder 32-bit field for extracted signal

carfield\_regs / doc / carfield\_regs.md

Summary

| Name                                    | Offset | Length | Description   |
|---|--------|--------|---|
| carfield.VERSION0                       | 0x0    | 4      | Cheshire sha256 commit                              |
| carfield.VERSION1                       | 0x4    | 4      | Safety Island sha256 commit                         |
| carfield.VERSION2                       | 0x8    | 4      | Security Island sha256 commit                       |
| carfield.VERSION3                       | 0xc    | 4      | PULP Cluster sha256 commit                          |
| carfield.VERSION4                       | 0x10   | 4      | Spatz CLuster sha256 commit                         |
| carfield.JEDEC_IDCODE                   | 0x14   | 4      | JEDEC ID CODE -TODO assign-                         |
| carfield.GENERIC_SCRATCH0               | 0x18   | 4      | Scratch   |
| carfield.GENERIC_SCRATCH1               | 0x1c   | 4      | Scratch   |
| carfield.HOST_RST                       | 0x20   | 4      | Host Domain reset -active high, inverted in HW-     |
| carfield.PERIPH_RST                     | 0x24   | 4      | Periph Domain reset -active high, inverted in HW-   |
| carfield.SAFETY_ISLAND_RST              | 0x28   | 4      | Safety Island reset -active high, inverted in HW-   |
| carfield.SECURITY_ISLAND_RST            | 0x2c   | 4      | Security Island reset -active high, inverted in HW- |
| carfield.PULP_CLUSTER_RST               | 0x30   | 4      | PULP Cluster reset -active high, inverted in HW-    |
| carfield.SPATZ_CLUSTER_RST              | 0x34   | 4      | Spatz Cluster reset -active high, inverted in HW-   |
| carfield.L2_RST                         | 0x38   | 4      | L2 reset -active high, inverted in HW-              |
| carfield.PERIPH_ISOLATE                 | 0x3c   | 4      | Periph Domain AXI isolate                           |
| carfield.SAFETY_ISLAND_ISOLATE          | 0x40   | 4      | Safety Island AXI isolate                           |
| carfield.SECURITY_ISLAND_ISOLATE        | 0x44   | 4      | Security Island AXI isolate                         |
| carfield.PULP_CLUSTER_ISOLATE           | 0x48   | 4      | PULP Cluster AXI isolate                            |
| carfield.SPATZ_CLUSTER_ISOLATE          | 0x4c   | 4      | Spatz Cluster AXI isolate                           |
| carfield.L2_ISOLATE                     | 0x50   | 4      | L2 AXI isolate                                      |
| carfield.PERIPH_ISOLATE_STATUS          | 0x54   | 4      | Periph Domain AXI isolate status                    |
| carfield.SAFETY_ISLAND_ISOLATE_STATUS   | 0x58   | 4      | Safety Island AXI isolate status                    |
| carfield.SECURITY_ISLAND_ISOLATE_STATUS | 0x5c   | 4      | Security Island AXI isolate status                  |
| carfield.PULP_CLUSTER_ISOLATE_STATUS    | 0x60   | 4      | PULP Cluster AXI isolate status                     |
| carfield.SPATZ_CLUSTER_ISOLATE_STATUS   | 0x64   | 4      | Spatz Cluster AXI isolate status                    |
| carfield.L2_ISOLATE_STATUS              | 0x68   | 4      | L2 AXI isolate status                               |
| carfield.PERIPH_CLK_EN                  | 0x6c   | 4      | Periph Domain clk gate enable                       |
| carfield.SAFETY_ISLAND_CLK_EN           | 0x70   | 4      | Safety Island clk gate enable                       |
| carfield.SECURITY_ISLAND_CLK_EN         | 0x74   | 4      | Security Island clk gate enable                     |

| Name  | Offset | Length | Description  |
|---|--------|--------|--|
| carfield. <a href="#">PULP_CLUSTER_CLK_EN</a>           | 0x78   | 4      | PULP Cluster clk gate enable   |
| carfield. <a href="#">SPATZ_CLUSTER_CLK_EN</a>          | 0x7c   | 4      | Spatz Cluster clk gate enable  |
| carfield. <a href="#">L2_CLK_EN</a>                     | 0x80   | 4      | Shared L2 memory clk gate enable                                       |
| carfield. <a href="#">PERIPH_CLK_SEL</a>                | 0x84   | 4      | Periph Domain pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)   |
| carfield. <a href="#">SAFETY_ISLAND_CLK_SEL</a>         | 0x88   | 4      | Safety Island pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)   |
| carfield. <a href="#">SECURITY_ISLAND_CLK_SEL</a>       | 0x8c   | 4      | Security Island pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll) |
| carfield. <a href="#">PULP_CLUSTER_CLK_SEL</a>          | 0x90   | 4      | PULP Cluster pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)    |
| carfield. <a href="#">SPATZ_CLUSTER_CLK_SEL</a>         | 0x94   | 4      | Spatz Cluster pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)   |
| carfield. <a href="#">L2_CLK_SEL</a>                    | 0x98   | 4      | L2 Memory pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)       |
| carfield. <a href="#">PERIPH_CLK_DIV_VALUE</a>          | 0x9c   | 4      | Periph Domain clk divider value  |
| carfield. <a href="#">SAFETY_ISLAND_CLK_DIV_VALUE</a>   | 0xa0   | 4      | Safety Island clk divider value  |
| carfield. <a href="#">SECURITY_ISLAND_CLK_DIV_VALUE</a> | 0xa4   | 4      | Security Island clk divider value                                      |
| carfield. <a href="#">PULP_CLUSTER_CLK_DIV_VALUE</a>    | 0xa8   | 4      | PULP Cluster clk divider value   |
| carfield. <a href="#">SPATZ_CLUSTER_CLK_DIV_VALUE</a>   | 0xac   | 4      | Spatz Cluster clk divider value  |
| carfield. <a href="#">L2_CLK_DIV_VALUE</a>              | 0xb0   | 4      | L2 Memory clk divider value  |
| carfield. <a href="#">HOST_FETCH_ENABLE</a>             | 0xb4   | 4      | Host Domain fetch enable   |
| carfield. <a href="#">SAFETY_ISLAND_FETCH_ENABLE</a>    | 0xb8   | 4      | Safety Island fetch enable   |
| carfield. <a href="#">SECURITY_ISLAND_FETCH_ENABLE</a>  | 0xbc   | 4      | Security Island fetch enable   |
| carfield. <a href="#">PULP_CLUSTER_FETCH_ENABLE</a>     | 0xc0   | 4      | PULP Cluster fetch enable  |
| carfield. <a href="#">SPATZ_CLUSTER_DEBUG_REQ</a>       | 0xc4   | 4      | Spatz Cluster debug req  |
| carfield. <a href="#">HOST_BOOT_ADDR</a>                | 0xc8   | 4      | Host boot address  |
| carfield. <a href="#">SAFETY_ISLAND_BOOT_ADDR</a>       | 0xcc   | 4      | Safety Island boot address   |
| carfield. <a href="#">SECURITY_ISLAND_BOOT_ADDR</a>     | 0xd0   | 4      | Security Island boot address   |
| carfield. <a href="#">PULP_CLUSTER_BOOT_ADDR</a>        | 0xd4   | 4      | PULP Cluster boot address  |
| carfield. <a href="#">SPATZ_CLUSTER_BOOT_ADDR</a>       | 0xd8   | 4      | Spatz Cluster boot address   |
| carfield. <a href="#">PULP_CLUSTER_BOOT_ENABLE</a>      | 0xdc   | 4      | PULP Cluster boot enable   |
| carfield. <a href="#">SPATZ_CLUSTER_BUSY</a>            | 0xe0   | 4      | Spatz Cluster busy   |
| carfield. <a href="#">PULP_CLUSTER_BUSY</a>             | 0xe4   | 4      | PULP Cluster busy  |
| carfield. <a href="#">PULP_CLUSTER_EOC</a>              | 0xe8   | 4      | PULP Cluster end of computation  |
| carfield. <a href="#">ETH_RGMII_PHY_CLK_DIV_EN</a>      | 0xec   | 4      | Ethernet RGMII PHY clock divider enable bit                            |
| carfield. <a href="#">ETH_RGMII_PHY_CLK_DIV_VALUE</a>   | 0xf0   | 4      | Ethernet RGMII PHY clock divider value                                 |
| carfield. <a href="#">ETH_MDIO_CLK_DIV_EN</a>           | 0xf4   | 4      | Ethernet MDIO clock divider enable bit                                 |
| carfield. <a href="#">ETH_MDIO_CLK_DIV_VALUE</a>        | 0xf8   | 4      | Ethernet MDIO clock divider value                                      |

# VERSION0

Cheshire sha256 commit

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "VERSION0", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description |
|------|------|-------|----------|-------------|
| 31:0 | ro   | 0x0   | VERSION0 |             |

# VERSION1

Safety Island sha256 commit

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "VERSION1", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description |
|------|------|-------|----------|-------------|
| 31:0 | ro   | 0x0   | VERSION1 |             |

# VERSION2

Security Island sha256 commit

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "VERSION2", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description |
|------|------|-------|----------|-------------|
| 31:0 | ro   | 0x0   | VERSION2 |             |

# VERSION3

PULP Cluster sha256 commit

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "VERSION3", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description |
|------|------|-------|----------|-------------|
| 31:0 | ro   | 0x0   | VERSION3 |             |

# VERSION4

Spatz CLuster sha256 commit

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "VERSION4", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description |
|------|------|-------|----------|-------------|
| 31:0 | ro   | 0x0   | VERSION4 |             |

# JEDEC\_IDCODE

JEDEC ID CODE -TODO assign-

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "JEDEC_IDCODE", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name         | Description |
|------|------|-------|--------------|-------------|
| 31:0 | rw   | 0x0   | JEDEC_IDCODE |             |

# GENERIC\_SCRATCH0

Scratch

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "GENERIC_SCRATCH0", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name             | Description |
|------|------|-------|------------------|-------------|
| 31:0 | rw   | 0x0   | GENERIC_SCRATCH0 |             |

## GENERIC\_SCRATCH1

Scratch

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "GENERIC_SCRATCH1", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name             | Description |
|------|------|-------|------------------|-------------|
| 31:0 | rw   | 0x0   | GENERIC_SCRATCH1 |             |

## HOST\_RST

Host Domain reset -active high, inverted in HW-

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "HOST_RST", "bits": 1, "attr": ["ro"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description |
|------|------|-------|----------|-------------|
| 31:1 |      |       |          | Reserved    |
| 0    | ro   | 0x0   | HOST_RST |             |

## PERIPH\_RST

Periph Domain reset -active high, inverted in HW-

- Offset: 0x24
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "PERIPH_RST", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name       | Description |
|------|------|-------|------------|-------------|
| 31:1 |      |       |            | Reserved    |
| 0    | rw   | 0x0   | PERIPH_RST |             |

## SAFETY\_ISLAND\_RST

Safety Island reset -active high, inverted in HW-

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "SAFETY_ISLAND_RST", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10}}
```

| Bits | Type | Reset | Name              | Description |
|------|------|-------|-------------------|-------------|
| 31:1 |      |       |                   | Reserved    |
| 0    | rw   | 0x0   | SAFETY_ISLAND_RST |             |

SECURITY\_ISLAND\_RST

Security Island reset -active high, inverted in HW-

- Offset: 0x2c
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "SECURITY_ISLAND_RST", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10}}
```

| Bits | Type | Reset | Name                | Description |
|------|------|-------|---------------------|-------------|
| 31:1 |      |       |                     | Reserved    |
| 0    | rw   | 0x0   | SECURITY_ISLAND_RST |             |

PULP\_CLUSTER\_RST

PULP Cluster reset -active high, inverted in HW-

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "PULP_CLUSTER_RST", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10}}
```

| Bits | Type | Reset | Name             | Description |
|------|------|-------|------------------|-------------|
| 31:1 |      |       |                  | Reserved    |
| 0    | rw   | 0x0   | PULP_CLUSTER_RST |             |

SPATZ\_CLUSTER\_RST

Spatz Cluster reset -active high, inverted in HW-

- Offset: 0x34
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "SPATZ_CLUSTER_RST", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10}}
```

| Bits | Type | Reset | Name              | Description |
|------|------|-------|-------------------|-------------|
| 31:1 |      |       |                   | Reserved    |
| 0    | rw   | 0x0   | SPATZ_CLUSTER_RST |             |



# L2\_RST

L2 reset -active high, inverted in HW-

- Offset: 0x38
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "L2_RST", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:1 |      |       |        | Reserved    |
| 0    | rw   | 0x0   | L2_RST |             |

# PERIPH\_ISOLATE

Periph Domain AXI isolate

- Offset: 0x3c
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "PERIPH_ISOLATE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name           | Description |
|------|------|-------|----------------|-------------|
| 31:1 |      |       |                | Reserved    |
| 0    | rw   | 0x0   | PERIPH_ISOLATE |             |

# SAFETY\_ISLAND\_ISOLATE

Safety Island AXI isolate

- Offset: 0x40
- Reset default: 0x1
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "SAFETY_ISLAND_ISOLATE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name                  | Description |
|------|------|-------|-----------------------|-------------|
| 31:1 |      |       |                       | Reserved    |
| 0    | rw   | 0x1   | SAFETY_ISLAND_ISOLATE |             |

# SECURITY\_ISLAND\_ISOLATE

Security Island AXI isolate

- Offset: 0x44
- Reset default: 0x1
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "SECURITY_ISLAND_ISOLATE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
| 31:1 |      |       |      | Reserved    |

| Bits | Type | Reset Name                  | Description |
|------|------|-----------------------------|-------------|
| 0    | rw   | 0x1 SECURITY_ISLAND_ISOLATE |             |

# PULP\_CLUSTER\_ISOLATE

PULP Cluster AXI isolate

- Offset: 0x48
- Reset default: 0x1
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "PULP_CLUSTER_ISOLATE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vsync": 0}}
```

| Bits | Type | Reset Name               | Description |
|------|------|--------------------------|-------------|
| 31:1 |      |                          | Reserved    |
| 0    | rw   | 0x1 PULP_CLUSTER_ISOLATE |             |

# SPATZ\_CLUSTER\_ISOLATE

Spatz Cluster AXI isolate

- Offset: 0x4c
- Reset default: 0x1
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "SPATZ_CLUSTER_ISOLATE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vsync": 0}}
```

| Bits | Type | Reset Name                | Description |
|------|------|---------------------------|-------------|
| 31:1 |      |                           | Reserved    |
| 0    | rw   | 0x1 SPATZ_CLUSTER_ISOLATE |             |

# L2\_ISOLATE

L2 AXI isolate

- Offset: 0x50
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "L2_ISOLATE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vsync": 0}}
```

| Bits | Type | Reset Name     | Description |
|------|------|----------------|-------------|
| 31:1 |      |                | Reserved    |
| 0    | rw   | 0x0 L2_ISOLATE |             |

# PERIPH\_ISOLATE\_STATUS

Periph Domain AXI isolate status

- Offset: 0x54
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "PERIPH_ISOLATE_STATUS", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset Name                | Description |
|------|------|---------------------------|-------------|
| 31:1 |      |                           | Reserved    |
| 0    | rw   | 0x0 PERIPH_ISOLATE_STATUS |             |

# SAFETY\_ISLAND\_ISOLATE\_STATUS

Safety Island AXI isolate status

- Offset: 0x58
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "SAFETY_ISLAND_ISOLATE_STATUS", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset Name                       | Description |
|------|------|----------------------------------|-------------|
| 31:1 |      |                                  | Reserved    |
| 0    | rw   | 0x0 SAFETY_ISLAND_ISOLATE_STATUS |             |

# SECURITY\_ISLAND\_ISOLATE\_STATUS

Security Island AXI isolate status

- Offset: 0x5c
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "SECURITY_ISLAND_ISOLATE_STATUS", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset Name                         | Description |
|------|------|------------------------------------|-------------|
| 31:1 |      |                                    | Reserved    |
| 0    | rw   | 0x0 SECURITY_ISLAND_ISOLATE_STATUS |             |

# PULP\_CLUSTER\_ISOLATE\_STATUS

PULP Cluster AXI isolate status

- Offset: 0x60
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "PULP_CLUSTER_ISOLATE_STATUS", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset Name                      | Description |
|------|------|---------------------------------|-------------|
| 31:1 |      |                                 | Reserved    |
| 0    | rw   | 0x0 PULP_CLUSTER_ISOLATE_STATUS |             |

# SPATZ\_CLUSTER\_ISOLATE\_STATUS

Spatz Cluster AXI isolate status

- Offset: 0x64
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "SPATZ_CLUSTER_ISOLATE_STATUS", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "font
```

| Bits | Type | Reset | Name                         | Description |
|------|------|-------|------------------------------|-------------|
| 31:1 |      |       |                              | Reserved    |
| 0    | rw   | 0x0   | SPATZ_CLUSTER_ISOLATE_STATUS |             |

L2\_ISOLATE\_STATUS

L2 AXI isolate status

- Offset: 0x68
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "L2_ISOLATE_STATUS", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "font
```

| Bits | Type | Reset | Name              | Description |
|------|------|-------|-------------------|-------------|
| 31:1 |      |       |                   | Reserved    |
| 0    | rw   | 0x0   | L2_ISOLATE_STATUS |             |

PERIPH\_CLK\_EN

Periph Domain clk gate enable

- Offset: 0x6c
- Reset default: 0x1
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "PERIPH_CLK_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "font
```

| Bits | Type | Reset | Name          | Description |
|------|------|-------|---------------|-------------|
| 31:1 |      |       |               | Reserved    |
| 0    | rw   | 0x1   | PERIPH_CLK_EN |             |

SAFETY\_ISLAND\_CLK\_EN

Safety Island clk gate enable

- Offset: 0x70
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "SAFETY_ISLAND_CLK_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "font
```

| Bits | Type | Reset | Name                 | Description |
|------|------|-------|----------------------|-------------|
| 31:1 |      |       |                      | Reserved    |
| 0    | rw   | 0x0   | SAFETY_ISLAND_CLK_EN |             |

SECURITY\_ISLAND\_CLK\_EN

Security Island clk gate enable

- Offset: 0x74
- Reset default: 0x0

- Reset mask: 0x1

### Fields

```
{"reg": [{"name": "SECURITY_ISLAND_CLK_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsi
```

| Bits | Type | Reset | Name                   | Description |
|------|------|-------|------------------------|-------------|
| 31:1 |      |       |                        | Reserved    |
| 0    | rw   | 0x0   | SECURITY_ISLAND_CLK_EN |             |

## PULP\_CLUSTER\_CLK\_EN

PULP Cluster clk gate enable

- Offset: 0x78
- Reset default: 0x0
- Reset mask: 0x1

### Fields

```
{"reg": [{"name": "PULP_CLUSTER_CLK_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize
```

| Bits | Type | Reset | Name                | Description |
|------|------|-------|---------------------|-------------|
| 31:1 |      |       |                     | Reserved    |
| 0    | rw   | 0x0   | PULP_CLUSTER_CLK_EN |             |

## SPATZ\_CLUSTER\_CLK\_EN

Spatz Cluster clk gate enable

- Offset: 0x7c
- Reset default: 0x0
- Reset mask: 0x1

### Fields

```
{"reg": [{"name": "SPATZ_CLUSTER_CLK_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize
```

| Bits | Type | Reset | Name                 | Description |
|------|------|-------|----------------------|-------------|
| 31:1 |      |       |                      | Reserved    |
| 0    | rw   | 0x0   | SPATZ_CLUSTER_CLK_EN |             |

## L2\_CLK\_EN

Shared L2 memory clk gate enable

- Offset: 0x80
- Reset default: 0x1
- Reset mask: 0x1

### Fields

```
{"reg": [{"name": "L2_CLK_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspa
```

| Bits | Type | Reset | Name      | Description |
|------|------|-------|-----------|-------------|
| 31:1 |      |       |           | Reserved    |
| 0    | rw   | 0x1   | L2_CLK_EN |             |

## PERIPH\_CLK\_SEL

Periph Domain pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)

- Offset: 0x84
- Reset default: 0x2
- Reset mask: 0x3

Fields

```
{"reg": [{"name": "PERIPH_CLK_SEL", "bits": 2, "attr": ["rw"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "fontsize": 10,
```

| Bits | Type | Reset Name         | Description |
|------|------|--------------------|-------------|
| 31:2 |      |                    | Reserved    |
| 1:0  | rw   | 0x2 PERIPH_CLK_SEL |             |

SAFETY\_ISLAND\_CLK\_SEL

Safety Island pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)

- Offset: 0x88
- Reset default: 0x1
- Reset mask: 0x3

Fields

```
{"reg": [{"name": "SAFETY_ISLAND_CLK_SEL", "bits": 2, "attr": ["rw"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "fontsize": 10,
```

| Bits | Type | Reset Name                | Description |
|------|------|---------------------------|-------------|
| 31:2 |      |                           | Reserved    |
| 1:0  | rw   | 0x1 SAFETY_ISLAND_CLK_SEL |             |

SECURITY\_ISLAND\_CLK\_SEL

Security Island pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)

- Offset: 0x8c
- Reset default: 0x1
- Reset mask: 0x3

Fields

```
{"reg": [{"name": "SECURITY_ISLAND_CLK_SEL", "bits": 2, "attr": ["rw"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "fontsize": 10,
```

| Bits | Type | Reset Name                  | Description |
|------|------|-----------------------------|-------------|
| 31:2 |      |                             | Reserved    |
| 1:0  | rw   | 0x1 SECURITY_ISLAND_CLK_SEL |             |

PULP\_CLUSTER\_CLK\_SEL

PULP Cluster pll select (0 -> host pll, 1 -> alt PLL, 2 -> per pll)

- Offset: 0x90
- Reset default: 0x1
- Reset mask: 0x3

Fields

```
{"reg": [{"name": "PULP_CLUSTER_CLK_SEL", "bits": 2, "attr": ["rw"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "fontsize": 10,
```

| Bits | Type | Reset Name               | Description |
|------|------|--------------------------|-------------|
| 31:2 |      |                          | Reserved    |
| 1:0  | rw   | 0x1 PULP_CLUSTER_CLK_SEL |             |

SPATZ\_CLUSTER\_CLK\_SEL

- Offset: 0x94
- Reset default: 0x1
- Reset mask: 0x3

```
{ "reg": [{"name": "SPATZ_CLUSTER_CLK_SEL", "bits": 2, "attr": ["rw"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "fontSize": 16}}
```

## L2\_CLK\_SEL

- Offset: 0x98
- Reset default: 0x1
- Reset mask: 0x3

```

{"reg": [{"name": "L2_CLK_SEL", "bits": 2, "attr": ["rw"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "fontsize": 10, "vs

```

## PH\_CLK\_DIV\_VALUE

- Offset: 0x9c
- Reset default: 0x1
- Reset mask: 0xffffffff

```
{ "reg": [{"name": "PERIPH_CLK_DIV_VALUE", "bits": 24, "attr": ["rw"], "rotate": 0}, {"bits": 8}], "config": {"lanes": 1, "fontsize":
```

## SAFETY\_ISLAND\_CLK\_DIV\_VALUE

- Offset: 0xa0
- Reset default: 0x1
- Reset mask: 0xffffffff

```
{ "reg": [{"name": "SAFETY ISLAND CLK DIV VALUE", "bits": 24, "attr": ["rw"], "rotate": 0}, {"bits": 8}], "config": {"lanes": 1, "font":
```

| Bits  | Type | Reset | Name                        | Description |
|-------|------|-------|-----------------------------|-------------|
| 31:24 |      |       |                             | Reserved    |
| 23:0  | rw   | 0x1   | SAFETY_ISLAND_CLK_DIV_VALUE |             |

# SECURITY\_ISLAND\_CLK\_DIV\_VALUE

Security Island clk divider value

- Offset: 0xa4
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "SECURITY_ISLAND_CLK_DIV_VALUE", "bits": 24, "attr": ["rw"], "rotate": 0}, {"bits": 8}], "config": {"lanes": 1, "font
```

| Bits  | Type | Reset | Name                          | Description |
|-------|------|-------|-------------------------------|-------------|
| 31:24 |      |       |                               | Reserved    |
| 23:0  | rw   | 0x1   | SECURITY_ISLAND_CLK_DIV_VALUE |             |

# PULP\_CLUSTER\_CLK\_DIV\_VALUE

PULP Cluster clk divider value

- Offset: 0xa8
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "PULP_CLUSTER_CLK_DIV_VALUE", "bits": 24, "attr": ["rw"], "rotate": 0}, {"bits": 8}], "config": {"lanes": 1, "font
```

| Bits  | Type | Reset | Name                       | Description |
|-------|------|-------|----------------------------|-------------|
| 31:24 |      |       |                            | Reserved    |
| 23:0  | rw   | 0x1   | PULP_CLUSTER_CLK_DIV_VALUE |             |

# SPATZ\_CLUSTER\_CLK\_DIV\_VALUE

Spatz Cluster clk divider value

- Offset: 0xac
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "SPATZ_CLUSTER_CLK_DIV_VALUE", "bits": 24, "attr": ["rw"], "rotate": 0}, {"bits": 8}], "config": {"lanes": 1, "font
```

| Bits  | Type | Reset | Name                        | Description |
|-------|------|-------|-----------------------------|-------------|
| 31:24 |      |       |                             | Reserved    |
| 23:0  | rw   | 0x1   | SPATZ_CLUSTER_CLK_DIV_VALUE |             |

# L2\_CLK\_DIV\_VALUE

L2 Memory clk divider value

- Offset: 0xb0
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "L2_CLK_DIV_VALUE", "bits": 24, "attr": ["rw"], "rotate": 0}, {"bits": 8}], "config": {"lanes": 1, "fontsize": 10,
```

| Bits  | Type | Reset | Name | Description |
|-------|------|-------|------|-------------|
| 31:24 |      |       |      | Reserved    |



| Bits | Type | Reset Name           | Description |
|------|------|----------------------|-------------|
| 23:0 | rw   | 0x1 L2_CLK_DIV_VALUE |             |

# HOST\_FETCH\_ENABLE

Host Domain fetch enable

- Offset: 0xb4
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "HOST_FETCH_ENABLE", "bits": 1, "attr": ["ro"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset Name            | Description |
|------|------|-----------------------|-------------|
| 31:1 |      |                       | Reserved    |
| 0    | ro   | 0x0 HOST_FETCH_ENABLE |             |

# SAFETY\_ISLAND\_FETCH\_ENABLE

Safety Island fetch enable

- Offset: 0xb8
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "SAFETY_ISLAND_FETCH_ENABLE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset Name                     | Description |
|------|------|--------------------------------|-------------|
| 31:1 |      |                                | Reserved    |
| 0    | rw   | 0x0 SAFETY_ISLAND_FETCH_ENABLE |             |

# SECURITY\_ISLAND\_FETCH\_ENABLE

Security Island fetch enable

- Offset: 0xbc
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "SECURITY_ISLAND_FETCH_ENABLE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset Name                       | Description |
|------|------|----------------------------------|-------------|
| 31:1 |      |                                  | Reserved    |
| 0    | rw   | 0x0 SECURITY_ISLAND_FETCH_ENABLE |             |

# PULP\_CLUSTER\_FETCH\_ENABLE

PULP Cluster fetch enable

- Offset: 0xc0
- Reset default: 0x0
- Reset mask: 0x1

## Fields

{"reg": [{"name": "PULP\_CLUSTER\_FETCH\_ENABLE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "font

| Bits | Type | Reset | Name                      | Description |
|------|------|-------|---------------------------|-------------|
| 31:1 |      |       |                           | Reserved    |
| 0    | rw   | 0x0   | PULP_CLUSTER_FETCH_ENABLE |             |

# SPATZ\_CLUSTER\_DEBUG\_REQ

Spatz Cluster debug req

- Offset: 0xc4
- Reset default: 0x0
- Reset mask: 0x3

## Fields

{"reg": [{"name": "SPATZ\_CLUSTER\_DEBUG\_REQ", "bits": 2, "attr": ["rw"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "font

| Bits | Type | Reset | Name                    | Description |
|------|------|-------|-------------------------|-------------|
| 31:2 |      |       |                         | Reserved    |
| 1:0  | rw   | 0x0   | SPATZ_CLUSTER_DEBUG_REQ |             |

# HOST\_BOOT\_ADDR

Host boot address

- Offset: 0xc8
- Reset default: 0x1000
- Reset mask: 0xffffffff

## Fields

{"reg": [{"name": "HOST\_BOOT\_ADDR", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

| Bits | Type | Reset  | Name           | Description |
|------|------|--------|----------------|-------------|
| 31:0 | rw   | 0x1000 | HOST_BOOT_ADDR |             |

# SAFETY\_ISLAND\_BOOT\_ADDR

Safety Island boot address

- Offset: 0xcc
- Reset default: 0x70000000
- Reset mask: 0xffffffff

## Fields

{"reg": [{"name": "SAFETY\_ISLAND\_BOOT\_ADDR", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

| Bits | Type | Reset      | Name                    | Description |
|------|------|------------|-------------------------|-------------|
| 31:0 | rw   | 0x70000000 | SAFETY_ISLAND_BOOT_ADDR |             |

# SECURITY\_ISLAND\_BOOT\_ADDR

Security Island boot address

- Offset: 0xd0
- Reset default: 0x70000000
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "SECURITY_ISLAND_BOOT_ADDR", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset      | Name                      | Description |
|------|------|------------|---------------------------|-------------|
| 31:0 | rw   | 0x70000000 | SECURITY_ISLAND_BOOT_ADDR |             |

# PULP\_CLUSTER\_BOOT\_ADDR

PULP Cluster boot address

- Offset: 0xd4
- Reset default: 0x70000000
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "PULP_CLUSTER_BOOT_ADDR", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset      | Name                   | Description |
|------|------|------------|------------------------|-------------|
| 31:0 | rw   | 0x70000000 | PULP_CLUSTER_BOOT_ADDR |             |

# SPATZ\_CLUSTER\_BOOT\_ADDR

Spatz Cluster boot address

- Offset: 0xd8
- Reset default: 0x70000000
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "SPATZ_CLUSTER_BOOT_ADDR", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset      | Name                    | Description |
|------|------|------------|-------------------------|-------------|
| 31:0 | rw   | 0x70000000 | SPATZ_CLUSTER_BOOT_ADDR |             |

# PULP\_CLUSTER\_BOOT\_ENABLE

PULP Cluster boot enable

- Offset: 0xdc
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "PULP_CLUSTER_BOOT_ENABLE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name                     | Description |
|------|------|-------|--------------------------|-------------|
| 31:1 |      |       |                          | Reserved    |
| 0    | rw   | 0x0   | PULP_CLUSTER_BOOT_ENABLE |             |

# SPATZ\_CLUSTER\_BUSY

Spatz Cluster busy

- Offset: 0xe0
- Reset default: 0x0
- Reset mask: 0x1

## Fields

{"reg": [{"name": "SPATZ\_CLUSTER\_BUSY", "bits": 1, "attr": ["ro"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontSize": 10}}

| Bits | Type | Reset | Name               | Description |
|------|------|-------|--------------------|-------------|
| 31:1 |      |       |                    | Reserved    |
| 0    | ro   | 0x0   | SPATZ_CLUSTER_BUSY |             |

# PULP\_CLUSTER\_BUSY

PULP Cluster busy

- Offset: 0xe4
- Reset default: 0x0
- Reset mask: 0x1

## Fields

{"reg": [{"name": "PULP\_CLUSTER\_BUSY", "bits": 1, "attr": ["ro"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontSize": 10}}

| Bits | Type | Reset | Name              | Description |
|------|------|-------|-------------------|-------------|
| 31:1 |      |       |                   | Reserved    |
| 0    | ro   | 0x0   | PULP_CLUSTER_BUSY |             |

# PULP\_CLUSTER\_EOC

PULP Cluster end of computation

- Offset: 0xe8
- Reset default: 0x0
- Reset mask: 0x1

## Fields

{"reg": [{"name": "PULP\_CLUSTER\_EOC", "bits": 1, "attr": ["ro"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontSize": 10}}

| Bits | Type | Reset | Name             | Description |
|------|------|-------|------------------|-------------|
| 31:1 |      |       |                  | Reserved    |
| 0    | ro   | 0x0   | PULP_CLUSTER_EOC |             |

# ETH\_RGMII\_PHY\_CLK\_DIV\_EN

Ethernet RGMII PHY clock divider enable bit

- Offset: 0xec
- Reset default: 0x1
- Reset mask: 0x1

## Fields

{"reg": [{"name": "ETH\_RGMII\_PHY\_CLK\_DIV\_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontSize": 10}}

| Bits | Type | Reset | Name                     | Description |
|------|------|-------|--------------------------|-------------|
| 31:1 |      |       |                          | Reserved    |
| 0    | rw   | 0x1   | ETH_RGMII_PHY_CLK_DIV_EN |             |

# ETH\_RGMII\_PHY\_CLK\_DIV\_VALUE

Ethernet RGMII PHY clock divider value

- Offset: 0xf0
- Reset default: 0x64
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "ETH_RGMII_PHY_CLK_DIV_VALUE", "bits": 20, "attr": ["rw"], "rotate": 0}, {"bits": 12}], "config": {"lanes": 1, "fo
```

| Bits  | Type | Reset Name                       | Description |
|-------|------|----------------------------------|-------------|
| 31:20 |      |                                  | Reserved    |
| 19:0  | rw   | 0x64 ETH_RGMII_PHY_CLK_DIV_VALUE |             |

## ETH\_MDIO\_CLK\_DIV\_EN

Ethernet MDIO clock divider enable bit

- Offset: 0xf4
- Reset default: 0x1
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "ETH_MDIO_CLK_DIV_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize
```

| Bits | Type | Reset Name              | Description |
|------|------|-------------------------|-------------|
| 31:1 |      |                         | Reserved    |
| 0    | rw   | 0x1 ETH_MDIO_CLK_DIV_EN |             |

## ETH\_MDIO\_CLK\_DIV\_VALUE

Ethernet MDIO clock divider value

- Offset: 0xf8
- Reset default: 0x64
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "ETH_MDIO_CLK_DIV_VALUE", "bits": 20, "attr": ["rw"], "rotate": 0}, {"bits": 12}], "config": {"lanes": 1, "fontsize
```

| Bits  | Type | Reset Name                  | Description |
|-------|------|-----------------------------|-------------|
| 31:20 |      |                             | Reserved    |
| 19:0  | rw   | 0x64 ETH_MDIO_CLK_DIV_VALUE |             |

## cheshire / doc / registers.md

## Summary

| Name                                 | Offset | Length | Description                   |
|--------------------------------------|--------|--------|-------------------------------|
| cheshire. <a href="#">scratch_0</a>  | 0x0    | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_1</a>  | 0x4    | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_2</a>  | 0x8    | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_3</a>  | 0xc    | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_4</a>  | 0x10   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_5</a>  | 0x14   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_6</a>  | 0x18   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_7</a>  | 0x1c   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_8</a>  | 0x20   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_9</a>  | 0x24   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_10</a> | 0x28   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_11</a> | 0x2c   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_12</a> | 0x30   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_13</a> | 0x34   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_14</a> | 0x38   | 4      | Registers for use by software |
| cheshire. <a href="#">scratch_15</a> | 0x3c   | 4      | Registers for use by software |

| Name                           | Offset | Length | Description  |
|--------------------------------|--------|--------|--|
| cheshire. <u>boot_mode</u>     | 0x40   | 4      | Method to load boot code (connected to input pins) |
| cheshire. <u>rtc_freq</u>      | 0x44   | 4      | Frequency (Hz) configured for RTC                  |
| cheshire. <u>platform_rom</u>  | 0x48   | 4      | Address of platform ROM                            |
| cheshire. <u>num_int_harts</u> | 0x4c   | 4      | Number of internal harts                           |
| cheshire. <u>hw_features</u>   | 0x50   | 4      | Specifies which hardware features are available    |
| cheshire. <u>llc_size</u>      | 0x54   | 4      | Total size of LLC in bytes                         |
| cheshire. <u>vga_params</u>    | 0x58   | 4      | VGA hardware parameters                            |

# scratch

Registers for use by software

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name       | Offset |
|------------|--------|
| scratch_0  | 0x0    |
| scratch_1  | 0x4    |
| scratch_2  | 0x8    |
| scratch_3  | 0xc    |
| scratch_4  | 0x10   |
| scratch_5  | 0x14   |
| scratch_6  | 0x18   |
| scratch_7  | 0x1c   |
| scratch_8  | 0x20   |
| scratch_9  | 0x24   |
| scratch_10 | 0x28   |
| scratch_11 | 0x2c   |
| scratch_12 | 0x30   |
| scratch_13 | 0x34   |
| scratch_14 | 0x38   |
| scratch_15 | 0x3c   |

## Fields

```
{"reg": [{"name": "scratch", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name    | Description                   |
|------|------|-------|---------|-------------------------------|
| 31:0 | rw   | 0x0   | scratch | Registers for use by software |

# boot\_mode

Method to load boot code (connected to input pins)

- Offset: 0x40
- Reset default: 0x0
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "boot_mode", "bits": 2, "attr": ["ro"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name             |
|------|------|-------|------------------|
| 31:2 |      |       | Reserved         |
| 1:0  | ro   | x     | <u>boot_mode</u> |

## boot\_mode . boot\_mode

Method to load boot code (connected to input pins)

| Value | Name | Description |
|-------|------|-------------|
|-------|------|-------------|

| Value | Name          | Description                          |
|-------|---------------|--------------------------------------|
| 0x0   | passive       | Wait for external preload and launch |
| 0x1   | spi_sdcard    | Boot from SD Card in SPI mode        |
| 0x2   | spi_s25fs512s | Boot from S25FS512S SPI NOR flash    |
| 0x3   | i2c_24xx1025  | Boot from 24xx1025 I2C EEPROM        |

# rtc\_freq

Frequency (Hz) configured for RTC

- Offset: 0x44
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "ref_freq", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description                       |
|------|------|-------|----------|-----------------------------------|
| 31:0 | ro   | x     | ref_freq | Frequency (Hz) configured for RTC |

# platform\_rom

Address of platform ROM

- Offset: 0x48
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "platform_rom", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name         | Description             |
|------|------|-------|--------------|-------------------------|
| 31:0 | ro   | x     | platform_rom | Address of platform ROM |

# num\_int\_harts

Number of internal harts

- Offset: 0x4c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "num_harts", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description              |
|------|------|-------|-----------|--------------------------|
| 31:0 | ro   | x     | num_harts | Number of internal harts |

# hw\_features

Specifies which hardware features are available

- Offset: 0x50
- Reset default: 0x0
- Reset mask: 0x1fff

## Fields

```
{"reg": [{"name": "bootrom", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "llc", "bits": 1, "attr": ["ro"], "rotate": -90}, {"
```

| Bits  | Type | Reset | Name        | Description                      |
|-------|------|-------|-------------|----------------------------------|
| 31:13 |      |       |             | Reserved                         |
| 12    | ro   | x     | bus_err     | Whether UNBENT is available      |
| 11    | ro   | x     | irq_router  | Whether IRQ router is available  |
| 10    | ro   | x     | clic        | Whether CLIC is available        |
| 9     | ro   | x     | axirt       | Whether AXI RT is available      |
| 8     | ro   | x     | vga         | Whether VGA is available         |
| 7     | ro   | x     | serial_link | Whether serial link is available |
| 6     | ro   | x     | dma         | Whether DMA is available         |
| 5     | ro   | x     | gpio        | Whether GPIO is available        |
| 4     | ro   | x     | i2c         | Whether I2C is available         |
| 3     | ro   | x     | spi_host    | Whether SPI host is available    |
| 2     | ro   | x     | uart        | Whether UART is available        |
| 1     | ro   | x     | llc         | Whether LLC is available         |
| 0     | ro   | x     | bootrom     | Whether boot ROM is available    |

## llc\_size

Total size of LLC in bytes

- Offset: 0x54
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "llc_size", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description                |
|------|------|-------|----------|----------------------------|
| 31:0 | ro   | x     | llc_size | Total size of LLC in bytes |

## vga\_params

VGA hardware parameters

- Offset: 0x58
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "red_width", "bits": 8, "attr": ["ro"], "rotate": 0}, {"name": "green_width", "bits": 8, "attr": ["ro"], "rotate":
```

| Bits  | Type | Reset | Name        | Description         |
|-------|------|-------|-------------|---------------------|
| 31:24 |      |       |             | Reserved            |
| 23:16 | ro   | x     | blue_width  | Blue channel width  |
| 15:8  | ro   | x     | green_width | Green channel width |
| 7:0   | ro   | x     | red_width   | Red channel width   |

## clic / doc / clicint\_registers.md

## Summary

| Name                             | Offset | Length | Description   |
|----------------------------------|--------|--------|---|
| CLICINT. <a href="#">CLICINT</a> | 0x0    | 4      | CLIC interrupt pending, enable, attribute and control |

## CLICINT

CLIC interrupt pending, enable, attribute and control



- **Offset:** 0x0
- **Reset default:** 0xc00000
- **Reset mask:** 0xffc70101

Fields

{"reg": [{"name": "IP", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 7}, {"name": "IE", "bits": 1, "attr": ["rw"], "rotate":

| Bits  | Type | Reset | Name      | Description                                  |
|-------|------|-------|-----------|--|
| 31:24 | rw   | 0x0   | CTL       | interrupt control for interrupt              |
| 23:22 | rw   | 0x3   | ATTR_MODE | privilege mode of this interrupt             |
| 21:19 |      |       |           | Reserved                                     |
| 18:17 | rw   | 0x0   | ATTR_TRIG | specify trigger type for this interrupt      |
| 16    | rw   | 0x0   | ATTR_SHV  | enable hardware vectoring for this interrupt |
| 15:9  |      |       |           | Reserved                                     |
| 8     | rw   | 0x0   | IE        | interrupt enable for interrupt               |
| 7:1   |      |       |           | Reserved                                     |
| 0     | rw   | 0x0   | IP        | interrupt pending for interrupt              |

clic / doc / clictv\_registers.md

Summary

| Name                               | Offset | Length | Description                   |
|------------------------------------|--------|--------|-------------------------------|
| CLICINTV. <a href="#">CLICINTV</a> | 0x0    | 4      | CLIC interrupt virtualization |

CLICINTV

CLIC interrupt virtualization

- **Offset:** 0x0
- **Reset default:** 0x0
- **Reset mask:** 0xfdfdfdfd

Fields

{"reg": [{"name": "V0", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 1}, {"name": "VSID0", "bits": 6, "attr": ["rw"], "rotate":

| Bits  | Type | Reset | Name  | Description                    |
|-------|------|-------|-------|--------------------------------|
| 31:26 | rw   | 0x0   | VSID3 | interrupt VS id                |
| 25    |      |       |       | Reserved                       |
| 24    | rw   | 0x0   | V3    | interrupt delegated to VS-mode |
| 23:18 | rw   | 0x0   | VSID2 | interrupt VS id                |
| 17    |      |       |       | Reserved                       |
| 16    | rw   | 0x0   | V2    | interrupt delegated to VS-mode |
| 15:10 | rw   | 0x0   | VSID1 | interrupt VS id                |
| 9     |      |       |       | Reserved                       |
| 8     | rw   | 0x0   | V1    | interrupt delegated to VS-mode |
| 7:2   | rw   | 0x0   | VSID0 | interrupt VS id                |
| 1     |      |       |       | Reserved                       |
| 0     | rw   | 0x0   | V0    | interrupt delegated to VS-mode |

clic / doc / clicvs\_registers.md

Summary

| Name                           | Offset | Length | Description                      |
|--------------------------------|--------|--------|----------------------------------|
| CLICVS. <a href="#">vsprio</a> | 0x0    | 4      | CLIC virtual supervisor priority |

vsprio

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0x1010101

```
{ "reg": [{"name": "prio0", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 7}, {"name": "prio1", "bits": 1, "attr": ["rw"], "rot
```

clic / doc / mclic\_registers.md

| Name                                 | Offset | Length | Description                            |
|--------------------------------------|--------|--------|--|
| MCLIC. <a href="#">MCLICCFG</a>      | 0x0    | 4      | CLIC configuration                     |
| MCLIC. <a href="#">CLICMNXTICONE</a> | 0x4    | 4      | CLIC enable mnxti irq forwarding logic |

## CLIC configuration

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xff0f003f

```
{"reg": [{"name": "mnlbits", "bits": 4, "attr": ["rw"], "rotate": -90}, {"name": "nmblbits", "bits": 2, "attr": ["rw"], "rotate": -90}]
```

# CLICMNXTICONF

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0x1

```
{"reg": [{"name": "CLICMNXTICONF", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10,
```

| Bits | Type | Reset Name | Description |
|------|------|------------|-------------|
|------|------|------------|-------------|

| Bits | Type | Reset Name        | Description |
|------|------|-------------------|-------------|
| 31:1 |      |                   | Reserved    |
| 0    | rw   | 0x0 CLICMNXTICONF |             |

# clint / doc / registers.md

## Summary

| Name                         | Offset | Length | Description                        |
|------------------------------|--------|--------|------------------------------------|
| CLINT. <u>MSIP_0</u>         | 0x0    | 4      | Machine Software Interrupt Pending |
| CLINT. <u>MSIP_1</u>         | 0x4    | 4      | Machine Software Interrupt Pending |
| CLINT. <u>MTIMECMP_LOW0</u>  | 0x4000 | 4      | Machine Timer Compare for Core 0   |
| CLINT. <u>MTIMECMP_HIGH0</u> | 0x4004 | 4      | Machine Timer Compare for Core 0   |
| CLINT. <u>MTIMECMP_LOW1</u>  | 0x4008 | 4      | Machine Timer Compare for Core 1   |
| CLINT. <u>MTIMECMP_HIGH1</u> | 0x400c | 4      | Machine Timer Compare for Core 1   |
| CLINT. <u>MTIME_LOW</u>      | 0xbff8 | 4      | Timer Register Low                 |
| CLINT. <u>MTIME_HIGH</u>     | 0xbffc | 4      | Timer Register High                |

## MSIP

Machine Software Interrupt Pending

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name   | Offset |
|--------|--------|
| MSIP_0 | 0x0    |
| MSIP_1 | 0x4    |

## Fields

|  |
|--|
| <pre>{"reg": [{"name": "P", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "RSVD", "bits": 31, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}</pre> |
|--|

| Bits | Type | Reset Name | Description                        |
|------|------|------------|------------------------------------|
| 31:1 | ro   | 0x0 RSVD   | Reserved                           |
| 0    | rw   | 0x0 P      | Machine Software Interrupt Pending |

## MTIMECMP\_LOW0

Machine Timer Compare for Core 0

- Offset: 0x4000
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

|   |
|---|
| <pre>{"reg": [{"name": "MTIMECMP_LOW", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}</pre> |
|---|

| Bits | Type | Reset Name       | Description                       |
|------|------|------------------|-----------------------------------|
| 31:0 | rw   | 0x0 MTIMECMP_LOW | Machine Time Compare (Low) Core 0 |

## MTIMECMP\_HIGH0

Machine Timer Compare for Core 0

- Offset: 0x4004
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "MTIMECMP_HIGH", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name        | Description                        |
|------|------|-------------------|------------------------------------|
| 31:0 | rw   | 0x0 MTIMECMP_HIGH | Machine Time Compare (High) Core 0 |

MTIMECMP\_LOW1

Machine Timer Compare for Core 1

- Offset: 0x4008
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "MTIMECMP_LOW", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name       | Description                       |
|------|------|------------------|-----------------------------------|
| 31:0 | rw   | 0x0 MTIMECMP_LOW | Machine Time Compare (Low) Core 1 |

MTIMECMP\_HIGH1

Machine Timer Compare for Core 1

- Offset: 0x400c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "MTIMECMP_HIGH", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name        | Description                        |
|------|------|-------------------|------------------------------------|
| 31:0 | rw   | 0x0 MTIMECMP_HIGH | Machine Time Compare (High) Core 1 |

MTIME\_LOW

Timer Register Low

- Offset: 0xbff8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "MTIME_LOW", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name    | Description        |
|------|------|---------------|--------------------|
| 31:0 | rw   | 0x0 MTIME_LOW | Machine Time (Low) |

MTIME\_HIGH

Timer Register High

- Offset: 0xbffc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "MTIME_HIGH", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name     | Description         |
|------|------|----------------|---------------------|
| 31:0 | rw   | 0x0 MTIME_HIGH | Machine Time (High) |

## cl\_event\_unit / doc / registers.md

### Summary

| Name   | Offset | Length | Description  |
|--|--------|--------|--|
| cluster_event_unit. <a href="#">EVT_MASK</a>                     | 0x0    | 4      | Input event mask configuration register.   |
| cluster_event_unit. <a href="#">EVT_MASK_AND</a>                 | 0x4    | 4      | Input event mask update command register with bitwise AND operation.                               |
| cluster_event_unit. <a href="#">EVT_MASK_OR</a>                  | 0x8    | 4      | Input event mask update command register with bitwise OR operation.                                |
| cluster_event_unit. <a href="#">IRQ_MASK</a>                     | 0xc    | 4      | Interrupt request mask configuration register.   |
| cluster_event_unit. <a href="#">IRQ_MASK_AND</a>                 | 0x10   | 4      | Interrupt request mask update command register with bitwise AND operation.                         |
| cluster_event_unit. <a href="#">IRQ_MASK_OR</a>                  | 0x14   | 4      | Interrupt request mask update command register with bitwise OR operation.                          |
| cluster_event_unit. <a href="#">CLOCK_STATUS</a>                 | 0x18   | 4      | Cluster cores clock status register.   |
| cluster_event_unit. <a href="#">EVENT_BUFFER</a>                 | 0x1c   | 4      | Pending input events status register.  |
| cluster_event_unit. <a href="#">EVENT_BUFFER_MASKED</a>          | 0x20   | 4      | Pending input events status register with EVT_MASK applied.  |
| cluster_event_unit. <a href="#">EVENT_BUFFER_IRQ_MASKED</a>      | 0x24   | 4      | Pending input events status register with IRQ_MASK applied.  |
| cluster_event_unit. <a href="#">EVENT_BUFFER_CLEAR</a>           | 0x28   | 4      | Pending input events status clear command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_MASK</a>                | 0x2c   | 4      | Software events cluster cores destination mask configuration register.                             |
| cluster_event_unit. <a href="#">SW_EVENT_MASK_AND</a>            | 0x30   | 4      | Software events cluster cores destination mask update command register with bitwise AND operation. |
| cluster_event_unit. <a href="#">SW_EVENT_MASK_OR</a>             | 0x34   | 4      | Software events cluster cores destination mask update command register with bitwise OR operation.  |
| cluster_event_unit. <a href="#">EVENT_WAIT</a>                   | 0x38   | 4      | Input event wait command register.   |
| cluster_event_unit. <a href="#">EVENT_WAIT_CLEAR</a>             | 0x3c   | 4      | Input event wait and clear command register.   |
| cluster_event_unit. <a href="#">HW_DISPATCH_PUSH_TASK</a>        | 0x40   | 4      | Hardware task dispatcher push command register.  |
| cluster_event_unit. <a href="#">HW_DISPATCH_POP_TASK</a>         | 0x44   | 4      | Hardware task dispatcher pop command register.   |
| cluster_event_unit. <a href="#">HW_DISPATCH_PUSH_TEAM_CONFIG</a> | 0x48   | 4      | Hardware task dispatcher cluster core team configuration register.                                 |
| cluster_event_unit. <a href="#">HW_MUTEX_0_MSG_PUT</a>           | 0x4c   | 4      | Hardware mutex 0 non-blocking put command register.  |
| cluster_event_unit. <a href="#">HW_MUTEX_0_MSG_GET</a>           | 0x50   | 4      | Hardware mutex 0 blocking get command register.  |
| cluster_event_unit. <a href="#">HW_MUTEX_1_MSG_PUT</a>           | 0x54   | 4      | Hardware mutex 1 non-blocking put command register.  |
| cluster_event_unit. <a href="#">HW_MUTEX_1_MSG_GET</a>           | 0x58   | 4      | Hardware mutex 1 blocking get command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_0_TRIG</a>              | 0x5c   | 4      | Cluster Software event 0 trigger command register.   |
| cluster_event_unit. <a href="#">SW_EVENT_1_TRIG</a>              | 0x60   | 4      | Cluster Software event 1 trigger command register.   |
| cluster_event_unit. <a href="#">SW_EVENT_2_TRIG</a>              | 0x64   | 4      | Cluster Software event 2 trigger command register.   |
| cluster_event_unit. <a href="#">SW_EVENT_3_TRIG</a>              | 0x68   | 4      | Cluster Software event 3 trigger command register.   |
| cluster_event_unit. <a href="#">SW_EVENT_4_TRIG</a>              | 0x6c   | 4      | Cluster Software event 4 trigger command register.   |
| cluster_event_unit. <a href="#">SW_EVENT_5_TRIG</a>              | 0x70   | 4      | Cluster Software event 5 trigger command register.   |
| cluster_event_unit. <a href="#">SW_EVENT_6_TRIG</a>              | 0x74   | 4      | Cluster Software event 6 trigger command register.   |
| cluster_event_unit. <a href="#">SW_EVENT_7_TRIG</a>              | 0x78   | 4      | Cluster Software event 7 trigger command register.   |
| cluster_event_unit. <a href="#">SW_EVENT_0_TRIG_WAIT</a>         | 0x7c   | 4      | Cluster Software event 0 trigger and wait command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_1_TRIG_WAIT</a>         | 0x80   | 4      | Cluster Software event 1 trigger and wait command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_2_TRIG_WAIT</a>         | 0x84   | 4      | Cluster Software event 2 trigger and wait command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_3_TRIG_WAIT</a>         | 0x88   | 4      | Cluster Software event 3 trigger and wait command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_4_TRIG_WAIT</a>         | 0x8c   | 4      | Cluster Software event 4 trigger and wait command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_5_TRIG_WAIT</a>         | 0x90   | 4      | Cluster Software event 5 trigger and wait command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_6_TRIG_WAIT</a>         | 0x94   | 4      | Cluster Software event 6 trigger and wait command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_7_TRIG_WAIT</a>         | 0x98   | 4      | Cluster Software event 7 trigger and wait command register.  |
| cluster_event_unit. <a href="#">SW_EVENT_0_TRIG_WAIT_CLEAR</a>   | 0x9c   | 4      | Cluster Software event 0 trigger, wait and clear command register.                                 |
| cluster_event_unit. <a href="#">SW_EVENT_1_TRIG_WAIT_CLEAR</a>   | 0xa0   | 4      | Cluster Software event 1 trigger, wait and clear command register.                                 |
| cluster_event_unit. <a href="#">SW_EVENT_2_TRIG_WAIT_CLEAR</a>   | 0xa4   | 4      | Cluster Software event 2 trigger, wait and clear command register.                                 |
| cluster_event_unit. <a href="#">SW_EVENT_3_TRIG_WAIT_CLEAR</a>   | 0xa8   | 4      | Cluster Software event 3 trigger, wait and clear command register.                                 |
| cluster_event_unit. <a href="#">SW_EVENT_4_TRIG_WAIT_CLEAR</a>   | 0xac   | 4      | Cluster Software event 4 trigger, wait and clear command register.                                 |
| cluster_event_unit. <a href="#">SW_EVENT_5_TRIG_WAIT_CLEAR</a>   | 0xb0   | 4      | Cluster Software event 5 trigger, wait and clear command register.                                 |
| cluster_event_unit. <a href="#">SW_EVENT_6_TRIG_WAIT_CLEAR</a>   | 0xb4   | 4      | Cluster Software event 6 trigger, wait and clear command register.                                 |
| cluster_event_unit. <a href="#">SW_EVENT_7_TRIG_WAIT_CLEAR</a>   | 0xb8   | 4      | Cluster Software event 7 trigger, wait and clear command register.                                 |
| cluster_event_unit. <a href="#">SOC_PERIPH_EVENT_ID</a>          | 0xbc   | 4      | Cluster SoC peripheral event ID status register.   |

[illegible]

# EVT\_MASK

Input event mask configuration register.

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EMCL", "bits": 30, "attr": ["rw"], "rotate": 0}, {"name": "EMINTCL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "EMSOC", "bits": 1, "attr": ["rw"], "rotate": 0}]}
```

| Bits | Type | Reset | Name    | Description  |
|------|------|-------|---------|--|
| 31   | rw   | 0x0   | EMSOC   | Soc peripheral input event mask configuration bitfield: - EMSOC[i]=1'b0: Input event request i is masked - EMSOC[i]=1'b1: Input event request i is not masked    |
| 30   | rw   | 0x0   | EMINTCL | Inter-cluster input event mask configuration bitfield: - EMINTCL[i]=1'b0: Input event request i is masked - EMINTCL[i]=1'b1: Input event request i is not masked |
| 29:0 | rw   | 0x0   | EMCL    | Cluster internal input event mask configuration bitfield: - EMCL[i]=1'b0: Input event request i is masked - EMCL[i]=1'b1: Input event request i is not masked    |

# EVT\_MASK\_AND

Input event mask update command register with bitwise AND operation.

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EMA", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | wo   | 0x0   | EMA  | Input event mask configuration bitfield update with bitwise AND operation. It allows clearing EMCL[i], EMINTCL[i] or EMSOC[i] if EMA[i]=1'b1. |

# EVT\_MASK\_OR

Input event mask update command register with bitwise OR operation.

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EMO", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | wo   | 0x0   | EMO  | Input event mask configuration bitfield update with bitwise OR operation. It allows setting EMCL[i], EMINTCL[i] or EMSOC[i] if EMO[i]=1'b1. |

# IRQ\_MASK

Interrupt request mask configuration register.

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "IMCL", "bits": 30, "attr": ["rw"], "rotate": 0}, {"name": "IMINTCL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "IMSOC", "bits": 1, "attr": ["rw"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name    | Description   |
|------|------|-------|---------|---|
| 31   | rw   | 0x0   | IMSOC   | Soc peripheral interrupt request mask configuration bitfield: - bit[i]=1'b0: Interrupt request i is masked - bit[i]=1'b1: Interrupt request i is not masked   |
| 30   | rw   | 0x0   | IMINTCL | Inter-cluster interrupt request mask configuration bitfield: - bit[i]=1'b0: Interrupt request i is masked - bit[i]=1'b1: Interrupt request i is not masked    |
| 29:0 | rw   | 0x0   | IMCL    | Cluster internal interrupt request mask configuration bitfield: - bit[i]=1'b0: Interrupt request i is masked - bit[i]=1'b1: Interrupt request i is not masked |

## IRQ\_MASK\_AND

Interrupt request mask update command register with bitwise AND operation.

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "IMA", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | wo   | 0x0   | IMA  | Interrupt request mask configuration bitfield update with bitwise AND operation. It allows clearing IMCL[i], IMINTCL[i] or IMSOC[i] if IMA[i]=1'b1. |

## IRQ\_MASK\_OR

Interrupt request mask update command register with bitwise OR operation.

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "IMO", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | wo   | 0x0   | IMO  | Interrupt request mask configuration bitfield update with bitwise OR operation. It allows setting IMCL[i], IMINTCL[i] or IMSOC[i] if IMO[i]=1'b1. |

## CLOCK\_STATUS

Cluster cores clock status register.

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0x1

### Fields

```
{"reg": [{"name": "CS", "bits": 1, "attr": ["ro"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:1 |      |       |      | Reserved  |
| 0    | ro   | 0x0   | CS   | Cluster core clock status bitfield: - 1'b0: Cluster core clocked is gated - 1'b1: Cluster core clocked is running |

## EVENT\_BUFFER

Pending input events status register.

- Offset: 0x1c



- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "EB", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--|
| 31:0 | ro   | 0x0   | EB   | Pending input events status bitfield. EB[i]=1'b1: one or more input event i request are pending. |

## EVENT\_BUFFER\_MASKED

Pending input events status register with EVT\_MASK applied.

- **Offset:** 0x20
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | ro   | 0x0   | EBM  | Pending input events status bitfield with EVT_MASK applied. EBM[i]=1'b1: one or more input event i request are pending. |

## EVENT\_BUFFER\_IRQ\_MASKED

Pending input events status register with IRQ\_MASK applied.

- **Offset:** 0x24
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "IBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--|
| 31:0 | ro   | 0x0   | IBM  | Pending input events status bitfield with IRQ_MASK applied. IBM[i]=1'b1: one or more input events i are pending. |

## EVENT\_BUFFER\_CLEAR

Pending input events status clear command register.

- **Offset:** 0x28
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "EBC", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--|
| 31:0 | wo   | 0x0   | EBC  | Pending input events status clear command bitfield. It allows clearing EB[i] if EBC[i]=1'b1. |

## SW\_EVENT\_MASK

Software events cluster cores destination mask configuration register.

- **Offset:** 0x2c

- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "SWEM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--|
| 31:8 |      |       |      | Reserved   |
| 7:0  | rw   | 0x0   | SWEM | Software events mask configuration bitfield: - bit[i]=1'b0: software events are masked for CL_CORE[i] - bit[i]=1'b1: software events are not masked for CL_CORE[i] |

SW\_EVENT\_MASK\_AND

Software events cluster cores destination mask update command register with bitwise AND operation.

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "SWEMA", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name  | Description  |
|------|------|-------|-------|--|
| 31:8 |      |       |       | Reserved   |
| 7:0  | wo   | 0x0   | SWEMA | Software event mask configuration bitfield update with bitwise AND operation. It allows clearing SWEM[i] if SWEMA[i]=1'b1. |

SW\_EVENT\_MASK\_OR

Software events cluster cores destination mask update command register with bitwise OR operation.

- Offset: 0x34
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "SWEMO", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name  | Description  |
|------|------|-------|-------|--|
| 31:8 |      |       |       | Reserved   |
| 7:0  | wo   | 0x0   | SWEMO | Software event mask configuration bitfield update with bitwise OR operation. It allows setting SWEM[i] if SWEMO[i]=1'b1. |

EVENT\_WAIT

Input event wait command register.

- Offset: 0x38
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | ro   | 0x0   | EBM  | Reading this register will gate the Cluster core clock until at least one unmasked event occurs. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |

# EVENT\_WAIT\_CLEAR

Input event wait and clear command register.

- Offset: 0x3c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |     |   |
|------|----|-----|-----|---|
| 31:0 | ro | 0x0 | EBM | Reading this register has the same effect as reading EVENT_WAIT.EBM. In addition, EVENT_BUFFER.EB[i] bits are cleared if EVT_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |
|------|----|-----|-----|---|

# HW\_DISPATCH\_PUSH\_TASK

Hardware task dispatcher push command register.

- Offset: 0x40
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "MSG", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |     |  |
|------|----|-----|-----|--|
| 31:0 | wo | 0x0 | MSG | Message to dispatch to all cluster cores selected in HW_DISPATCH_PUSH_TEAM_CONFIG.CT configuration bitfield. |
|------|----|-----|-----|--|

# HW\_DISPATCH\_POP\_TASK

Hardware task dispatcher pop command register.

- Offset: 0x44
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "MSG", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |     |  |
|------|----|-----|-----|--|
| 31:0 | ro | 0x0 | MSG | Message dispatched using HW_DISPATCH_PUSH_TASK command and popped by cluster core who issued HW_DISPATCH_POP_TASK command. |
|------|----|-----|-----|--|

# HW\_DISPATCH\_PUSH\_TEAM\_CONFIG

Hardware task dispatcher cluster core team configuration register.

- Offset: 0x48
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "CT", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

Bits Type Reset Name Description

|      |    |     |    |   |
|------|----|-----|----|---|
| 31:8 |    |     |    | Reserved  |
| 7:0  | rw | 0x0 | CT | Cluster cores team selection configuration bitfield. It allows to transmit HW_DISPATCH_PUSH_TASK.MSG to cluster core i if CT[i]=1'b1. |

HW\_MUTEX\_0\_MSG\_PUT

Hardware mutex 0 non-blocking put command register.

- Offset: 0x4c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "MSG", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

|      |    |     |     |   |
|------|----|-----|-----|---|
| 31:0 | wo | 0x0 | MSG | Message pushed when releasing hardware mutex 0 configuration bitfiled. It is a non-blocking access. |
|------|----|-----|-----|---|

HW\_MUTEX\_0\_MSG\_GET

Hardware mutex 0 blocking get command register.

- Offset: 0x50
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "MSG", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

|      |    |     |     |   |
|------|----|-----|-----|---|
| 31:0 | ro | 0x0 | MSG | Message popped when taking hardware mutex 0 data bitfiled. It is a blocking access. |
|------|----|-----|-----|---|

HW\_MUTEX\_1\_MSG\_PUT

Hardware mutex 1 non-blocking put command register.

- Offset: 0x54
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "MSG", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

|      |    |     |     |   |
|------|----|-----|-----|---|
| 31:0 | wo | 0x0 | MSG | Message pushed when releasing hardware mutex 1 configuration bitfiled. It is a non-blocking access. |
|------|----|-----|-----|---|

HW\_MUTEX\_1\_MSG\_GET

Hardware mutex 1 blocking get command register.

- Offset: 0x58
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "MSG", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | ro   | 0x0   | MSG  | Message popped when taking hardware mutex 1 data bitfiled. It is a blocking access. |

# SW\_EVENT\_0\_TRIG

Cluster Software event 0 trigger command register.

- Offset: 0x5c
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```

{"reg": [{"name": "SW0T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}

```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | SW0T | Triggers software event 0 for cluster core i if SW0T[i]=1'b1. |

# SW\_EVENT\_1\_TRIG

Cluster Software event 1 trigger command register.

- Offset: 0x60
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```

{"reg": [{"name": "SW1T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}

```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | SW1T | Triggers software event 1 for cluster core i if SW1T[i]=1'b1. |

# SW\_EVENT\_2\_TRIG

Cluster Software event 2 trigger command register.

- Offset: 0x64
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```

{"reg": [{"name": "SW2T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}

```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | SW2T | Triggers software event 2 for cluster core i if SW2T[i]=1'b1. |

# SW\_EVENT\_3\_TRIG

Cluster Software event 3 trigger command register.

- Offset: 0x68
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "SW3T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

**Bits Type Reset Name Description**

31:8 Reserved  
7:0 wo 0x0 SW3T Triggers software event 3 for cluster core i if SW3T[i]=1'b1.

# SW\_EVENT\_4\_TRIG

Cluster Software event 4 trigger command register.

- Offset: 0x6c
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "SW4T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

**Bits Type Reset Name Description**

31:8 Reserved  
7:0 wo 0x0 SW4T Triggers software event 4 for cluster core i if SW4T[i]=1'b1.

# SW\_EVENT\_5\_TRIG

Cluster Software event 5 trigger command register.

- Offset: 0x70
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "SW5T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

**Bits Type Reset Name Description**

31:8 Reserved  
7:0 wo 0x0 SW5T Triggers software event 5 for cluster core i if SW5T[i]=1'b1.

# SW\_EVENT\_6\_TRIG

Cluster Software event 6 trigger command register.

- Offset: 0x74
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "SW6T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

**Bits Type Reset Name Description**

31:8 Reserved  
7:0 wo 0x0 SW6T Triggers software event 6 for cluster core i if SW6T[i]=1'b1.

# SW\_EVENT\_7\_TRIG

Cluster Software event 7 trigger command register.

- Offset: 0x78
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "SW7T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

Bits Type Reset Name Description

31:8 Reserved  
7:0 wo 0x0 SW7T Triggers software event 7 for cluster core i if SW7T[i]=1'b1.

SW\_EVENT\_0\_TRIG\_WAIT

Cluster Software event 0 trigger and wait command register.

- Offset: 0x7c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 ro 0x0 EBM Triggers software event 0 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

SW\_EVENT\_1\_TRIG\_WAIT

Cluster Software event 1 trigger and wait command register.

- Offset: 0x80
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 ro 0x0 EBM Triggers software event 1 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

SW\_EVENT\_2\_TRIG\_WAIT

Cluster Software event 2 trigger and wait command register.

- Offset: 0x84
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

Bits Type Reset Name Description

31:0 ro 0x0 EBM Triggers software event 2 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

SW\_EVENT\_3\_TRIG\_WAIT

Cluster Software event 3 trigger and wait command register.

- **Offset:** 0x88
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | ro   | 0x0   | EBM  | Triggers software event 3 to all cluster cores targeted in SW_EVENT_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |

SW\_EVENT\_4\_TRIG\_WAIT

Cluster Software event 4 trigger and wait command register.

- **Offset:** 0x8c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | ro   | 0x0   | EBM  | Triggers software event 4 to all cluster cores targeted in SW_EVENT_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |

SW\_EVENT\_5\_TRIG\_WAIT

Cluster Software event 5 trigger and wait command register.

- **Offset:** 0x90
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | ro   | 0x0   | EBM  | Triggers software event 5 to all cluster cores targeted in SW_EVENT_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |

SW\_EVENT\_6\_TRIG\_WAIT

Cluster Software event 6 trigger and wait command register.

- **Offset:** 0x94
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | ro   | 0x0   | EBM  | Triggers software event 6 to all cluster cores targeted in SW_EVENT_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |



# SW\_EVENT\_7\_TRIG\_WAIT

Cluster Software event 7 trigger and wait command register.

- Offset: 0x98
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | ro   | 0x0   | EBM  | Triggers software event 7 to all cluster cores targeted in SW_EVENT_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |

# SW\_EVENT\_0\_TRIG\_WAIT\_CLEAR

Cluster Software event 0 trigger, wait and clear command register.

- Offset: 0x9c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name

| Bits | Type | Reset | Name       |
|------|------|-------|------------|
| 31:0 | ro   | 0x0   | <u>EBM</u> |

## SW\_EVENT\_0\_TRIG\_WAIT\_CLEAR . EBM

Triggers software event 0 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

# SW\_EVENT\_1\_TRIG\_WAIT\_CLEAR

Cluster Software event 1 trigger, wait and clear command register.

- Offset: 0xa0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name

| Bits | Type | Reset | Name       |
|------|------|-------|------------|
| 31:0 | ro   | 0x0   | <u>EBM</u> |

## SW\_EVENT\_1\_TRIG\_WAIT\_CLEAR . EBM

Triggers software event 1 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

# SW\_EVENT\_2\_TRIG\_WAIT\_CLEAR

Cluster Software event 2 trigger, wait and clear command register.

- Offset: 0xa4
- Reset default: 0x0

- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name

31:0 ro 0x0 EBM

## SW\_EVENT\_2\_TRIG\_WAIT\_CLEAR . EBM

Triggers software event 2 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## SW\_EVENT\_3\_TRIG\_WAIT\_CLEAR

Cluster Software event 3 trigger, wait and clear command register.

- **Offset:** 0xa8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name

31:0 ro 0x0 EBM

## SW\_EVENT\_3\_TRIG\_WAIT\_CLEAR . EBM

Triggers software event 3 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## SW\_EVENT\_4\_TRIG\_WAIT\_CLEAR

Cluster Software event 4 trigger, wait and clear command register.

- **Offset:** 0xac
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name

31:0 ro 0x0 EBM

## SW\_EVENT\_4\_TRIG\_WAIT\_CLEAR . EBM

Triggers software event 4 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## SW\_EVENT\_5\_TRIG\_WAIT\_CLEAR

Cluster Software event 5 trigger, wait and clear command register.

- **Offset:** 0xb0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name**  
31:0 ro 0x0 EBM

## SW\_EVENT\_5\_TRIG\_WAIT\_CLEAR . EBM

Triggers software event 5 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## SW\_EVENT\_6\_TRIG\_WAIT\_CLEAR

Cluster Software event 6 trigger, wait and clear command register.

- Offset: 0xb4
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name**  
31:0 ro 0x0 EBM

## SW\_EVENT\_6\_TRIG\_WAIT\_CLEAR . EBM

Triggers software event 6 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## SW\_EVENT\_7\_TRIG\_WAIT\_CLEAR

Cluster Software event 7 trigger, wait and clear command register.

- Offset: 0xb8
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name**  
31:0 ro 0x0 EBM

## SW\_EVENT\_7\_TRIG\_WAIT\_CLEAR . EBM

Triggers software event 7 to all cluster cores targeted in SW\_EVENT\_MASK and gate the issuing cluster core clock until at least one unmasked event occurs. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## SOC\_PERIPH\_EVENT\_ID

Cluster SoC peripheral event ID status register.

- Offset: 0xbc
- Reset default: 0x0
- Reset mask: 0x800000ff

### Fields

```
{"reg": [{"name": "ID", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 23}, {"name": "VALID", "bits": 1, "attr": ["ro"], "rotate"
```

Bits Type Reset Name Description

|      |    |     |       |  |
|------|----|-----|-------|--|
| 31   | ro | 0x0 | VALID | Validity bit of SOC_PERIPH_EVENT_ID.ID bitfield. |
| 30:8 |    |     |       | Reserved   |
| 7:0  | ro | 0x0 | ID    | Oldest SoC peripheral event ID status bitfield.  |

HW\_BARRIER\_0\_TRIG\_MASK

Cluster hardware barrier 0 trigger mask configuration register.

- Offset: 0xc0
- Reset default: 0x0
- Reset mask: 0xff

Fields

{"reg": [{"name": "HB0TM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}

Bits Type Reset Name Description

|      |    |     |       |  |
|------|----|-----|-------|--|
| 31:8 |    |     |       | Reserved   |
| 7:0  | rw | 0x0 | HB0TM | Trigger mask for hardware barrier 0 bitfield. Hardware barrier 0 will be triggered only if for all HB0TM[i] = 1'b1, HW_BARRIER_0_STATUS.HB0S[i]=1'b1. HB0TM=0 means that hardware barrier 0 is disabled. |

HW\_BARRIER\_1\_TRIG\_MASK

Cluster hardware barrier 1 trigger mask configuration register.

- Offset: 0xc4
- Reset default: 0x0
- Reset mask: 0xff

Fields

{"reg": [{"name": "HB1TM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}

Bits Type Reset Name Description

|      |    |     |       |  |
|------|----|-----|-------|--|
| 31:8 |    |     |       | Reserved   |
| 7:0  | rw | 0x0 | HB1TM | Trigger mask for hardware barrier 1 bitfield. Hardware barrier 1 will be triggered only if for all HB1TM[i] = 1'b1, HW_BARRIER_1_STATUS.HB1S[i]=1'b1. HB1TM=0 means that hardware barrier 1 is disabled. |

HW\_BARRIER\_2\_TRIG\_MASK

Cluster hardware barrier 2 trigger mask configuration register.

- Offset: 0xc8
- Reset default: 0x0
- Reset mask: 0xff

Fields

{"reg": [{"name": "HB2TM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}

Bits Type Reset Name Description

|      |    |     |       |  |
|------|----|-----|-------|--|
| 31:8 |    |     |       | Reserved   |
| 7:0  | rw | 0x0 | HB2TM | Trigger mask for hardware barrier 2 bitfield. Hardware barrier 2 will be triggered only if for all HB2TM[i] = 1'b1, HW_BARRIER_2_STATUS.HB2S[i]=1'b1. HB2TM=0 means that hardware barrier 2 is disabled. |

HW\_BARRIER\_3\_TRIG\_MASK

Cluster hardware barrier 3 trigger mask configuration register.

- Offset: 0xcc
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HB3TM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |  |  |  |          |
|------|--|--|--|----------|
| 31:8 |  |  |  | Reserved |
|------|--|--|--|----------|

|     |    |     |       |  |
|-----|----|-----|-------|--|
| 7:0 | rw | 0x0 | HB3TM | Trigger mask for hardware barrier 3 bitfield. Hardware barrier 3 will be triggered only if for all HB3TM[i] = 1'b1, HW_BARRIER_3_STATUS.HB3S[i]=1'b1. HB3TM=0 means that hardware barrier 3 is disabled. |
|-----|----|-----|-------|--|

## HW\_BARRIER\_4\_TRIG\_MASK

Cluster hardware barrier 4 trigger mask configuration register.

- Offset: 0xd0
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HB4TM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |  |  |  |          |
|------|--|--|--|----------|
| 31:8 |  |  |  | Reserved |
|------|--|--|--|----------|

|     |    |     |       |  |
|-----|----|-----|-------|--|
| 7:0 | rw | 0x0 | HB4TM | Trigger mask for hardware barrier 4 bitfield. Hardware barrier 4 will be triggered only if for all HB4TM[i] = 1'b1, HW_BARRIER_4_STATUS.HB4S[i]=1'b1. HB4TM=0 means that hardware barrier 4 is disabled. |
|-----|----|-----|-------|--|

## HW\_BARRIER\_5\_TRIG\_MASK

Cluster hardware barrier 5 trigger mask configuration register.

- Offset: 0xd4
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HB5TM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |  |  |  |          |
|------|--|--|--|----------|
| 31:8 |  |  |  | Reserved |
|------|--|--|--|----------|

|     |    |     |       |  |
|-----|----|-----|-------|--|
| 7:0 | rw | 0x0 | HB5TM | Trigger mask for hardware barrier 5 bitfield. Hardware barrier 5 will be triggered only if for all HB5TM[i] = 1'b1, HW_BARRIER_5_STATUS.HB5S[i]=1'b1. HB5TM=0 means that hardware barrier 5 is disabled. |
|-----|----|-----|-------|--|

## HW\_BARRIER\_6\_TRIG\_MASK

Cluster hardware barrier 6 trigger mask configuration register.

- Offset: 0xd8
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HB6TM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |  |  |  |          |
|------|--|--|--|----------|
| 31:8 |  |  |  | Reserved |
|------|--|--|--|----------|

|     |    |     |       |  |
|-----|----|-----|-------|--|
| 7:0 | rw | 0x0 | HB6TM | Trigger mask for hardware barrier 6 bitfield. Hardware barrier 6 will be triggered only if for all HB6TM[i] = 1'b1, HW_BARRIER_6_STATUS.HB6S[i]=1'b1. HB6TM=0 means that hardware barrier 6 is disabled. |
|-----|----|-----|-------|--|

## HW\_BARRIER\_7\_TRIG\_MASK

Cluster hardware barrier 7 trigger mask configuration register.

- Offset: 0xdc
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HB7TM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description  |
|------|------|-------|-------|--|
| 31:8 |      |       |       | Reserved   |
| 7:0  | rw   | 0x0   | HB7TM | Trigger mask for hardware barrier 7 bitfield. Hardware barrier 7 will be triggered only if for all HB7TM[i] = 1'b1, HW_BARRIER_7_STATUS.HB7S[i]=1'b1. HB7TM=0 means that hardware barrier 7 is disabled. |

HW\_BARRIER\_0\_STATUS

Cluster hardware barrier 0 status register.

- Offset: 0xe0
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | ro   | 0x0   | HBS  | Current status of hardware barrier 0 bitfield. HBS[i]=1'b1 means that cluster core i has triggered hardware barrier 0. It is cleared when HBS matches HW_BARRIER_0_TRIG_MASK.HB0TM. |

HW\_BARRIER\_1\_STATUS

Cluster hardware barrier 1 status register.

- Offset: 0xe4
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | ro   | 0x0   | HBS  | Current status of hardware barrier 1 bitfield. HBS[i]=1'b1 means that cluster core i has triggered hardware barrier 1. It is cleared when HBS matches HW_BARRIER_1_TRIG_MASK.HB1TM. |

HW\_BARRIER\_2\_STATUS

Cluster hardware barrier 2 status register.

- Offset: 0xe8
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
| 31:8 |      |       |      | Reserved    |

**Bits Type Reset Name Description**

|     |    |     |     |   |
|-----|----|-----|-----|---|
| 7:0 | ro | 0x0 | HBS | Current status of hardware barrier 2 bitfield. HBS[i]=1'b1 means that cluster core i has triggered hardware barrier 2. It is cleared when HBS matches HW_BARRIER_2_TRIG_MASK.HB2TM. |
|-----|----|-----|-----|---|

# HW\_BARRIER\_3\_STATUS

Cluster hardware barrier 3 status register.

- Offset: 0xec
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HBS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

|      |    |     |     |   |
|------|----|-----|-----|---|
| 31:8 |    |     |     | Reserved  |
| 7:0  | ro | 0x0 | HBS | Current status of hardware barrier 3 bitfield. HBS[i]=1'b1 means that cluster core i has triggered hardware barrier 3. It is cleared when HBS matches HW_BARRIER_3_TRIG_MASK.HB3TM. |

# HW\_BARRIER\_4\_STATUS

Cluster hardware barrier 4 status register.

- Offset: 0xf0
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HBS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

|      |    |     |     |   |
|------|----|-----|-----|---|
| 31:8 |    |     |     | Reserved  |
| 7:0  | ro | 0x0 | HBS | Current status of hardware barrier 4 bitfield. HBS[i]=1'b1 means that cluster core i has triggered hardware barrier 4. It is cleared when HBS matches HW_BARRIER_4_TRIG_MASK.HB4TM. |

# HW\_BARRIER\_5\_STATUS

Cluster hardware barrier 5 status register.

- Offset: 0xf4
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HBS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

|      |    |     |     |   |
|------|----|-----|-----|---|
| 31:8 |    |     |     | Reserved  |
| 7:0  | ro | 0x0 | HBS | Current status of hardware barrier 5 bitfield. HBS[i]=1'b1 means that cluster core i has triggered hardware barrier 5. It is cleared when HBS matches HW_BARRIER_5_TRIG_MASK.HB5TM. |

# HW\_BARRIER\_6\_STATUS

Cluster hardware barrier 6 status register.

- Offset: 0xf8
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HBS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |     |   |
|------|----|-----|-----|---|
| 31:8 |    |     |     | Reserved  |
| 7:0  | ro | 0x0 | HBS | Current status of hardware barrier 6 bitfield. HBS[i]=1'b1 means that cluster core i has triggered hardware barrier 6. It is cleared when HBS matches HW_BARRIER_6_TRIG_MASK.HB6TM. |

## HW\_BARRIER\_7\_STATUS

Cluster hardware barrier 7 status register.

- Offset: 0xfc
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HBS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |     |   |
|------|----|-----|-----|---|
| 31:8 |    |     |     | Reserved  |
| 7:0  | ro | 0x0 | HBS | Current status of hardware barrier 7 bitfield. HBS[i]=1'b1 means that cluster core i has triggered hardware barrier 7. It is cleared when HBS matches HW_BARRIER_7_TRIG_MASK.HB7TM. |

## HW\_BARRIER\_0\_STATUS\_SUM

Cluster hardware barrier summary status register.

- Offset: 0x100
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HBSS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |      |  |
|------|----|-----|------|--|
| 31:8 |    |     |      | Reserved   |
| 7:0  | ro | 0x0 | HBSS | Current status of hardware barrier 0. HBSS[i] represents a summary of the barrier status for core i. |

## HW\_BARRIER\_1\_STATUS\_SUM

Cluster hardware barrier summary status register.

- Offset: 0x104
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "HBSS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |      |  |
|------|----|-----|------|--|
| 31:8 |    |     |      | Reserved   |
| 7:0  | ro | 0x0 | HBSS | Current status of hardware barrier 1. HBSS[i] represents a summary of the barrier status for core i. |

## HW\_BARRIER\_2\_STATUS\_SUM

Cluster hardware barrier summary status register.



- Offset: 0x108
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBSS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--|
| 31:8 |      |       |      | Reserved   |
| 7:0  | ro   | 0x0   | HBSS | Current status of hardware barrier 2. HBSS[i] represents a summary of the barrier status for core i. |

HW\_BARRIER\_3\_STATUS\_SUM

Cluster hardware barrier summary status register.

- Offset: 0x10c
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBSS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--|
| 31:8 |      |       |      | Reserved   |
| 7:0  | ro   | 0x0   | HBSS | Current status of hardware barrier 3. HBSS[i] represents a summary of the barrier status for core i. |

HW\_BARRIER\_4\_STATUS\_SUM

Cluster hardware barrier summary status register.

- Offset: 0x110
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBSS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--|
| 31:8 |      |       |      | Reserved   |
| 7:0  | ro   | 0x0   | HBSS | Current status of hardware barrier 4. HBSS[i] represents a summary of the barrier status for core i. |

HW\_BARRIER\_5\_STATUS\_SUM

Cluster hardware barrier summary status register.

- Offset: 0x114
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBSS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--|
| 31:8 |      |       |      | Reserved   |
| 7:0  | ro   | 0x0   | HBSS | Current status of hardware barrier 5. HBSS[i] represents a summary of the barrier status for core i. |

HW\_BARRIER\_6\_STATUS\_SUM

Cluster hardware barrier summary status register.

- Offset: 0x118
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBSS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name     | Description  |
|------|------|-------|----------|--|
| 31:8 |      |       | Reserved |  |
| 7:0  | ro   | 0x0   | HBSS     | Current status of hardware barrier 6. HBSS[i] represents a summary of the barrier status for core i. |

HW\_BARRIER\_7\_STATUS\_SUM

Cluster hardware barrier summary status register.

- Offset: 0x11c
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBSS", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name     | Description  |
|------|------|-------|----------|--|
| 31:8 |      |       | Reserved |  |
| 7:0  | ro   | 0x0   | HBSS     | Current status of hardware barrier 7. HBSS[i] represents a summary of the barrier status for core i. |

HW\_BARRIER\_0\_TARGET\_MASK

Cluster hardware barrier 0 target mask configuration register.

- Offset: 0x120
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBTAM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name     | Description  |
|------|------|-------|----------|--|
| 31:8 |      |       | Reserved |  |
| 7:0  | rw   | 0x0   | HBTAM    | Cluster hardware barrier 0 target mask configuration bitfield. HBTAM[i]=1'b1 means that cluster core i will receive hardware barrier 0 event when HW_BARRIER_0_STATUS will match HW_BARRIER_0_TRIG_MASK. |

HW\_BARRIER\_1\_TARGET\_MASK

Cluster hardware barrier 1 target mask configuration register.

- Offset: 0x124
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBTAM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name     | Description |
|------|------|-------|----------|-------------|
| 31:8 |      |       | Reserved |             |

| Bits | Type | Reset Name | Description  |
|------|------|------------|--|
| 7:0  | rw   | 0x0 HBTAM  | Cluster hardware barrier 1 target mask configuration bitfield. HBTAM[i]=1'b1 means that cluster core i will receive hardware barrier 1 event when HW_BARRIER_1_STATUS will match HW_BARRIER_1_TRIG_MASK. |

## HW\_BARRIER\_2\_TARGET\_MASK

Cluster hardware barrier 2 target mask configuration register.

- Offset: 0x128
- Reset default: 0x0
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "HBTAM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset Name | Description  |
|------|------|------------|--|
| 31:8 |      |            | Reserved   |
| 7:0  | rw   | 0x0 HBTAM  | Cluster hardware barrier 2 target mask configuration bitfield. HBTAM[i]=1'b1 means that cluster core i will receive hardware barrier 2 event when HW_BARRIER_2_STATUS will match HW_BARRIER_2_TRIG_MASK. |

## HW\_BARRIER\_3\_TARGET\_MASK

Cluster hardware barrier 3 target mask configuration register.

- Offset: 0x12c
- Reset default: 0x0
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "HBTAM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset Name | Description  |
|------|------|------------|--|
| 31:8 |      |            | Reserved   |
| 7:0  | rw   | 0x0 HBTAM  | Cluster hardware barrier 3 target mask configuration bitfield. HBTAM[i]=1'b1 means that cluster core i will receive hardware barrier 3 event when HW_BARRIER_3_STATUS will match HW_BARRIER_3_TRIG_MASK. |

## HW\_BARRIER\_4\_TARGET\_MASK

Cluster hardware barrier 4 target mask configuration register.

- Offset: 0x130
- Reset default: 0x0
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "HBTAM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset Name | Description  |
|------|------|------------|--|
| 31:8 |      |            | Reserved   |
| 7:0  | rw   | 0x0 HBTAM  | Cluster hardware barrier 4 target mask configuration bitfield. HBTAM[i]=1'b1 means that cluster core i will receive hardware barrier 4 event when HW_BARRIER_4_STATUS will match HW_BARRIER_4_TRIG_MASK. |

## HW\_BARRIER\_5\_TARGET\_MASK

Cluster hardware barrier 5 target mask configuration register.

- Offset: 0x134

- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBTAM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name  | Description  |
|------|------|-------|-------|--|
| 31:8 |      |       |       | Reserved   |
| 7:0  | rw   | 0x0   | HBTAM | Cluster hardware barrier 5 target mask configuration bitfield. HBTAM[i]=1'b1 means that cluster core i will receive hardware barrier 5 event when HW_BARRIER_5_STATUS will match HW_BARRIER_5_TRIG_MASK. |

HW\_BARRIER\_6\_TARGET\_MASK

Cluster hardware barrier 6 target mask configuration register.

- Offset: 0x138
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBTAM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name  | Description  |
|------|------|-------|-------|--|
| 31:8 |      |       |       | Reserved   |
| 7:0  | rw   | 0x0   | HBTAM | Cluster hardware barrier 6 target mask configuration bitfield. HBTAM[i]=1'b1 means that cluster core i will receive hardware barrier 6 event when HW_BARRIER_6_STATUS will match HW_BARRIER_6_TRIG_MASK. |

HW\_BARRIER\_7\_TARGET\_MASK

Cluster hardware barrier 7 target mask configuration register.

- Offset: 0x13c
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "HBTAM", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name  | Description  |
|------|------|-------|-------|--|
| 31:8 |      |       |       | Reserved   |
| 7:0  | rw   | 0x0   | HBTAM | Cluster hardware barrier 7 target mask configuration bitfield. HBTAM[i]=1'b1 means that cluster core i will receive hardware barrier 7 event when HW_BARRIER_7_STATUS will match HW_BARRIER_7_TRIG_MASK. |

HW\_BARRIER\_0\_TRIG

Cluster hardware barrier 0 trigger command register.

- Offset: 0x140
- Reset default: 0x0
- Reset mask: 0xff

Fields

```
{"reg": [{"name": "T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
| 31:8 |      |       |      | Reserved    |

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 7:0  | wo   | 0x0   | T    | Sets HW_BARRIER_0_STATUS.HBS[i] to 1'b1 when T[i]=1'b1. |

# HW\_BARRIER\_1\_TRIG

Cluster hardware barrier 1 trigger command register.

- Offset: 0x144
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | T    | Sets HW_BARRIER_1_STATUS.HBS[i] to 1'b1 when T[i]=1'b1. |

# HW\_BARRIER\_2\_TRIG

Cluster hardware barrier 2 trigger command register.

- Offset: 0x148
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | T    | Sets HW_BARRIER_2_STATUS.HBS[i] to 1'b1 when T[i]=1'b1. |

# HW\_BARRIER\_3\_TRIG

Cluster hardware barrier 3 trigger command register.

- Offset: 0x14c
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | T    | Sets HW_BARRIER_3_STATUS.HBS[i] to 1'b1 when T[i]=1'b1. |

# HW\_BARRIER\_4\_TRIG

Cluster hardware barrier 4 trigger command register.

- Offset: 0x150
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | T    | Sets HW_BARRIER_4_STATUS.HBS[i] to 1'b1 when T[i]=1'b1. |

## HW\_BARRIER\_5\_TRIG

Cluster hardware barrier 5 trigger command register.

- Offset: 0x154
- Reset default: 0x0
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | T    | Sets HW_BARRIER_5_STATUS.HBS[i] to 1'b1 when T[i]=1'b1. |

## HW\_BARRIER\_6\_TRIG

Cluster hardware barrier 6 trigger command register.

- Offset: 0x158
- Reset default: 0x0
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | T    | Sets HW_BARRIER_6_STATUS.HBS[i] to 1'b1 when T[i]=1'b1. |

## HW\_BARRIER\_7\_TRIG

Cluster hardware barrier 7 trigger command register.

- Offset: 0x15c
- Reset default: 0x0
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "T", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:8 |      |       |      | Reserved  |
| 7:0  | wo   | 0x0   | T    | Sets HW_BARRIER_7_STATUS.HBS[i] to 1'b1 when T[i]=1'b1. |

## HW\_BARRIER\_0\_SELF\_TRIG

Cluster hardware barrier 0 self trigger command register.

- Offset: 0x160
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "T", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 ro 0x0 T Sets HW\_BARRIER\_0\_STATUS.HBS[i] to 1'b1 when issued by cluster core i.

## HW\_BARRIER\_1\_SELF\_TRIG

Cluster hardware barrier 1 self trigger command register.

- Offset: 0x164
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "T", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 ro 0x0 T Sets HW\_BARRIER\_1\_STATUS.HBS[i] to 1'b1 when issued by cluster core i.

## HW\_BARRIER\_2\_SELF\_TRIG

Cluster hardware barrier 2 self trigger command register.

- Offset: 0x168
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "T", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 ro 0x0 T Sets HW\_BARRIER\_2\_STATUS.HBS[i] to 1'b1 when issued by cluster core i.

## HW\_BARRIER\_3\_SELF\_TRIG

Cluster hardware barrier 3 self trigger command register.

- Offset: 0x16c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "T", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 ro 0x0 T Sets HW\_BARRIER\_3\_STATUS.HBS[i] to 1'b1 when issued by cluster core i.

## HW\_BARRIER\_4\_SELF\_TRIG

Cluster hardware barrier 4 self trigger command register.

- Offset: 0x170
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "T", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 ro 0x0 T Sets HW\_BARRIER\_4\_STATUS.HBS[i] to 1'b1 when issued by cluster core i.

# HW\_BARRIER\_5\_SELF\_TRIG

Cluster hardware barrier 5 self trigger command register.

- Offset: 0x174
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "T", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 ro 0x0 T Sets HW\_BARRIER\_5\_STATUS.HBS[i] to 1'b1 when issued by cluster core i.

# HW\_BARRIER\_6\_SELF\_TRIG

Cluster hardware barrier 6 self trigger command register.

- Offset: 0x178
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "T", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 ro 0x0 T Sets HW\_BARRIER\_6\_STATUS.HBS[i] to 1'b1 when issued by cluster core i.

# HW\_BARRIER\_7\_SELF\_TRIG

Cluster hardware barrier 7 self trigger command register.

- Offset: 0x17c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "T", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:0 ro 0x0 T Sets HW\_BARRIER\_7\_STATUS.HBS[i] to 1'b1 when issued by cluster core i.

# HW\_BARRIER\_0\_TRIG\_WAIT

Cluster hardware barrier 0 trigger and wait command register.

- Offset: 0x180
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```



Bits Type Reset Name Description

31:0 ro 0x0 EBM Set HW\_BARRIER\_0[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_0 is released. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

HW\_BARRIER\_1\_TRIG\_WAIT

Cluster hardware barrier 1 trigger and wait command register.

- Offset: 0x184
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 ro 0x0 EBM Set HW\_BARRIER\_1[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_1 is released. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

HW\_BARRIER\_2\_TRIG\_WAIT

Cluster hardware barrier 2 trigger and wait command register.

- Offset: 0x188
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 ro 0x0 EBM Set HW\_BARRIER\_2[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_2 is released. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

HW\_BARRIER\_3\_TRIG\_WAIT

Cluster hardware barrier 3 trigger and wait command register.

- Offset: 0x18c
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}

Bits Type Reset Name Description

31:0 ro 0x0 EBM Set HW\_BARRIER\_3[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_3 is released. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

HW\_BARRIER\_4\_TRIG\_WAIT

Cluster hardware barrier 4 trigger and wait command register.

- Offset: 0x190
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

|      |    |     |     |  |
|------|----|-----|-----|--|
| 31:0 | ro | 0x0 | EBM | Set HW_BARRIER_4[i] when issued by cluster core i and gate the issuing cluster core i clock until HW_BARRIER_4 is released. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |
|------|----|-----|-----|--|

## HW\_BARRIER\_5\_TRIG\_WAIT

Cluster hardware barrier 5 trigger and wait command register.

- Offset: 0x194
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

|      |    |     |     |  |
|------|----|-----|-----|--|
| 31:0 | ro | 0x0 | EBM | Set HW_BARRIER_5[i] when issued by cluster core i and gate the issuing cluster core i clock until HW_BARRIER_5 is released. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |
|------|----|-----|-----|--|

## HW\_BARRIER\_6\_TRIG\_WAIT

Cluster hardware barrier 6 trigger and wait command register.

- Offset: 0x198
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

|      |    |     |     |  |
|------|----|-----|-----|--|
| 31:0 | ro | 0x0 | EBM | Set HW_BARRIER_6[i] when issued by cluster core i and gate the issuing cluster core i clock until HW_BARRIER_6 is released. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |
|------|----|-----|-----|--|

## HW\_BARRIER\_7\_TRIG\_WAIT

Cluster hardware barrier 7 trigger and wait command register.

- Offset: 0x19c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

|      |    |     |     |  |
|------|----|-----|-----|--|
| 31:0 | ro | 0x0 | EBM | Set HW_BARRIER_7[i] when issued by cluster core i and gate the issuing cluster core i clock until HW_BARRIER_7 is released. The read content of this bitfield is equivalent to EVENT_BUFFER_MASKED.EBM |
|------|----|-----|-----|--|

## HW\_BARRIER\_0\_TRIG\_WAIT\_CLEAR

Cluster hardware barrier 0 trigger, wait and clear command register.

- **Offset:** 0x1a0
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name**

31:0 ro 0x0 EBM

### HW\_BARRIER\_0\_TRIG\_WAIT\_CLEAR . EBM

Set HW\_BARRIER\_0[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_0 is released. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## HW\_BARRIER\_1\_TRIG\_WAIT\_CLEAR

Cluster hardware barrier 1 trigger, wait and clear command register.

- **Offset:** 0x1a4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name**

31:0 ro 0x0 EBM

### HW\_BARRIER\_1\_TRIG\_WAIT\_CLEAR . EBM

Set HW\_BARRIER\_1[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_1 is released. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## HW\_BARRIER\_2\_TRIG\_WAIT\_CLEAR

Cluster hardware barrier 2 trigger, wait and clear command register.

- **Offset:** 0x1a8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name**

31:0 ro 0x0 EBM

### HW\_BARRIER\_2\_TRIG\_WAIT\_CLEAR . EBM

Set HW\_BARRIER\_2[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_2 is released. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## HW\_BARRIER\_3\_TRIG\_WAIT\_CLEAR

Cluster hardware barrier 3 trigger, wait and clear command register.

- **Offset:** 0x1ac
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name

31:0 ro 0x0 EBM

## HW\_BARRIER\_3\_TRIG\_WAIT\_CLEAR . EBM

Set HW\_BARRIER\_3[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_3 is released. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## HW\_BARRIER\_4\_TRIG\_WAIT\_CLEAR

Cluster hardware barrier 4 trigger, wait and clear command register.

- Offset: 0x1b0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name

31:0 ro 0x0 EBM

## HW\_BARRIER\_4\_TRIG\_WAIT\_CLEAR . EBM

Set HW\_BARRIER\_4[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_4 is released. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## HW\_BARRIER\_5\_TRIG\_WAIT\_CLEAR

Cluster hardware barrier 5 trigger, wait and clear command register.

- Offset: 0x1b4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name

31:0 ro 0x0 EBM

## HW\_BARRIER\_5\_TRIG\_WAIT\_CLEAR . EBM

Set HW\_BARRIER\_5[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_5 is released. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

## HW\_BARRIER\_6\_TRIG\_WAIT\_CLEAR

Cluster hardware barrier 6 trigger, wait and clear command register.

- Offset: 0x1b8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name**

31:0 ro 0x0 EBM

HW\_BARRIER\_6\_TRIG\_WAIT\_CLEAR . EBM

Set HW\_BARRIER\_6[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_6 is released. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

HW\_BARRIER\_7\_TRIG\_WAIT\_CLEAR

Cluster hardware barrier 7 trigger, wait and clear command register.

- Offset: 0x1bc
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "EBM", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name**

31:0 ro 0x0 EBM

HW\_BARRIER\_7\_TRIG\_WAIT\_CLEAR . EBM

Set HW\_BARRIER\_7[i] when issued by cluster core i and gate the issuing cluster core i clock until HW\_BARRIER\_7 is released. In addition, EVENT\_BUFFER.EB[i] bits are cleared after the read if EVT\_MASK[i]=1'b1. The read content of this bitfield is equivalent to EVENT\_BUFFER\_MASKED.EBM

cluster\_ctrl\_unit / doc / registers.md

Summary

| Name   | Offset | Length | Description   |
|--|--------|--------|---|
| cluster_control_unit. <u>EOC</u>                     | 0x0    | 4      | End Of Computation status register.                                   |
| cluster_control_unit. <u>FETCH_EN</u>                | 0x4    | 4      | Cluster cores fetch enable configuration register.                    |
| cluster_control_unit. <u>CLOCK_GATE</u>              | 0x8    | 4      | Cluster clock gate configuration register.                            |
| cluster_control_unit. <u>DBG_RESUME</u>              | 0xc    | 4      | Cluster cores debug resume register.                                  |
| cluster_control_unit. <u>DBG_HALT_STATUS</u>         | 0x10   | 4      | Cluster cores debug halt status register.                             |
| cluster_control_unit. <u>DBG_HALT_MASK</u>           | 0x14   | 4      | Cluster cores debug halt mask configuration register.                 |
| cluster_control_unit. <u>BOOT_ADDR0</u>              | 0x18   | 4      | Cluster core 0 boot address configuration register.                   |
| cluster_control_unit. <u>TCDM_ARB_POLICY_CH0</u>     | 0x1c   | 4      | TCDM arbitration policy ch0 for cluster cores configuration register. |
| cluster_control_unit. <u>TCDM_ARB_POLICY_CH1</u>     | 0x20   | 4      | TCDM arbitration policy ch1 for DMA/HWCE configuration register.      |
| cluster_control_unit. <u>TCDM_ARB_POLICY_CH0_REP</u> | 0x24   | 4      | Read only duplicate of TCDM_ARB_POLICY_CH0 register                   |
| cluster_control_unit. <u>TCDM_ARB_POLICY_CH1_REP</u> | 0x28   | 4      | Read only duplicate of TCDM_ARB_POLICY_CH1 register                   |

EOC

End Of Computation status register.

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "eoc", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:1 Reserved

Bits Type Reset Name Description

|   |    |     |     |   |
|---|----|-----|-----|---|
| 0 | rw | 0x0 | eoc | End of computation status flag bitfield: - 1'b0: program execution under going - 1'b1: end of computation reached |
|---|----|-----|-----|---|

FETCH\_EN

Cluster cores fetch enable configuration register.

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xff

Fields

{"reg": [{"name": "CORE0", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CORE1", "bits": 1, "attr": ["rw"], "rotate": -90}, {"

Bits Type Reset Name Description

|      |    |     |       |  |
|------|----|-----|-------|--|
| 31:8 |    |     |       | Reserved   |
| 7    | rw | 0x0 | CORE7 | Core 7 fetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 6    | rw | 0x0 | CORE6 | Core 6 fetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 5    | rw | 0x0 | CORE5 | Core 5 fetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 4    | rw | 0x0 | CORE4 | Core 4 fetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 3    | rw | 0x0 | CORE3 | Core 3 fetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 2    | rw | 0x0 | CORE2 | Core 2 fetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 1    | rw | 0x0 | CORE1 | Core 1 fetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 0    | rw | 0x0 | CORE0 | Core 0 fetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |

CLOCK\_GATE

Cluster clock gate configuration register.

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0x1

Fields

{"reg": [{"name": "EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8

Bits Type Reset Name Description

|      |    |     |    |   |
|------|----|-----|----|---|
| 31:1 |    |     |    | Reserved  |
| 0    | rw | 0x0 | EN | Cluster clock gate configuration bitfield: - 1'b0: disabled - 1'b1: enabled |

DBG\_RESUME

Cluster cores debug resume register.

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xff

Fields

{"reg": [{"name": "CORE0", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "CORE1", "bits": 1, "attr": ["wo"], "rotate": -90}, {"

Bits Type Reset Name Description

|      |    |     |       |   |
|------|----|-----|-------|---|
| 31:8 |    |     |       | Reserved  |
| 7    | wo | 0x0 | CORE7 | Core 7 debug resume configuration bitfield: - 1'b0: stay halted - 1'b1: resume core 7 |
| 6    | wo | 0x0 | CORE6 | Core 6 debug resume configuration bitfield: - 1'b0: stay halted - 1'b1: resume core 6 |
| 5    | wo | 0x0 | CORE5 | Core 5 debug resume configuration bitfield: - 1'b0: stay halted - 1'b1: resume core 5 |
| 4    | wo | 0x0 | CORE4 | Core 4 debug resume configuration bitfield: - 1'b0: stay halted - 1'b1: resume core 4 |
| 3    | wo | 0x0 | CORE3 | Core 3 debug resume configuration bitfield: - 1'b0: stay halted - 1'b1: resume core 3 |
| 2    | wo | 0x0 | CORE2 | Core 2 debug resume configuration bitfield: - 1'b0: stay halted - 1'b1: resume core 2 |

| Bits | Type | Reset | Name  | Description   |
|------|------|-------|-------|---|
| 1    | wo   | 0x0   | CORE1 | Core 1 debug resume configuration bitfield: - 1'b0: stay halted - 1'b1: resume core 1 |
| 0    | wo   | 0x0   | CORE0 | Core 0 debug resume configuration bitfield: - 1'b0: stay halted - 1'b1: resume core 0 |

# DBG\_HALT\_STATUS

Cluster cores debug halt status register.

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "CORE0", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "CORE1", "bits": 1, "attr": ["ro"], "rotate": -90}, {"
```

| Bits | Type | Reset | Name  | Description  |
|------|------|-------|-------|--|
| 31:8 |      |       |       | Reserved   |
| 7    | ro   | 0x0   | CORE7 | Core 7 debug halt status flag bitfield: - 1'b0: running - 1'b1: halted |
| 6    | ro   | 0x0   | CORE6 | Core 6 debug halt status flag bitfield: - 1'b0: running - 1'b1: halted |
| 5    | ro   | 0x0   | CORE5 | Core 5 debug halt status flag bitfield: - 1'b0: running - 1'b1: halted |
| 4    | ro   | 0x0   | CORE4 | Core 4 debug halt status flag bitfield: - 1'b0: running - 1'b1: halted |
| 3    | ro   | 0x0   | CORE3 | Core 3 debug halt status flag bitfield: - 1'b0: running - 1'b1: halted |
| 2    | ro   | 0x0   | CORE2 | Core 2 debug halt status flag bitfield: - 1'b0: running - 1'b1: halted |
| 1    | ro   | 0x0   | CORE1 | Core 1 debug halt status flag bitfield: - 1'b0: running - 1'b1: halted |
| 0    | ro   | 0x0   | CORE0 | Core 0 debug halt status flag bitfield: - 1'b0: running - 1'b1: halted |

# DBG\_HALT\_MASK

Cluster cores debug halt mask configuration register.

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "CORE0", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CORE1", "bits": 1, "attr": ["rw"], "rotate": -90}, {"
```

| Bits | Type | Reset | Name  | Description   |
|------|------|-------|-------|---|
| 31:8 |      |       |       | Reserved  |
| 7    | rw   | 0x0   | CORE7 | Core 7 debug halt mask bitfield. When bit is set, core will be part of mask group and stopped when one of the members of the group stops. |
| 6    | rw   | 0x0   | CORE6 | Core 6 debug halt mask bitfield. When bit is set, core will be part of mask group and stopped when one of the members of the group stops. |
| 5    | rw   | 0x0   | CORE5 | Core 5 debug halt mask bitfield. When bit is set, core will be part of mask group and stopped when one of the members of the group stops. |
| 4    | rw   | 0x0   | CORE4 | Core 4 debug halt mask bitfield. When bit is set, core will be part of mask group and stopped when one of the members of the group stops. |
| 3    | rw   | 0x0   | CORE3 | Core 3 debug halt mask bitfield. When bit is set, core will be part of mask group and stopped when one of the members of the group stops. |
| 2    | rw   | 0x0   | CORE2 | Core 2 debug halt mask bitfield. When bit is set, core will be part of mask group and stopped when one of the members of the group stops. |
| 1    | rw   | 0x0   | CORE1 | Core 1 debug halt mask bitfield. When bit is set, core will be part of mask group and stopped when one of the members of the group stops. |
| 0    | rw   | 0x0   | CORE0 | Core 0 debug halt mask bitfield. When bit is set, core will be part of mask group and stopped when one of the members of the group stops. |

# BOOT\_ADDR0

Cluster core 0 boot address configuration register.

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "BA", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 BA Cluster core 0 boot address configuration bitfield.

## TCDM\_ARB\_POLICY\_CH0

TCDM arbitration policy ch0 for cluster cores configuration register.

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "POL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:1 Reserved  
0 rw 0x0 POL TCDM arbitration policy for cluster cores configuration bitfield: - 1'b0: fair round robin - 1'b1: fixed order

## TCDM\_ARB\_POLICY\_CH1

TCDM arbitration policy ch1 for DMA/HWCE configuration register.

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "POL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:1 Reserved  
0 rw 0x0 POL TCDM arbitration policy for DMA/HWCE configuration bitfield: - 1'b0: fair round robin - 1'b1: fixed order

## TCDM\_ARB\_POLICY\_CH0\_REP

Read only duplicate of TCDM\_ARB\_POLICY\_CH0 register

- Offset: 0x24
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "POL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:1 Reserved  
0 rw 0x0 POL TCDM arbitration policy for cluster cores configuration bitfield: - 1'b0: fair round robin - 1'b1: fixed order

## TCDM\_ARB\_POLICY\_CH1\_REP

Read only duplicate of TCDM\_ARB\_POLICY\_CH1 register

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0x1



## Fields

```
{"reg": [{"name": "POL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name     | Description   |
|------|------|-------|----------|---|
| 31:1 |      |       | Reserved |   |
| 0    | rw   | 0x0   | POL      | TCDM arbitration policy for DMA/HWCE configuration bitfield: - 1'b0: fair round robin - 1'b1: fixed order |

# cluster\_icache\_ctrl / doc / registers.md

## Summary

| Name                                | Offset | Length | Description  |
|-------------------------------------|--------|--------|--|
| cluster_icache_ctrl.ENABLE          | 0x0    | 4      | Cluster instruction cache unit enable configuration register.    |
| cluster_icache_ctrl.FLUSH           | 0x4    | 4      | Cluster instruction cache unit flush command register.           |
| cluster_icache_ctrl.L0_FLUSH        | 0x8    | 4      | Cluster level 0 instruction cache unit flush command register.   |
| cluster_icache_ctrl.SEL_FLUSH       | 0xc    | 4      | Cluster instruction cache unit selective flush command register. |
| cluster_icache_ctrl.L1_L15_PREFETCH | 0x10   | 4      | Enable L1 and L1.5 prefetch register.                            |

## ENABLE

Cluster instruction cache unit enable configuration register.

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name     | Description   |
|------|------|-------|----------|---|
| 31:1 |      |       | Reserved |   |
| 0    | rw   | 0x0   | EN       | Cluster instruction cache enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |

## FLUSH

Cluster instruction cache unit flush command register.

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "FL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name     | Description                                   |
|------|------|-------|----------|---|
| 31:1 |      |       | Reserved |   |
| 0    | rw   | 0x0   | FL       | Cluster instruction cache full flush command. |

## L0\_FLUSH

Cluster level 0 instruction cache unit flush command register.

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "L0_FL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace"}}
```

| Bits | Type | Reset | Name  | Description   |
|------|------|-------|-------|---|
| 31:1 |      |       |       | Reserved  |
| 0    | rw   | 0x0   | L0_FL | Cluster level 0 instruction cache full flush command. |

## SEL\_FLUSH

Cluster instruction cache unit selective flush command register.

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "ADDR", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31:0 | rw   | 0x0   | ADDR | Cluster instruction cache selective flush address configuration bitfield. |

## L1\_L15\_PREFETCH

Enable L1 and L1.5 prefetch register.

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "CORE0", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CORE1", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CORE2", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CORE3", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CORE4", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CORE5", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CORE6", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CORE7", "bits": 1, "attr": ["rw"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description  |
|------|------|-------|-------|--|
| 31:8 |      |       |       | Reserved   |
| 7    | rw   | 0x0   | CORE7 | Core 7 icache prefetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 6    | rw   | 0x0   | CORE6 | Core 6 icache prefetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 5    | rw   | 0x0   | CORE5 | Core 5 icache prefetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 4    | rw   | 0x0   | CORE4 | Core 4 icache prefetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 3    | rw   | 0x0   | CORE3 | Core 3 icache prefetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 2    | rw   | 0x0   | CORE2 | Core 2 icache prefetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 1    | rw   | 0x0   | CORE1 | Core 1 icache prefetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |
| 0    | rw   | 0x0   | CORE0 | Core 0 icache prefetch enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled |

## ethernet / doc / registers.md

## Summary

| Name                | Offset | Length | Description  |
|---------------------|--------|--------|--|
| eth_framing.CONFIG0 | 0x0    | 4      | Configures the lower 4 bytes of the devices MAC address                                    |
| eth_framing.CONFIG1 | 0x4    | 4      | Configures the: upper 2 bytes of the devices MAC address, promiscuous flag, MDIO interface |
| eth_framing.CONFIG2 | 0x8    | 4      | The FCS TX status  |
| eth_framing.CONFIG3 | 0xc    | 4      | The FCS RX status  |

## CONFIG0

Configures the lower 4 bytes of the devices MAC address

- Offset: 0x0
- Reset default: 0x890702
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "lower_mac_address", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset    | Name              | Description                             |
|------|------|----------|-------------------|---|
| 31:0 | rw   | 0x890702 | lower_mac_address | Lower 32 bit of the devices MAC address |

## CONFIG1

Configures the: upper 2 bytes of the devices MAC address, promiscuous flag, MDIO interface

- Offset: 0x4
- Reset default: 0x2301
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "upper_mac_address", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "promiscuous", "bits": 1, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits  | Type | Reset  | Name              | Description                             |
|-------|------|--------|-------------------|---|
| 31:20 |      |        |                   | Reserved                                |
| 19    | rw   | 0x0    | phy_mdio_oe       | MDIO output enable                      |
| 18    | rw   | 0x0    | phy_mdio_o        | MDIO output                             |
| 17    | rw   | 0x0    | phy_mdclk         | MDIO clock                              |
| 16    | rw   | 0x0    | promiscuous       | promiscuous flag                        |
| 15:0  | rw   | 0x2301 | upper_mac_address | Upper 16 bit of the devices MAC address |

## CONFIG2

The FCS TX status

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "tx_fcs_reg", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name       | Description   |
|------|------|-------|------------|---------------|
| 31:0 | ro   | 0x0   | tx_fcs_reg | FCS TX status |

## CONFIG3

The FCS RX status

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "rx_fcs_reg", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name       | Description   |
|------|------|-------|------------|---------------|
| 31:0 | ro   | 0x0   | rx_fcs_reg | FCS RX status |

fp\_cluster / doc / registers.md

## Summary

| Name   | Offset | Length | Description   |
|--|--------|--------|---|
| spatz_cluster_peripheral. <a href="#">PERF_COUNTER_ENABLE_0</a>  | 0x0    | 8      | Enable particular performance counter and start tracking.   |
| spatz_cluster_peripheral. <a href="#">PERF_COUNTER_ENABLE_1</a>  | 0x8    | 8      | Enable particular performance counter and start tracking.   |
| spatz_cluster_peripheral. <a href="#">HART_SELECT_0</a>          | 0x10   | 8      | Select from which hart in the cluster, starting from 0,   |
| spatz_cluster_peripheral. <a href="#">HART_SELECT_1</a>          | 0x18   | 8      | Select from which hart in the cluster, starting from 0,   |
| spatz_cluster_peripheral. <a href="#">PERF_COUNTER_0</a>         | 0x20   | 8      | Performance counter. Set corresponding PERF_COUNTER_ENABLE bits depending on what                   |
| spatz_cluster_peripheral. <a href="#">PERF_COUNTER_1</a>         | 0x28   | 8      | Performance counter. Set corresponding PERF_COUNTER_ENABLE bits depending on what                   |
| spatz_cluster_peripheral. <a href="#">CL_CLINT_SET</a>           | 0x30   | 8      | Set bits in the cluster-local CLINT. Writing a 1 at location i sets the cluster-local interrupt     |
| spatz_cluster_peripheral. <a href="#">CL_CLINT_CLEAR</a>         | 0x38   | 8      | Clear bits in the cluster-local CLINT. Writing a 1 at location i clears the cluster-local interrupt |
| spatz_cluster_peripheral. <a href="#">HW_BARRIER</a>             | 0x40   | 8      | Hardware barrier register. Loads to this register will block until all cores have                   |
| spatz_cluster_peripheral. <a href="#">ICACHE_PREFETCH_ENABLE</a> | 0x48   | 8      | Controls prefetching of the instruction cache.  |
| spatz_cluster_peripheral. <a href="#">SPATZ_STATUS</a>           | 0x50   | 8      | Sets the status of the Spatz cluster.   |
| spatz_cluster_peripheral. <a href="#">CLUSTER_BOOT_CONTROL</a>   | 0x58   | 8      | Controls the cluster boot process.  |

## PERF\_COUNTER\_ENABLE

Enable particular performance counter and start tracking.

- Reset default: 0x0
- Reset mask: 0x7fffffff

### Instances

| Name                  | Offset |
|-----------------------|--------|
| PERF_COUNTER_ENABLE_0 | 0x0    |
| PERF_COUNTER_ENABLE_1 | 0x8    |

### Fields

```
{ "reg": [ { "name": "CYCLE", "bits": 1, "attr": ["rw"], "rotate": -90 }, { "name": "TCDM_ACCESSED", "bits": 1, "attr": ["rw"], "rotate":
```

| Bits  | Type | Reset | Name                              |
|-------|------|-------|-----------------------------------|
| 63:31 |      |       | Reserved                          |
| 30    | rw   | 0x0   | <a href="#">ICACHE_STALL</a>      |
| 29    | rw   | 0x0   | <a href="#">ICACHE_DOUBLE_HIT</a> |
| 28    | rw   | 0x0   | <a href="#">ICACHE_PREFETCH</a>   |
| 27    | rw   | 0x0   | <a href="#">ICACHE_HIT</a>        |
| 26    | rw   | 0x0   | <a href="#">ICACHE_MISS</a>       |
| 25    | rw   | 0x0   | <a href="#">DMA_BUSY</a>          |
| 24    | rw   | 0x0   | <a href="#">DMA_B_DONE</a>        |
| 23    | rw   | 0x0   | <a href="#">DMA_W_BW</a>          |
| 22    | rw   | 0x0   | <a href="#">DMA_W_DONE</a>        |
| 21    | rw   | 0x0   | <a href="#">DMA_R_BW</a>          |
| 20    | rw   | 0x0   | <a href="#">DMA_R_DONE</a>        |
| 19    | rw   | 0x0   | <a href="#">DMA_AR_BW</a>         |
| 18    | rw   | 0x0   | <a href="#">DMA_AR_DONE</a>       |
| 17    | rw   | 0x0   | <a href="#">DMA_AW_BW</a>         |
| 16    | rw   | 0x0   | <a href="#">DMA_AW_DONE</a>       |
| 15    | rw   | 0x0   | <a href="#">DMA_BUF_R_STALL</a>   |
| 14    | rw   | 0x0   | <a href="#">DMA_BUF_W_STALL</a>   |
| 13    | rw   | 0x0   | <a href="#">DMA_W_STALL</a>       |
| 12    | rw   | 0x0   | <a href="#">DMA_R_STALL</a>       |
| 11    | rw   | 0x0   | <a href="#">DMA_AR_STALL</a>      |
| 10    | rw   | 0x0   | <a href="#">DMA_AW_STALL</a>      |
| 9     | rw   | 0x0   | <a href="#">RETIRED_ACC</a>       |
| 8     | rw   | 0x0   | <a href="#">RETIRED_I</a>         |
| 7     | rw   | 0x0   | <a href="#">RETIRED_LOAD</a>      |
| 6     | rw   | 0x0   | <a href="#">RETIRED_INSTR</a>     |
| 5     | rw   | 0x0   | <a href="#">ISSUE_CORE_TO_FPU</a> |
| 4     | rw   | 0x0   | <a href="#">ISSUE_FPU_SEQ</a>     |
| 3     | rw   | 0x0   | <a href="#">ISSUE_FPU</a>         |

| Bits | Type | Reset | Name                  |
|------|------|-------|-----------------------|
| 2    | rw   | 0x0   | <u>TCDM_CONGESTED</u> |
| 1    | rw   | 0x0   | <u>TCDM_ACCESSED</u>  |
| 0    | rw   | 0x0   | <u>CYCLE</u>          |

## PERF\_COUNTER\_ENABLE . ICACHE\_STALL

Incremented for instruction cache stalls. *This is a hart-local signal*

## PERF\_COUNTER\_ENABLE . ICACHE\_DOUBLE\_HIT

Incremented for instruction cache double hit. *This is a hart-local signal*

## PERF\_COUNTER\_ENABLE . ICACHE\_PREFETCH

Incremented for instruction cache prefetches. *This is a hart-local signal*

## PERF\_COUNTER\_ENABLE . ICACHE\_HIT

Incremented for instruction cache hits. *This is a hart-local signal*

## PERF\_COUNTER\_ENABLE . ICACHE\_MISS

Incremented for instruction cache misses. *This is a hart-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_BUSY

Incremented whenever DMA is busy. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_B\_DONE

Incremented whenever B handshake occurs. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_W\_BW

Whenever W handshake occurs, the counter is incremented by the number of bytes transfered in this cycle *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_W\_DONE

Incremented whenever W handshake occurs. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_R\_BW

Whenever R handshake occurs, the counter is incremented by the number of bytes transfered in this cycle *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_R\_DONE

Incremented whenever R handshake occurs. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_AR\_BW

Whenever AR handshake occurs, the counter is incremented by the number of bytes transfered for this transaction *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_AR\_DONE

Incremented whenever AR handshake occurs. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_AW\_BW

Whenever AW handshake occurs, the counter is incremented by the number of bytes transfered for this transaction *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_AW\_DONE

Incremented whenever AW handshake occurs. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_BUF\_R\_STALL

Incremented whenever r\_valid = 1 but r\_ready = 0. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_BUF\_W\_STALL

Incremented whenever `w_ready = 1` but `w_valid = 0`. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_W\_STALL

Incremented whenever `w_valid = 1` but `w_ready = 0`. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_R\_STALL

Incremented whenever `r_ready = 1` but `r_valid = 0`. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_AR\_STALL

Incremented whenever `ar_valid = 1` but `ar_ready = 0`. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . DMA\_AW\_STALL

Incremented whenever `aw_valid = 1` but `aw_ready = 0`. *This is a DMA-local signal*

## PERF\_COUNTER\_ENABLE . RETIRED\_ACC

Offloaded instructions retired by the core. *This is a hart-local signal.*

## PERF\_COUNTER\_ENABLE . RETIRED\_I

Base instructions retired by the core. *This is a hart-local signal.*

## PERF\_COUNTER\_ENABLE . RETIRED\_LOAD

Load instructions retired by the core. *This is a hart-local signal.*

## PERF\_COUNTER\_ENABLE . RETIRED\_INSTR

Instructions retired by the core. *This is a hart-local signal.*

## PERF\_COUNTER\_ENABLE . ISSUE\_CORE\_TO\_FPU

Incremented whenever the core issues an FPU instruction. *This is a hart-local signal.*

## PERF\_COUNTER\_ENABLE . ISSUE\_FPU\_SEQ

Incremented whenever the FPU Sequencer issues an FPU instruction. Might be non available if the hardware doesn't support FREP. *This is a hart-local signal.*

## PERF\_COUNTER\_ENABLE . ISSUE\_FPU

Core operations performed in the FPU. *This is a hart-local signal.*

## PERF\_COUNTER\_ENABLE . TCDM\_CONGESTED

Incremented whenever an access towards the TCDM is made but the arbitration logic didn't grant the access (due to congestion). Is strictly less than `TCDM_ACCESSED`. *This is a cluster-global signal.*

## PERF\_COUNTER\_ENABLE . TCDM\_ACCESSED

Increased whenever the TCDM is accessed. Each individual access is tracked, so if `n` cores access the TCDM, `n` will be added. Accesses are tracked at the TCDM, so it doesn't matter whether the cores or the for example the SSR hardware accesses the TCDM. *This is a cluster-global signal.*

## PERF\_COUNTER\_ENABLE . CYCLE

Cycle counter. Counts up as long as the cluster is powered.

# HART\_SELECT

Select from which hart in the cluster, starting from 0, the event should be counted. For each performance counter the cores can be selected individually. If a hart greater than the clusters total hart size is selected the selection will wrap and the hart corresponding to `hart_select % total_harts_in_cluster` will be selected.

- Reset default: 0x0
- Reset mask: 0x3ff

### Instances

| Name          | Offset |
|---------------|--------|
| HART_SELECT_0 | 0x10   |
| HART_SELECT_1 | 0x18   |

### Fields

|   |  |
|---|--|
| {"reg": [{"name": "HART_SELECT", "bits": 10, "attr": ["rw"], "rotate": -90}, {"bits": 54}], "config": {"lanes": 1, "fontsize": 10, "v |  |
|---|--|

| Bits  | Type | Reset | Name        | Description                                   |
|-------|------|-------|-------------|---|
| 63:10 |      |       |             | Reserved                                      |
| 9:0   | rw   | 0x0   | HART_SELECT | Select source of per-hart performance counter |

## PERF\_COUNTER

Performance counter. Set corresponding PERF\_COUNTER\_ENABLE bits depending on what performance metric you would like to track.

- Reset default: 0x0
- Reset mask: 0xffffffffffff

### Instances

| Name           | Offset |
|----------------|--------|
| PERF_COUNTER_0 | 0x20   |
| PERF_COUNTER_1 | 0x28   |

### Fields

|  |  |
|--|--|
| {"reg": [{"name": "PERF_COUNTER", "bits": 48, "attr": ["rw"], "rotate": 0}, {"bits": 16}], "config": {"lanes": 1, "fontsize": 10, "v |  |
|--|--|

| Bits  | Type | Reset | Name         | Description         |
|-------|------|-------|--------------|---------------------|
| 63:48 |      |       |              | Reserved            |
| 47:0  | rw   | x     | PERF_COUNTER | Performance counter |

## CL\_CLINT\_SET

Set bits in the cluster-local CLINT. Writing a 1 at location i sets the cluster-local interrupt of hart i, where i is relative to the first hart in the cluster, ignoring the cluster base hart ID.

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

|  |  |
|--|--|
| {"reg": [{"name": "CL_CLINT_SET", "bits": 32, "attr": ["wo"], "rotate": 0}, {"bits": 32}], "config": {"lanes": 1, "fontsize": 10, "v |  |
|--|--|

| Bits  | Type | Reset | Name         | Description                           |
|-------|------|-------|--------------|---------------------------------------|
| 63:32 |      |       |              | Reserved                              |
| 31:0  | wo   | x     | CL_CLINT_SET | Set cluster-local interrupt of hart i |

## CL\_CLINT\_CLEAR

Clear bits in the cluster-local CLINT. Writing a 1 at location i clears the cluster-local interrupt of hart i, where i is relative to the first hart in the cluster, ignoring the cluster base hart ID.

- Offset: 0x38
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

{"reg": [{"name": "CL\_CLINT\_CLEAR", "bits": 32, "attr": ["wo"], "rotate": 0}, {"bits": 32}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}

| Bits  | Type | Reset Name       | Description                             |
|-------|------|------------------|---|
| 63:32 |      |                  | Reserved                                |
| 31:0  | wo   | x CL_CLINT_CLEAR | Clear cluster-local interrupt of hart i |

## HW\_BARRIER

Hardware barrier register. Loads to this register will block until all cores have performed the load. At this stage we know that they reached the same point in the control flow, i.e., the cores are synchronized.

- Offset: 0x40
- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

{"reg": [{"name": "HW\_BARRIER", "bits": 32, "attr": ["ro"], "rotate": 0}, {"bits": 32}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}

| Bits  | Type | Reset Name   | Description                |
|-------|------|--------------|----------------------------|
| 63:32 |      |              | Reserved                   |
| 31:0  | ro   | x HW_BARRIER | Hardware barrier register. |

## ICACHE\_PREFETCH\_ENABLE

Controls prefetching of the instruction cache.

- Offset: 0x48
- Reset default: 0x1
- Reset mask: 0x1

### Fields

{"reg": [{"name": "ICACHE\_PREFETCH\_ENABLE", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 63}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}

| Bits | Type | Reset Name                 | Description                |
|------|------|----------------------------|----------------------------|
| 63:1 |      |                            | Reserved                   |
| 0    | wo   | 0x1 ICACHE_PREFETCH_ENABLE | Hardware barrier register. |

## SPATZ\_STATUS

Sets the status of the Spatz cluster.

- Offset: 0x50
- Reset default: 0x0
- Reset mask: 0x1

### Fields

{"reg": [{"name": "SPATZ\_CLUSTER\_PROBE", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 63}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}

| Bits | Type | Reset Name              | Description                                  |
|------|------|-------------------------|--|
| 63:1 |      |                         | Reserved                                     |
| 0    | wo   | 0x0 SPATZ_CLUSTER_PROBE | Indicates the cluster is computing a kernel. |

## CLUSTER\_BOOT\_CONTROL

Controls the cluster boot process.

- Offset: 0x58
- Reset default: 0x0
- Reset mask: 0xffffffff



## Fields

```
{"reg": [{"name": "ENTRY_POINT", "bits": 32, "attr": ["rw"], "rotate": 0}, {"bits": 32}], "config": {"lanes": 1, "fontsize": 10, "vs"}}
```

| Bits  | Type | Reset Name      | Description                     |
|-------|------|-----------------|---------------------------------|
| 63:32 |      |                 | Reserved                        |
| 31:0  | rw   | 0x0 ENTRY_POINT | Post-bootstrapping entry point. |

## gp\_timer1\_system\_timer / doc / registers.md

## Summary

| Name                | Offset | Length | Description                           |
|---------------------|--------|--------|---------------------------------------|
| timer_unit.CFG_LO   | 0x0    | 4      | Timer Low Configuration register.     |
| timer_unit.CFG_HI   | 0x4    | 4      | Timer HIGH Configuration register.    |
| timer_unit.CNT_LO   | 0x8    | 4      | Timer Low counter value register.     |
| timer_unit.CNT_HI   | 0xc    | 4      | Timer High counter value register.    |
| timer_unit.CMP_LO   | 0x10   | 4      | Timer Low comparator value register.  |
| timer_unit.CMP_HI   | 0x14   | 4      | Timer High comparator value register. |
| timer_unit.START_LO | 0x18   | 4      | Start Timer Low counting register.    |
| timer_unit.START_HI | 0x1c   | 4      | Start Timer High counting register.   |
| timer_unit.RESET_LO | 0x20   | 4      | Reset Timer Low counter register.     |
| timer_unit.RESET_HI | 0x24   | 4      | Reset Timer High counter register.    |

## CFG\_LO

Timer Low Configuration register.

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0x8000ffff

## Fields

```
{"reg": [{"name": "ENABLE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "RESET", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "MODE", "bits": 2, "attr": ["rw"], "rotate": -90}, {"name": "PVAL", "bits": 8, "attr": ["rw"], "rotate": -90}, {"name": "CCFG", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "PEN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "ONE_S", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "IEM", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "IRQEN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "RESET", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "ENABLE", "bits": 1, "attr": ["rw"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vs"}}
```

| Bits  | Type | Reset Name | Description  |
|-------|------|------------|--|
| 31    | rw   | 0x0 CASC   | Timer low + Timer high 64bit cascaded mode configuration bitfield.   |
| 30:16 |      |            | Reserved   |
| 15:8  | rw   | 0x0 PVAL   | Timer low prescaler value bitfield. Ftimer = Fclk / (1 + PRESC_VAL)  |
| 7     | rw   | 0x0 CCFG   | Timer low clock source configuration bitfield: - 1'b0: FLL or FLL+Prescaler - 1'b1: Reference clock at 32kHz   |
| 6     | rw   | 0x0 PEN    | Timer low prescaler enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled  |
| 5     | rw   | 0x0 ONE_S  | Timer low one shot configuration bitfield: - 1'b0: let Timer low enabled counting when compare match with CMP_LO occurs. - 1'b1: disable Timer low when compare match with CMP_LO occurs.  |
| 4     | rw   | 0x0 MODE   | Timer low continuous mode configuration bitfield: - 1'b0: Continue mode - continue incrementing Timer low counter when compare match with CMP_LO occurs. - 1'b1: Cycle mode - reset Timer low counter when compare match with CMP_LO occurs. |
| 3     | rw   | 0x0 IEM    | Timer low input event mask configuration bitfield: - 1'b0: disabled - 1'b1: enabled  |
| 2     | rw   | 0x0 IRQEN  | Timer low compare match interrupt enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled  |
| 1     | rw   | 0x0 RESET  | Timer low counter reset command bitfield. Cleared after Timer Low reset execution.   |
| 0     | rw   | 0x0 ENABLE | Timer low enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled  |

## CFG\_HI

Timer HIGH Configuration register.

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "ENABLE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "RESET", "bits": 1, "attr": ["wo"], "rotate": -90},
```

| Bits | Type | Reset | Name   | Description   |
|------|------|-------|--------|---|
| 31:8 |      |       |        | Reserved  |
| 7    | rw   | 0x0   | CLKCFG | Timer high clock source configuration bitfield: - 1'b0: FLL or FLL+Prescaler - 1'b1: Reference clock at 32kHz   |
| 6    | rw   | 0x0   | PEN    | Timer high prescaler enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled  |
| 5    | rw   | 0x0   | ONE_S  | Timer high one shot configuration bitfield: - 1'b0: let Timer high enabled counting when compare match with CMP_HI occurs. - 1'b1: disable Timer high when compare match with CMP_HI occurs.  |
| 4    | rw   | 0x0   | MODE   | Timer high continuous mode configuration bitfield: - 1'b0: Continue mode - continue incrementing Timer high counter when compare match with CMP_HI occurs. - 1'b1: Cycle mode - reset Timer high counter when compare match with CMP_HI occurs. |
| 3    | rw   | 0x0   | IEM    | Timer high input event mask configuration bitfield: - 1'b0: disabled - 1'b1: enabled  |
| 2    | rw   | 0x0   | IRQEN  | Timer high compare match interrupt enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled  |
| 1    | wo   | 0x0   | RESET  | Timer high counter reset command bitfield. Cleared after Timer high reset execution.  |
| 0    | rw   | 0x0   | ENABLE | Timer high enable configuration bitfield: - 1'b0: disabled - 1'b1: enabled  |

# CNT\_LO

Timer Low counter value register.

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "cnt_lo", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name   | Description                       |
|------|------|-------|--------|-----------------------------------|
| 31:0 | rw   | 0x0   | cnt_lo | Timer Low counter value bitfield. |

# CNT\_HI

Timer High counter value register.

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "cnt_hi", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name   | Description                        |
|------|------|-------|--------|------------------------------------|
| 31:0 | rw   | 0x0   | cnt_hi | Timer High counter value bitfield. |

# CMP\_LO

Timer Low comparator value register.

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "cmp_lo", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name   | Description                          |
|------|------|-------|--------|--------------------------------------|
| 31:0 | rw   | 0x0   | cmp_lo | Timer Low comparator value bitfield. |

# CMP\_HI

Timer High comparator value register.

- **Offset:** 0x14
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "cmp_hi", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name   | Description                           |
|------|------|-------|--------|---------------------------------------|
| 31:0 | rw   | 0x0   | cmp_hi | Timer High comparator value bitfield. |

START\_LO

Start Timer Low counting register.

- **Offset:** 0x18
- **Reset default:** 0x0
- **Reset mask:** 0x1

Fields

```
{"reg": [{"name": "strt_lo", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description  |
|------|------|-------|----------|--|
| 31:1 |      |       | Reserved |  |
| 0    | wo   | 0x0   | strt_lo  | Timer Low start command bitfield. When executed, CFG_LO.ENABLE is set. |

START\_HI

Start Timer High counting register.

- **Offset:** 0x1c
- **Reset default:** 0x0
- **Reset mask:** 0x1

Fields

```
{"reg": [{"name": "strt_hi", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description   |
|------|------|-------|----------|---|
| 31:1 |      |       | Reserved |   |
| 0    | wo   | 0x0   | strt_hi  | Timer High start command bitfield. When executed, CFG_HI.ENABLE is set. |

RESET\_LO

Reset Timer Low counter register.

- **Offset:** 0x20
- **Reset default:** 0x0
- **Reset mask:** 0x1

Fields

```
{"reg": [{"name": "rst_lo", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description   |
|------|------|-------|----------|---|
| 31:1 |      |       | Reserved |   |
| 0    | wo   | 0x0   | rst_lo   | Timer Low counter reset command bitfield. When executed, CFG_LO.RESET is set. |

# RESET\_HI

Reset Timer High counter register.

- Offset: 0x24
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "rst_hi", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

### Bits Type Reset Name Description

|      |    |     |        |  |
|------|----|-----|--------|--|
| 31:1 |    |     |        | Reserved   |
| 0    | wo | 0x0 | rst_hi | Timer High counter reset command bitfield. When executed, CFG_HI.RESET is set. |

## gp\_timer2\_advanced\_timer / doc / registers.md

## Summary

| Name                         | Offset | Length | Description  |
|------------------------------|--------|--------|--|
| apb_adv_timer.T0_CMD         | 0x0    | 4      | ADV_TIMER0 command register.                             |
| apb_adv_timer.T0_CONFIG      | 0x4    | 4      | ADV_TIMER0 configuration register.                       |
| apb_adv_timer.T0_THRESHOLD   | 0x8    | 4      | ADV_TIMER0 threshold configuration register.             |
| apb_adv_timer.T0_TH_CHANNEL0 | 0xc    | 4      | ADV_TIMER0 channel 0 threshold configuration register.   |
| apb_adv_timer.T0_TH_CHANNEL1 | 0x10   | 4      | ADV_TIMER0 channel 1 threshold configuration register.   |
| apb_adv_timer.T0_TH_CHANNEL2 | 0x14   | 4      | ADV_TIMER0 channel 2 threshold configuration register.   |
| apb_adv_timer.T0_TH_CHANNEL3 | 0x18   | 4      | ADV_TIMER0 channel 3 threshold configuration register.   |
| apb_adv_timer.T0_COUNTER     | 0x1c   | 4      | ADV_TIMER0 counter register.                             |
| apb_adv_timer.T1_CMD         | 0x20   | 4      | ADV_TIMER1 command register.                             |
| apb_adv_timer.T1_CONFIG      | 0x24   | 4      | ADV_TIMER1 configuration register.                       |
| apb_adv_timer.T1_THRESHOLD   | 0x28   | 4      | ADV_TIMER1 threshold configuration register.             |
| apb_adv_timer.T1_TH_CHANNEL0 | 0x2c   | 4      | ADV_TIMER1 channel 0 threshold configuration register.   |
| apb_adv_timer.T1_TH_CHANNEL1 | 0x30   | 4      | ADV_TIMER1 channel 1 threshold configuration register.   |
| apb_adv_timer.T1_TH_CHANNEL2 | 0x34   | 4      | ADV_TIMER1 channel 2 threshold configuration register.   |
| apb_adv_timer.T1_TH_CHANNEL3 | 0x38   | 4      | ADV_TIMER1 channel 3 threshold configuration register.   |
| apb_adv_timer.T1_COUNTER     | 0x3c   | 4      | ADV_TIMER1 counter register.                             |
| apb_adv_timer.T2_CMD         | 0x40   | 4      | ADV_TIMER2 command register.                             |
| apb_adv_timer.T2_CONFIG      | 0x44   | 4      | ADV_TIMER2 configuration register.                       |
| apb_adv_timer.T2_THRESHOLD   | 0x48   | 4      | ADV_TIMER2 threshold configuration register.             |
| apb_adv_timer.T2_TH_CHANNEL0 | 0x4c   | 4      | ADV_TIMER2 channel 0 threshold configuration register.   |
| apb_adv_timer.T2_TH_CHANNEL1 | 0x50   | 4      | ADV_TIMER2 channel 1 threshold configuration register.   |
| apb_adv_timer.T2_TH_CHANNEL2 | 0x54   | 4      | ADV_TIMER2 channel 2 threshold configuration register.   |
| apb_adv_timer.T2_TH_CHANNEL3 | 0x58   | 4      | ADV_TIMER2 channel 3 threshold configuration register.   |
| apb_adv_timer.T2_COUNTER     | 0x5c   | 4      | ADV_TIMER2 counter register.                             |
| apb_adv_timer.T3_CMD         | 0x60   | 4      | ADV_TIMER3 command register.                             |
| apb_adv_timer.T3_CONFIG      | 0x64   | 4      | ADV_TIMER3 configuration register.                       |
| apb_adv_timer.T3_THRESHOLD   | 0x68   | 4      | ADV_TIMER3 threshold configuration register.             |
| apb_adv_timer.T3_TH_CHANNEL0 | 0x6c   | 4      | ADV_TIMER3 channel 0 threshold configuration register.   |
| apb_adv_timer.T3_TH_CHANNEL1 | 0x70   | 4      | ADV_TIMER3 channel 1 threshold configuration register.   |
| apb_adv_timer.T3_TH_CHANNEL2 | 0x74   | 4      | ADV_TIMER3 channel 2 threshold configuration register.   |
| apb_adv_timer.T3_TH_CHANNEL3 | 0x78   | 4      | ADV_TIMER3 channel 3 threshold configuration register.   |
| apb_adv_timer.T3_COUNTER     | 0x7c   | 4      | ADV_TIMER3 counter register.                             |
| apb_adv_timer.EVENT_CFG      | 0x80   | 4      | ADV_TIMERS events configuration register.                |
| apb_adv_timer.CG             | 0x84   | 4      | ADV_TIMERS channels clock gating configuration register. |

## T0\_CMD

ADV\_TIMER0 command register.

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "START", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "STOP", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "UPDATE", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RESET", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "ARM", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RFU", "bits": 1, "attr": ["wo"], "rotate": -90}]}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |     |        |                                     |
|------|----|-----|--------|-------------------------------------|
| 31:5 | wo | 0x0 | RFU    | ?                                   |
| 4    | wo | 0x0 | ARM    | ADV_TIMER0 arm command bitfield.    |
| 3    | wo | 0x0 | RESET  | ADV_TIMER0 reset command bitfield.  |
| 2    | wo | 0x0 | UPDATE | ADV_TIMER0 update command bitfield. |
| 1    | wo | 0x0 | STOP   | ADV_TIMER0 stop command bitfield.   |
| 0    | wo | 0x0 | START  | ADV_TIMER0 start command bitfield.  |

## T0\_CONFIG

ADV\_TIMER0 configuration register.

- Offset: 0x4
- Reset default: 0x1000
- Reset mask: 0xfffffff

## Fields

```
{"reg": [{"name": "INSEL", "bits": 8, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"name": "CLKSEL", "bits": 2, "attr": ["rw"], "rotate": 0}, {"name": "UPDOWNSEL", "bits": 2, "attr": ["rw"], "rotate": 0}, {"name": "PRESC", "bits": 8, "attr": ["rw"], "rotate": 0}]}
```

| Bits | Type | Reset | Name |
|------|------|-------|------|
|------|------|-------|------|

|       |    |     |                  |
|-------|----|-----|------------------|
| 31:24 |    |     | Reserved         |
| 23:16 | rw | 0x0 | <u>PRESC</u>     |
| 15:13 |    |     | Reserved         |
| 12    | rw | 0x1 | <u>UPDOWNSEL</u> |
| 11    | rw | 0x0 | <u>CLKSEL</u>    |
| 10:8  | rw | 0x0 | <u>MODE</u>      |
| 7:0   | rw | 0x0 | <u>INSEL</u>     |

### T0\_CONFIG . PRESC

ADV\_TIMER0 prescaler value configuration bitfield.

### T0\_CONFIG . UPDOWNSEL

ADV\_TIMER0 center-aligned mode configuration bitfield:

- 1'b0: The counter counts up and down alternatively.
- 1'b1: The counter counts up and resets to 0 when reach threshold.

### T0\_CONFIG . CLKSEL

ADV\_TIMER0 clock source configuration bitfield:

- 1'b0: FLL
- 1'b1: reference clock at 32kHz

### T0\_CONFIG . MODE

ADV\_TIMER0 trigger mode configuration bitfield:

- 3'h0: trigger event at each clock cycle.
- 3'h1: trigger event if input source is 0
- 3'h2: trigger event if input source is 1
- 3'h3: trigger event on input source rising edge
- 3'h4: trigger event on input source falling edge
- 3'h5: trigger event on input source falling or rising edge
- 3'h6: trigger event on input source rising edge when armed
- 3'h7: trigger event on input source falling edge when armed

### T0\_CONFIG . INSEL

ADV\_TIMER0 input source configuration bitfield:

- 0-31: GPIO[0] to GPIO[31]
- 32-35: Channel 0 to 3 of ADV\_TIMER0
- 36-39: Channel 0 to 3 of ADV\_TIMER1
- 40-43: Channel 0 to 3 of ADV\_TIMER2
- 44-47: Channel 0 to 3 of ADV\_TIMER3

# T0\_THRESHOLD

ADV\_TIMER0 threshold configuration register.

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "TH_LO", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "TH_HI", "bits": 16, "attr": ["rw"], "rotate": 0}], "c
```

| Bits  | Type | Reset | Name  | Description   |
|-------|------|-------|-------|---|
| 31:16 | rw   | 0x0   | TH_HI | ADV_TIMER0 threshold high part configuration bitfield. It defines end counter value.  |
| 15:0  | rw   | 0x0   | TH_LO | ADV_TIMER0 threshold low part configuration bitfield. It defines start counter value. |

# T0\_TH\_CHANNEL0

ADV\_TIMER0 channel 0 threshold configuration register.

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0x7ffff

## Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

| Bits  | Type | Reset | Name     |
|-------|------|-------|----------|
| 31:19 |      |       | Reserved |
| 18:16 | rw   | 0x0   | MODE     |
| 15:0  | rw   | 0x0   | TH       |

## T0\_TH\_CHANNEL0 . MODE

ADV\_TIMER0 channel 0 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T0\_TH\_CHANNEL0 . TH

ADV\_TIMER0 channel 0 threshold configuration bitfield.

# T0\_TH\_CHANNEL1

ADV\_TIMER0 channel 1 threshold configuration register.

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0x7ffff

## Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

### Bits Type Reset Name

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T0\_TH\_CHANNEL1 . MODE

ADV\_TIMER0 channel 1 threshold match action on channel output signal configuration bitfield.

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T0\_TH\_CHANNEL1 . TH

ADV\_TIMER0 channel 1 threshold configuration bitfield.

## T0\_TH\_CHANNEL2

ADV\_TIMER0 channel 2 threshold configuration register.

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0x7ffff

## Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

### Bits Type Reset Name

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T0\_TH\_CHANNEL2 . MODE

ADV\_TIMER0 channel 2 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T0\_TH\_CHANNEL2 . TH

ADV\_TIMER0 channel 2 threshold configuration bitfield.

## T0\_TH\_CHANNEL3

ADV\_TIMER0 channel 3 threshold configuration register.

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0x7ffff

## Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits": 31, "attr": ["rw"], "rotate": 0}]}
```

### Bits Type Reset Name

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T0\_TH\_CHANNEL3 . MODE

ADV\_TIMER0 channel 3 threshold match action on channel output signal configuration bitfield.

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T0\_TH\_CHANNEL3 . TH

ADV\_TIMER0 channel 3 threshold configuration bitfield.

## T0\_COUNTER

ADV\_TIMER0 counter register.

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0xffff

## Fields

```
{"reg": [{"name": "COUNTER", "bits": 16, "attr": ["ro"], "rotate": 0}, {"bits": 31, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

### Bits Type Reset Name Description

|       |    |     |                                   |
|-------|----|-----|-----------------------------------|
| 31:16 |    |     | Reserved                          |
| 15:0  | ro | 0x0 | COUNTER ADV_TIMER0 counter value. |

## T1\_CMD

ADV\_TIMER1 command register.

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0x1f

## Fields

```
{"reg": [{"name": "START", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "STOP", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "UPDATE", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RESET", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "ARM", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31, "attr": ["wo"], "rotate": -90}]}
```

### Bits Type Reset Name Description

|      |    |     |  |
|------|----|-----|--|
| 31:5 |    |     | Reserved                                   |
| 4    | wo | 0x0 | ARM ADV_TIMER1 arm command bitfield.       |
| 3    | wo | 0x0 | RESET ADV_TIMER1 reset command bitfield.   |
| 2    | wo | 0x0 | UPDATE ADV_TIMER1 update command bitfield. |
| 1    | wo | 0x0 | STOP ADV_TIMER1 stop command bitfield.     |
| 0    | wo | 0x0 | START ADV_TIMER1 start command bitfield.   |

## T1\_CONFIG



ADV\_TIMER1 configuration register.

- Offset: 0x24
- Reset default: 0x1000
- Reset mask: 0xff1fff

## Fields

```
{"reg": [{"name": "INSEL", "bits": 8, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"name": "UPDOWNSEL", "bits": 2, "attr": ["rw"], "rotate": 0}, {"name": "CLKSEL", "bits": 2, "attr": ["rw"], "rotate": 0}, {"name": "PRESC", "bits": 8, "attr": ["rw"], "rotate": 0}, {"name": "THRESHOLD", "bits": 16, "attr": ["rw"], "rotate": 0}]}
```

### Bits Type Reset Name

|       |    |     |                  |
|-------|----|-----|------------------|
| 31:24 |    |     | Reserved         |
| 23:16 | rw | 0x0 | <u>PRESC</u>     |
| 15:13 |    |     | Reserved         |
| 12    | rw | 0x1 | <u>UPDOWNSEL</u> |
| 11    | rw | 0x0 | <u>CLKSEL</u>    |
| 10:8  | rw | 0x0 | <u>MODE</u>      |
| 7:0   | rw | 0x0 | <u>INSEL</u>     |

## T1\_CONFIG . PRESC

ADV\_TIMER1 prescaler value configuration bitfield.

## T1\_CONFIG . UPDOWNSEL

ADV\_TIMER1 center-aligned mode configuration bitfield:

- 1'b0: The counter counts up and down alternatively.
- 1'b1: The counter counts up and resets to 0 when reach threshold.

## T1\_CONFIG . CLKSEL

ADV\_TIMER1 clock source configuration bitfield:

- 1'b0: FLL
- 1'b1: reference clock at 32kHz

## T1\_CONFIG . MODE

ADV\_TIMER1 trigger mode configuration bitfield:

- 3'h0: trigger event at each clock cycle.
- 3'h1: trigger event if input source is 0
- 3'h2: trigger event if input source is 1
- 3'h3: trigger event on input source rising edge
- 3'h4: trigger event on input source falling edge
- 3'h5: trigger event on input source falling or rising edge
- 3'h6: trigger event on input source rising edge when armed
- 3'h7: trigger event on input source falling edge when armed

## T1\_CONFIG . INSEL

ADV\_TIMER1 input source configuration bitfield:

- 0-31: GPIO[0] to GPIO[31]
- 32-35: Channel 0 to 3 of ADV\_TIMER0
- 36-39: Channel 0 to 3 of ADV\_TIMER1
- 40-43: Channel 0 to 3 of ADV\_TIMER2
- 44-47: Channel 0 to 3 of ADV\_TIMER3

## T1\_THRESHOLD

ADV\_TIMER1 threshold configuration register.

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "TH_LO", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "TH_HI", "bits": 16, "attr": ["rw"], "rotate": 0}], "c
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |     |       |   |
|-------|----|-----|-------|---|
| 31:16 | rw | 0x0 | TH_HI | ADV_TIMER1 threshold high part configuration bitfield. It defines end counter value.  |
| 15:0  | rw | 0x0 | TH_LO | ADV_TIMER1 threshold low part configuration bitfield. It defines start counter value. |

## T1\_TH\_CHANNEL0

ADV\_TIMER1 channel 0 threshold configuration register.

- Offset: 0x2c
- Reset default: 0x0
- Reset mask: 0x7ffff

## Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

| Bits | Type | Reset | Name |
|------|------|-------|------|
|------|------|-------|------|

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T1\_TH\_CHANNEL0 . MODE

ADV\_TIMER1 channel 0 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T1\_TH\_CHANNEL0 . TH

ADV\_TIMER1 channel 0 threshold configuration bitfield.

## T1\_TH\_CHANNEL1

ADV\_TIMER1 channel 1 threshold configuration register.

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0x7ffff

## Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

| Bits | Type | Reset | Name |
|------|------|-------|------|
|------|------|-------|------|

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T1\_TH\_CHANNEL1 . MODE

ADV\_TIMER1 channel 1 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.

- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T1\_TH\_CHANNEL1 . TH

ADV\_TIMER1 channel 1 threshold configuration bitfield.

## T1\_TH\_CHANNEL2

ADV\_TIMER1 channel 2 threshold configuration register.

- Offset: 0x34
- Reset default: 0x0
- Reset mask: 0x7fff

### Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

| Bits | Type | Reset | Name |
|------|------|-------|------|
|------|------|-------|------|

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T1\_TH\_CHANNEL2 . MODE

ADV\_TIMER1 channel 2 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T1\_TH\_CHANNEL2 . TH

ADV\_TIMER1 channel 2 threshold configuration bitfield.

## T1\_TH\_CHANNEL3

ADV\_TIMER1 channel 3 threshold configuration register.

- Offset: 0x38
- Reset default: 0x0
- Reset mask: 0x7fff

### Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

| Bits | Type | Reset | Name |
|------|------|-------|------|
|------|------|-------|------|

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T1\_TH\_CHANNEL3 . MODE

ADV\_TIMER1 channel 3 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.

- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T1\_TH\_CHANNEL3 . TH

ADV\_TIMER1 channel 3 threshold configuration bitfield.

## T1\_COUNTER

ADV\_TIMER1 counter register.

- Offset: 0x3c
- Reset default: 0x0
- Reset mask: 0xffff

### Fields

```
{"reg": [{"name": "COUNTER", "bits": 16, "attr": ["ro"], "rotate": 0}, {"bits": 16}], "config": {"lanes": 1, "fontSize": 10, "vspace": 10}}
```

| Bits  | Type | Reset | Name    | Description               |
|-------|------|-------|---------|---------------------------|
| 31:16 |      |       |         | Reserved                  |
| 15:0  | ro   | 0x0   | COUNTER | ADV_TIMER1 counter value. |

## T2\_CMD

ADV\_TIMER2 command register.

- Offset: 0x40
- Reset default: 0x0
- Reset mask: 0x1f

### Fields

```
{"reg": [{"name": "START", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "STOP", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "UPDATE", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RESET", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "ARM", "bits": 1, "attr": ["wo"], "rotate": -90}], "config": {"lanes": 1, "fontSize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description                         |
|------|------|-------|--------|-------------------------------------|
| 31:5 |      |       |        | Reserved                            |
| 4    | wo   | 0x0   | ARM    | ADV_TIMER2 arm command bitfield.    |
| 3    | wo   | 0x0   | RESET  | ADV_TIMER2 reset command bitfield.  |
| 2    | wo   | 0x0   | UPDATE | ADV_TIMER2 update command bitfield. |
| 1    | wo   | 0x0   | STOP   | ADV_TIMER2 stop command bitfield.   |
| 0    | wo   | 0x0   | START  | ADV_TIMER2 start command bitfield.  |

## T2\_CONFIG

ADV\_TIMER2 configuration register.

- Offset: 0x44
- Reset default: 0x1000
- Reset mask: 0xfffffff

### Fields

```
{"reg": [{"name": "INSEL", "bits": 8, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"name": "PRESC", "bits": 12, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontSize": 10, "vspace": 10}}
```

| Bits  | Type | Reset | Name         |
|-------|------|-------|--------------|
| 31:24 |      |       | Reserved     |
| 23:16 | rw   | 0x0   | <u>PRESC</u> |
| 15:13 |      |       | Reserved     |

| Bits | Type | Reset | Name             |
|------|------|-------|------------------|
| 12   | rw   | 0x1   | <u>UPDOWNSEL</u> |
| 11   | rw   | 0x0   | <u>CLKSEL</u>    |
| 10:8 | rw   | 0x0   | <u>MODE</u>      |
| 7:0  | rw   | 0x0   | <u>INSEL</u>     |

## T2\_CONFIG . PRESC

ADV\_TIMER2 prescaler value configuration bitfield.

## T2\_CONFIG . UPDOWNSEL

ADV\_TIMER2 center-aligned mode configuration bitfield:

- 1'b0: The counter counts up and down alternatively.
- 1'b1: The counter counts up and resets to 0 when reach threshold.

## T2\_CONFIG . CLKSEL

ADV\_TIMER2 clock source configuration bitfield:

- 1'b0: FLL
- 1'b1: reference clock at 32kHz

## T2\_CONFIG . MODE

ADV\_TIMER2 trigger mode configuration bitfield:

- 3'h0: trigger event at each clock cycle.
- 3'h1: trigger event if input source is 0
- 3'h2: trigger event if input source is 1
- 3'h3: trigger event on input source rising edge
- 3'h4: trigger event on input source falling edge
- 3'h5: trigger event on input source falling or rising edge
- 3'h6: trigger event on input source rising edge when armed
- 3'h7: trigger event on input source falling edge when armed

## T2\_CONFIG . INSEL

ADV\_TIMER2 input source configuration bitfield:

- 0-31: GPIO[0] to GPIO[31]
- 32-35: Channel 0 to 3 of ADV\_TIMER0
- 36-39: Channel 0 to 3 of ADV\_TIMER1
- 40-43: Channel 0 to 3 of ADV\_TIMER2
- 44-47: Channel 0 to 3 of ADV\_TIMER3

# T2\_THRESHOLD

ADV\_TIMER2 threshold configuration register.

- Offset: 0x48
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "TH_LO", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "TH_HI", "bits": 16, "attr": ["rw"], "rotate": 0}], "c"
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |     |       |   |
|-------|----|-----|-------|---|
| 31:16 | rw | 0x0 | TH_HI | ADV_TIMER2 threshold high part configuration bitfield. It defines end counter value.  |
| 15:0  | rw | 0x0 | TH_LO | ADV_TIMER2 threshold low part configuration bitfield. It defines start counter value. |

# T2\_TH\_CHANNEL0

ADV\_TIMER2 channel 0 threshold configuration register.

- **Offset:** 0x4c
- **Reset default:** 0x0
- **Reset mask:** 0x7fff

Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

Bits   Type   Reset   Name

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

T2\_TH\_CHANNEL0 . MODE

ADV\_TIMER2 channel 0 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

T2\_TH\_CHANNEL0 . TH

ADV\_TIMER2 channel 0 threshold configuration bitfield.

T2\_TH\_CHANNEL1

ADV\_TIMER2 channel 1 threshold configuration register.

- **Offset:** 0x50
- **Reset default:** 0x0
- **Reset mask:** 0x7fff

Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

Bits   Type   Reset   Name

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

T2\_TH\_CHANNEL1 . MODE

ADV\_TIMER2 channel 1 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

T2\_TH\_CHANNEL1 . TH

ADV\_TIMER2 channel 1 threshold configuration bitfield.

T2\_TH\_CHANNEL2

ADV\_TIMER2 channel 2 threshold configuration register.

- Offset: 0x54
- Reset default: 0x0
- Reset mask: 0x7fff

Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

Bits Type Reset Name

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

T2\_TH\_CHANNEL2 . MODE

ADV\_TIMER2 channel 2 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

T2\_TH\_CHANNEL2 . TH

ADV\_TIMER2 channel 2 threshold configuration bitfield.

T2\_TH\_CHANNEL3

ADV\_TIMER2 channel 3 threshold configuration register.

- Offset: 0x58
- Reset default: 0x0
- Reset mask: 0x7fff

Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

Bits Type Reset Name

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

T2\_TH\_CHANNEL3 . MODE

ADV\_TIMER2 channel 3 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

T2\_TH\_CHANNEL3 . TH

ADV\_TIMER2 channel 3 threshold configuration bitfield.

T2\_COUNTER

ADV\_TIMER2 counter register.

- **Offset:** 0x5c
- **Reset default:** 0x0
- **Reset mask:** 0xffff

Fields

```
{"reg": [{"name": "COUNTER", "bits": 16, "attr": ["ro"], "rotate": 0}, {"bits": 16}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits  | Type | Reset Name | Description                       |
|-------|------|------------|-----------------------------------|
| 31:16 |      |            | Reserved                          |
| 15:0  | ro   | 0x0        | COUNTER ADV_TIMER2 counter value. |

T3\_CMD

ADV\_TIMER3 command register.

- **Offset:** 0x60
- **Reset default:** 0x0
- **Reset mask:** 0x1f

Fields

```
{"reg": [{"name": "START", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "STOP", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "UPDATE", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RESET", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "ARM", "bits": 1, "attr": ["wo"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset Name | Description                                |
|------|------|------------|--|
| 31:5 |      |            | Reserved                                   |
| 4    | wo   | 0x0        | ARM ADV_TIMER3 arm command bitfield.       |
| 3    | wo   | 0x0        | RESET ADV_TIMER3 reset command bitfield.   |
| 2    | wo   | 0x0        | UPDATE ADV_TIMER3 update command bitfield. |
| 1    | wo   | 0x0        | STOP ADV_TIMER3 stop command bitfield.     |
| 0    | wo   | 0x0        | START ADV_TIMER3 start command bitfield.   |

T3\_CONFIG

ADV\_TIMER3 configuration register.

- **Offset:** 0x64
- **Reset default:** 0x1000
- **Reset mask:** 0xfffffff

Fields

```
{"reg": [{"name": "INSEL", "bits": 8, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"name": "CLKSEL", "bits": 2, "attr": ["rw"], "rotate": 0}, {"name": "UPDOWNSEL", "bits": 2, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits  | Type | Reset Name | Description      |
|-------|------|------------|------------------|
| 31:24 |      |            | Reserved         |
| 23:16 | rw   | 0x0        | <u>PRESC</u>     |
| 15:13 |      |            | Reserved         |
| 12    | rw   | 0x1        | <u>UPDOWNSEL</u> |
| 11    | rw   | 0x0        | <u>CLKSEL</u>    |
| 10:8  | rw   | 0x0        | <u>MODE</u>      |
| 7:0   | rw   | 0x0        | <u>INSEL</u>     |

T3\_CONFIG . PRESC

ADV\_TIMER3 prescaler value configuration bitfield.

T3\_CONFIG . UPDOWNSEL

ADV\_TIMER3 center-aligned mode configuration bitfield:

- 1'b0: The counter counts up and down alternatively.
- 1'b1: The counter counts up and resets to 0 when reach threshold.



## T3\_CONFIG . CLKSEL

ADV\_TIMER3 clock source configuration bitfield:

- 1'b0: FLL
- 1'b1: reference clock at 32kHz

## T3\_CONFIG . MODE

ADV\_TIMER3 trigger mode configuration bitfield:

- 3'h0: trigger event at each clock cycle.
- 3'h1: trigger event if input source is 0
- 3'h2: trigger event if input source is 1
- 3'h3: trigger event on input source rising edge
- 3'h4: trigger event on input source falling edge
- 3'h5: trigger event on input source falling or rising edge
- 3'h6: trigger event on input source rising edge when armed
- 3'h7: trigger event on input source falling edge when armed

## T3\_CONFIG . INSEL

ADV\_TIMER3 input source configuration bitfield:

- 0-31: GPIO[0] to GPIO[31]
- 32-35: Channel 0 to 3 of ADV\_TIMER0
- 36-39: Channel 0 to 3 of ADV\_TIMER1
- 40-43: Channel 0 to 3 of ADV\_TIMER2
- 44-47: Channel 0 to 3 of ADV\_TIMER3

## T3\_THRESHOLD

ADV\_TIMER3 threshold configuration register.

- **Offset:** 0x68
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

### Fields

```
{"reg": [{"name": "TH_LO", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "TH_HI", "bits": 16, "attr": ["rw"], "rotate": 0}], "c
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |     |       |   |
|-------|----|-----|-------|---|
| 31:16 | rw | 0x0 | TH_HI | ADV_TIMER3 threshold high part configuration bitfield. It defines end counter value.  |
| 15:0  | rw | 0x0 | TH_LO | ADV_TIMER3 threshold low part configuration bitfield. It defines start counter value. |

## T3\_TH\_CHANNEL0

ADV\_TIMER3 channel 0 threshold configuration register.

- **Offset:** 0x6c
- **Reset default:** 0x0
- **Reset mask:** 0x7ffff

### Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

| Bits | Type | Reset | Name |
|------|------|-------|------|
|------|------|-------|------|

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T3\_TH\_CHANNEL0 . MODE

ADV\_TIMER3 channel 0 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T3\_TH\_CHANNEL0 . TH

ADV\_TIMER3 channel 0 threshold configuration bitfield.

## T3\_TH\_CHANNEL1

ADV\_TIMER3 channel 1 threshold configuration register.

- Offset: 0x70
- Reset default: 0x0
- Reset mask: 0x7ffff

## Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

### Bits Type Reset Name

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T3\_TH\_CHANNEL1 . MODE

ADV\_TIMER3 channel 1 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

## T3\_TH\_CHANNEL1 . TH

ADV\_TIMER3 channel 1 threshold configuration bitfield.

## T3\_TH\_CHANNEL2

ADV\_TIMER3 channel 2 threshold configuration register.

- Offset: 0x74
- Reset default: 0x0
- Reset mask: 0x7ffff

## Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

### Bits Type Reset Name

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

## T3\_TH\_CHANNEL2 . MODE

ADV\_TIMER3 channel 2 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

### T3\_TH\_CHANNEL2 . TH

ADV\_TIMER3 channel 2 threshold configuration bitfield.

## T3\_TH\_CHANNEL3

ADV\_TIMER3 channel 3 threshold configuration register.

- Offset: 0x78
- Reset default: 0x0
- Reset mask: 0x7fff

### Fields

```
{"reg": [{"name": "TH", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 3, "attr": ["rw"], "rotate": 0}, {"bits":
```

| Bits | Type | Reset | Name |
|------|------|-------|------|
|------|------|-------|------|

|       |    |     |             |
|-------|----|-----|-------------|
| 31:19 |    |     | Reserved    |
| 18:16 | rw | 0x0 | <u>MODE</u> |
| 15:0  | rw | 0x0 | <u>TH</u>   |

### T3\_TH\_CHANNEL3 . MODE

ADV\_TIMER3 channel 3 threshold match action on channel output signal configuration bitfield:

- 3'h0: set.
- 3'h1: toggle then next threshold match action is clear.
- 3'h2: set then next threshold match action is clear.
- 3'h3: toggle.
- 3'h4: clear.
- 3'h5: toggle then next threshold match action is set.
- 3'h6: clear then next threshold match action is set.

### T3\_TH\_CHANNEL3 . TH

ADV\_TIMER3 channel 3 threshold configuration bitfield.

## T3\_COUNTER

ADV\_TIMER3 counter register.

- Offset: 0x7c
- Reset default: 0x0
- Reset mask: 0xffff

### Fields

```
{"reg": [{"name": "COUNTER", "bits": 16, "attr": ["ro"], "rotate": 0}, {"bits": 16}], "config": {"lanes": 1, "fontsize": 10, "vspace":
```

| Bits | Type | Reset | Name |
|------|------|-------|------|
|------|------|-------|------|

|       |    |     |                                   |
|-------|----|-----|-----------------------------------|
| 31:16 |    |     | Reserved                          |
| 15:0  | ro | 0x0 | COUNTER ADV_TIMER3 counter value. |

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

## EVENT\_CFG

ADV\_TIMERS events configuration register.

- **Offset:** 0x80
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "SEL0", "bits": 4, "attr": ["rw"], "rotate": 0}, {"name": "SEL1", "bits": 4, "attr": ["rw"], "rotate": 0}, {"name": "SEL2", "bits": 4, "attr": ["rw"], "rotate": 0}, {"name": "SEL3", "bits": 4, "attr": ["rw"], "rotate": 0}, {"name": "ENA", "bits": 1, "attr": ["rw"], "rotate": 0}]}
```

| Bits  | Type | Reset | Name        |
|-------|------|-------|-------------|
| 31:20 |      |       | Reserved    |
| 19:16 | rw   | 0x0   | <u>ENA</u>  |
| 15:12 | rw   | 0x0   | <u>SEL3</u> |
| 11:8  | rw   | 0x0   | <u>SEL2</u> |
| 7:4   | rw   | 0x0   | <u>SEL1</u> |
| 3:0   | rw   | 0x0   | <u>SEL0</u> |

## EVENT\_CFG . ENA

ADV\_TIMER output event enable configuration bitfield. ENA[i]=1 enables output event i generation.

## EVENT\_CFG . SEL3

ADV\_TIMER output event 3 source configuration bitfield:

- 4'h0: ADV\_TIMER0 channel 0.
- 4'h1: ADV\_TIMER0 channel 1.
- 4'h2: ADV\_TIMER0 channel 2.
- 4'h3: ADV\_TIMER0 channel 3.
- 4'h4: ADV\_TIMER1 channel 0.
- 4'h5: ADV\_TIMER1 channel 1.
- 4'h6: ADV\_TIMER1 channel 2.
- 4'h7: ADV\_TIMER1 channel 3.
- 4'h8: ADV\_TIMER2 channel 0.
- 4'h9: ADV\_TIMER2 channel 1.
- 4'hA: ADV\_TIMER2 channel 2.
- 4'hB: ADV\_TIMER2 channel 3.
- 4'hC: ADV\_TIMER3 channel 0.
- 4'hD: ADV\_TIMER3 channel 1.
- 4'hE: ADV\_TIMER3 channel 2.
- 4'hF: ADV\_TIMER3 channel 3.

## EVENT\_CFG . SEL2

ADV\_TIMER output event 2 source configuration bitfield:

- 4'h0: ADV\_TIMER0 channel 0.
- 4'h1: ADV\_TIMER0 channel 1.
- 4'h2: ADV\_TIMER0 channel 2.
- 4'h3: ADV\_TIMER0 channel 3.
- 4'h4: ADV\_TIMER1 channel 0.
- 4'h5: ADV\_TIMER1 channel 1.
- 4'h6: ADV\_TIMER1 channel 2.
- 4'h7: ADV\_TIMER1 channel 3.
- 4'h8: ADV\_TIMER2 channel 0.
- 4'h9: ADV\_TIMER2 channel 1.
- 4'hA: ADV\_TIMER2 channel 2.
- 4'hB: ADV\_TIMER2 channel 3.
- 4'hC: ADV\_TIMER3 channel 0.
- 4'hD: ADV\_TIMER3 channel 1.
- 4'hE: ADV\_TIMER3 channel 2.
- 4'hF: ADV\_TIMER3 channel 3.

## EVENT\_CFG . SEL1

ADV\_TIMER output event 1 source configuration bitfiled:

- 4'h0: ADV\_TIMER0 channel 0.
- 4'h1: ADV\_TIMER0 channel 1.
- 4'h2: ADV\_TIMER0 channel 2.
- 4'h3: ADV\_TIMER0 channel 3.
- 4'h4: ADV\_TIMER1 channel 0.
- 4'h5: ADV\_TIMER1 channel 1.
- 4'h6: ADV\_TIMER1 channel 2.
- 4'h7: ADV\_TIMER1 channel 3.
- 4'h8: ADV\_TIMER2 channel 0.
- 4'h9: ADV\_TIMER2 channel 1.
- 4'hA: ADV\_TIMER2 channel 2.
- 4'hB: ADV\_TIMER2 channel 3.
- 4'hC: ADV\_TIMER3 channel 0.
- 4'hD: ADV\_TIMER3 channel 1.
- 4'hE: ADV\_TIMER3 channel 2.
- 4'hF: ADV\_TIMER3 channel 3.

## EVENT\_CFG . SEL0

ADV\_TIMER output event 0 source configuration bitfiled:

- 4'h0: ADV\_TIMER0 channel 0.
- 4'h1: ADV\_TIMER0 channel 1.
- 4'h2: ADV\_TIMER0 channel 2.
- 4'h3: ADV\_TIMER0 channel 3.
- 4'h4: ADV\_TIMER1 channel 0.
- 4'h5: ADV\_TIMER1 channel 1.
- 4'h6: ADV\_TIMER1 channel 2.
- 4'h7: ADV\_TIMER1 channel 3.
- 4'h8: ADV\_TIMER2 channel 0.
- 4'h9: ADV\_TIMER2 channel 1.
- 4'hA: ADV\_TIMER2 channel 2.
- 4'hB: ADV\_TIMER2 channel 3.
- 4'hC: ADV\_TIMER3 channel 0.
- 4'hD: ADV\_TIMER3 channel 1.
- 4'hE: ADV\_TIMER3 channel 2.
- 4'hF: ADV\_TIMER3 channel 3.

## CG

ADV\_TIMERS channels clock gating configuration register.

- Offset: 0x84
- Reset default: 0x0
- Reset mask: 0xf

### Fields

```
{"reg": [{"name": "ENA", "bits": 4, "attr": ["rw"], "rotate": 0}, {"bits": 28}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description  |
|------|------|-------|----------|--|
| 31:4 |      |       | Reserved |  |
| 3:0  | rw   | 0x0   | ENA      | ADV_TIMER clock gating configuration bitfield. - ENA[i]=0: clock gate ADV_TIMERi. - ENA[i]=1: enable ADV_TIMERi. |

## gpio / doc / registers.md

### Summary

| Name                     | Offset | Length | Description               |
|--------------------------|--------|--------|---------------------------|
| gpio. <u>INTR_STATE</u>  | 0x0    | 4      | Interrupt State Register  |
| gpio. <u>INTR_ENABLE</u> | 0x4    | 4      | Interrupt Enable Register |
| gpio. <u>INTR_TEST</u>   | 0x8    | 4      | Interrupt Test Register   |

| Name                                       | Offset | Length | Description                                   |
|--|--------|--------|---|
| gpio. <a href="#">ALERT_TEST</a>           | 0xc    | 4      | Alert Test Register                           |
| gpio. <a href="#">DATA_IN</a>              | 0x10   | 4      | GPIO Input data read value                    |
| gpio. <a href="#">DIRECT_OUT</a>           | 0x14   | 4      | GPIO direct output data write value           |
| gpio. <a href="#">MASKED_OUT_LOWER</a>     | 0x18   | 4      | GPIO write data lower with mask.              |
| gpio. <a href="#">MASKED_OUT_UPPER</a>     | 0x1c   | 4      | GPIO write data upper with mask.              |
| gpio. <a href="#">DIRECT_OE</a>            | 0x20   | 4      | GPIO Output Enable.                           |
| gpio. <a href="#">MASKED_OE_LOWER</a>      | 0x24   | 4      | GPIO write Output Enable lower with mask.     |
| gpio. <a href="#">MASKED_OE_UPPER</a>      | 0x28   | 4      | GPIO write Output Enable upper with mask.     |
| gpio. <a href="#">INTR_CTRL_EN_RISING</a>  | 0x2c   | 4      | GPIO interrupt enable for GPIO, rising edge.  |
| gpio. <a href="#">INTR_CTRL_EN_FALLING</a> | 0x30   | 4      | GPIO interrupt enable for GPIO, falling edge. |
| gpio. <a href="#">INTR_CTRL_EN_LVLHIGH</a> | 0x34   | 4      | GPIO interrupt enable for GPIO, level high.   |
| gpio. <a href="#">INTR_CTRL_EN_LVLLOW</a>  | 0x38   | 4      | GPIO interrupt enable for GPIO, level low.    |
| gpio. <a href="#">CTRL_EN_INPUT_FILTER</a> | 0x3c   | 4      | filter enable for GPIO input bits.            |

# INTR\_STATE

Interrupt State Register

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "gpio", "bits": 32, "attr": ["rwl"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 1c 0x0 gpio raised if any of GPIO pin detects configured interrupt mode

# INTR\_ENABLE

Interrupt Enable Register

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "gpio", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x0 gpio Enable interrupt when corresponding bit in [INTR\\_STATE.gpio](#) is set.

# INTR\_TEST

Interrupt Test Register

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "gpio", "bits": 32, "attr": ["wo"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 wo 0x0 gpio Write 1 to force corresponding bit in [INTR\\_STATE.gpio](#) to 1.

# ALERT\_TEST

Alert Test Register

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0x1

Fields

```
{"reg": [{"name": "fatal_fault", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vs
```

| Bits | Type | Reset | Name        | Description                                      |
|------|------|-------|-------------|--|
| 31:1 |      |       |             | Reserved   |
| 0    | wo   | 0x0   | fatal_fault | Write 1 to trigger one alert event of this kind. |

DATA\_IN

GPIO Input data read value

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "DATA_IN", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name    | Description |
|------|------|-------|---------|-------------|
| 31:0 | ro   | x     | DATA_IN |             |

DIRECT\_OUT

GPIO direct output data write value

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "DIRECT_OUT", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name       | Description |
|------|------|-------|------------|-------------|
| 31:0 | rw   | x     | DIRECT_OUT |             |

MASKED\_OUT\_LOWER

GPIO write data lower with mask.

Masked write for DATA\_OUT[15:0].

Upper 16 bits of this register are used as mask. Writing lower 16 bits of the register changes DATA\_OUT[15:0] value if mask bits are set.

Read-back of this register returns upper 16 bits as zero and lower 16 bits as DATA\_OUT[15:0].

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "data", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "mask", "bits": 16, "attr": ["wo"], "rotate": 0}], "con
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |   |      |   |
|-------|----|---|------|---|
| 31:16 | wo | x | mask | Write data mask[15:0]. A value of 1 in mask[i] allows the updating of DATA_OUT[i], 0 <= i <= 15 |
| 15:0  | rw | x | data | Write data value[15:0]. Value to write into DATA_OUT[i], valid in the presence of mask[i]==1    |

# MASKED\_OUT\_UPPER

GPIO write data upper with mask.

Masked write for DATA\_OUT[31:16].

Upper 16 bits of this register are used as mask. Writing lower 16 bits of the register changes DATA\_OUT[31:16] value if mask bits are set.

Read-back of this register returns upper 16 bits as zero and lower 16 bits as DATA\_OUT[31:16].

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "data", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "mask", "bits": 16, "attr": ["wo"], "rotate": 0}], "con:
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |   |      |   |
|-------|----|---|------|---|
| 31:16 | wo | x | mask | Write data mask[31:16]. A value of 1 in mask[i] allows the updating of DATA_OUT[i], 16 <= i <= 31 |
| 15:0  | rw | x | data | Write data value[31:16]. Value to write into DATA_OUT[i], valid in the presence of mask[i]==1     |

# DIRECT\_OE

GPIO Output Enable.

Setting direct\_oe[i] to 1 enables output mode for GPIO[i]

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "DIRECT_OE", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|      |    |   |           |  |
|------|----|---|-----------|--|
| 31:0 | rw | x | DIRECT_OE |  |
|------|----|---|-----------|--|

# MASKED\_OE\_LOWER

GPIO write Output Enable lower with mask.

Masked write for DATA\_OE[15:0], the register that controls output mode for GPIO pins [15:0].

Upper 16 bits of this register are used as mask. Writing lower 16 bits of the register changes DATA\_OE[15:0] value if mask bits are set.

Read-back of this register returns upper 16 bits as zero and lower 16 bits as DATA\_OE[15:0].

- Offset: 0x24
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "data", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "mask", "bits": 16, "attr": ["rw"], "rotate": 0}], "con:
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |   |      |  |
|-------|----|---|------|--|
| 31:16 | rw | x | mask | Write OE mask[15:0]. A value of 1 in mask[i] allows the updating of DATA_OE[i], 0 <= i <= 15 |
| 15:0  | rw | x | data | Write OE value[15:0]. Value to write into DATA_OE[i], valid in the presence of mask[i]==1    |



# MASKED\_OE\_UPPER

GPIO write Output Enable upper with mask.

Masked write for DATA\_OE[31:16], the register that controls output mode for GPIO pins [31:16].

Upper 16 bits of this register are used as mask. Writing lower 16 bits of the register changes DATA\_OE[31:16] value if mask bits are set.

Read-back of this register returns upper 16 bits as zero and lower 16 bits as DATA\_OE[31:16].

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "data", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "mask", "bits": 16, "attr": ["rw"], "rotate": 0}], "con
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |   |      |  |
|-------|----|---|------|--|
| 31:16 | rw | x | mask | Write OE mask[31:16]. A value of 1 in mask[i] allows the updating of DATA_OE[i], 16 <= i <= 31 |
| 15:0  | rw | x | data | Write OE value[31:16]. Value to write into DATA_OE[i], valid in the presence of mask[i]==1     |

# INTR\_CTRL\_EN\_RISING

GPIO interrupt enable for GPIO, rising edge.

If INTR\_ENABLE[i] is true, a value of 1 on INTR\_CTRL\_EN\_RISING[i] enables rising-edge interrupt detection on GPIO[i].

- Offset: 0x2c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "INTR_CTRL_EN_RISING", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace":
```

| Bits | Type | Reset | Name                | Description |
|------|------|-------|---------------------|-------------|
| 31:0 | rw   | 0x0   | INTR_CTRL_EN_RISING |             |

# INTR\_CTRL\_EN\_FALLING

GPIO interrupt enable for GPIO, falling edge.

If INTR\_ENABLE[i] is true, a value of 1 on INTR\_CTRL\_EN\_FALLING[i] enables falling-edge interrupt detection on GPIO[i].

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "INTR_CTRL_EN_FALLING", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace"
```

| Bits | Type | Reset | Name                 | Description |
|------|------|-------|----------------------|-------------|
| 31:0 | rw   | 0x0   | INTR_CTRL_EN_FALLING |             |

# INTR\_CTRL\_EN\_LVLHIGH

GPIO interrupt enable for GPIO, level high.

If INTR\_ENABLE[i] is true, a value of 1 on INTR\_CTRL\_EN\_LVLHIGH[i] enables level high interrupt detection on GPIO[i].

- Offset: 0x34
- Reset default: 0x0

- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "INTR_CTRL_EN_LVLHIGH", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace":
```

| Bits | Type | Reset | Name                 | Description |
|------|------|-------|----------------------|-------------|
| 31:0 | rw   | 0x0   | INTR_CTRL_EN_LVLHIGH |             |

# INTR\_CTRL\_EN\_LVLLOW

GPIO interrupt enable for GPIO, level low.

If INTR\_ENABLE[i] is true, a value of 1 on INTR\_CTRL\_EN\_LVLLOW[i] enables level low interrupt detection on GPIO[i].

- Offset: 0x38
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "INTR_CTRL_EN_LVLLOW", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace":
```

| Bits | Type | Reset | Name                | Description |
|------|------|-------|---------------------|-------------|
| 31:0 | rw   | 0x0   | INTR_CTRL_EN_LVLLOW |             |

# CTRL\_EN\_INPUT\_FILTER

filter enable for GPIO input bits.

If CTRL\_EN\_INPUT\_FILTER[i] is true, a value of input bit [i] must be stable for 16 cycles before transitioning.

- Offset: 0x3c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "CTRL_EN_INPUT_FILTER", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace":
```

| Bits | Type | Reset | Name                 | Description |
|------|------|-------|----------------------|-------------|
| 31:0 | rw   | 0x0   | CTRL_EN_INPUT_FILTER |             |

# hyperbus / doc / registers.md

# Summary

| Name                                   | Offset | Length | Description                                 |
|--|--------|--------|---|
| hyperbus. <u>T_LATENCY_ACCESS</u>      | 0x0    | 4      | Initial latency                             |
| hyperbus. <u>EN_LATENCY_ADDITIONAL</u> | 0x4    | 4      | Force 2x Latency count                      |
| hyperbus. <u>T_BURST_MAX</u>           | 0x8    | 4      | Max burst Length between two memory refresh |
| hyperbus. <u>T_READ_WRITE_RECOVERY</u> | 0xc    | 4      | Idle time between transactions              |
| hyperbus. <u>T_RX_CLOCK_DELAY</u>      | 0x10   | 4      | RX Delay Line                               |
| hyperbus. <u>T_TX_CLOCK_DELAY</u>      | 0x14   | 4      | TX Delay Line                               |
| hyperbus. <u>ADDRESS_MASK_MSB</u>      | 0x18   | 4      | Address Mask MSB                            |
| hyperbus. <u>ADDRESS_SPACE</u>         | 0x1c   | 4      | L2 sleep configuration register             |
| hyperbus. <u>PHYS_IN_USE</u>           | 0x20   | 4      | Number of PHYs on use                       |
| hyperbus. <u>WHICH_PHY</u>             | 0x24   | 4      | PHY used in single PHY mode                 |
| hyperbus. <u>CS0_BASE</u>              | 0x28   | 4      | CS0 Base address range                      |
| hyperbus. <u>CS0_END</u>               | 0x2c   | 4      | CS0 End address range                       |
| hyperbus. <u>CS1_BASE</u>              | 0x30   | 4      | CS1 Base address range                      |
| hyperbus. <u>CS1_END</u>               | 0x34   | 4      | CS1 End address range                       |

| Name                      | Offset | Length | Description            |
|---------------------------|--------|--------|------------------------|
| hyperbus. <u>CS2_BASE</u> | 0x38   | 4      | CS2 Base address range |
| hyperbus. <u>CS2_END</u>  | 0x3c   | 4      | CS2 End address range  |
| hyperbus. <u>CS3_BASE</u> | 0x40   | 4      | CS3 Base address range |
| hyperbus. <u>CS3_END</u>  | 0x44   | 4      | CS3 End address range  |

# T\_LATENCY\_ACCESS

Initial latency

- Offset: 0x0
- Reset default: 0x6
- Reset mask: 0xf

## Fields

```
{"reg": [{"name": "T_LATENCY_ACCESS", "bits": 4, "attr": ["rw"], "rotate": -90}, {"bits": 28}], "config": {"lanes": 1, "fontsize": 10}}
```

| Bits | Type | Reset | Name             | Description     |
|------|------|-------|------------------|-----------------|
| 31:4 |      |       |                  | Reserved        |
| 3:0  | rw   | 0x6   | T_LATENCY_ACCESS | Initial latency |

# EN\_LATENCY\_ADDITIONAL

Force 2x Latency count

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "EN_LATENCY_ADDITIONAL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10}}
```

| Bits | Type | Reset | Name                  | Description            |
|------|------|-------|-----------------------|------------------------|
| 31:1 |      |       |                       | Reserved               |
| 0    | rw   | 0x0   | EN_LATENCY_ADDITIONAL | Force 2x Latency count |

# T\_BURST\_MAX

Max burst Length between two memory refresh

- Offset: 0x8
- Reset default: 0x15e
- Reset mask: 0xffff

## Fields

```
{"reg": [{"name": "T_BURST_MAX", "bits": 16, "attr": ["rw"], "rotate": 0}, {"bits": 16}], "config": {"lanes": 1, "fontsize": 10, "vs": 10}}
```

| Bits  | Type | Reset | Name        | Description                                 |
|-------|------|-------|-------------|---|
| 31:16 |      |       |             | Reserved                                    |
| 15:0  | rw   | 0x15e | T_BURST_MAX | Max burst Length between two memory refresh |

# T\_READ\_WRITE\_RECOVERY

Idle time between transactions

- Offset: 0xc
- Reset default: 0x6
- Reset mask: 0xf

## Fields

```
{"reg": [{"name": "T_READ_WRITE_RECOVERY", "bits": 4, "attr": ["rw"], "rotate": -90}, {"bits": 28}], "config": {"lanes": 1, "fontSize": 10}}
```

| Bits | Type | Reset Name                | Description                    |
|------|------|---------------------------|--------------------------------|
| 31:4 |      |                           | Reserved                       |
| 3:0  | rw   | 0x6 T_READ_WRITE_RECOVERY | Idle time between transactions |

## T\_RX\_CLOCK\_DELAY

RX Delay Line

- Offset: 0x10
- Reset default: 0x8
- Reset mask: 0xf

## Fields

```
{"reg": [{"name": "T_RX_CLOCK_DELAY", "bits": 4, "attr": ["rw"], "rotate": -90}, {"bits": 28}], "config": {"lanes": 1, "fontSize": 10}}
```

| Bits | Type | Reset Name           | Description   |
|------|------|----------------------|---------------|
| 31:4 |      |                      | Reserved      |
| 3:0  | rw   | 0x8 T_RX_CLOCK_DELAY | RX Delay Line |

## T\_TX\_CLOCK\_DELAY

TX Delay Line

- Offset: 0x14
- Reset default: 0x8
- Reset mask: 0xf

## Fields

```
{"reg": [{"name": "T_TX_CLOCK_DELAY", "bits": 4, "attr": ["rw"], "rotate": -90}, {"bits": 28}], "config": {"lanes": 1, "fontSize": 10}}
```

| Bits | Type | Reset Name           | Description   |
|------|------|----------------------|---------------|
| 31:4 |      |                      | Reserved      |
| 3:0  | rw   | 0x8 T_TX_CLOCK_DELAY | TX Delay Line |

## ADDRESS\_MASK\_MSB

Address Mask MSB

- Offset: 0x18
- Reset default: 0x19
- Reset mask: 0x7ffff

## Fields

```
{"reg": [{"name": "ADDRESS_MASK_MSB", "bits": 19, "attr": ["rw"], "rotate": 0}, {"bits": 13}], "config": {"lanes": 1, "fontSize": 10}}
```

| Bits  | Type | Reset Name            | Description      |
|-------|------|-----------------------|------------------|
| 31:19 |      |                       | Reserved         |
| 18:0  | rw   | 0x19 ADDRESS_MASK_MSB | Address Mask MSB |

## ADDRESS\_SPACE

L2 sleep configuration register

- Offset: 0x1c
- Reset default: 0x0

- Reset mask: 0x1

### Fields

```
{"reg": [{"name": "ADDRESS_SPACE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name          | Description                     |
|------|------|-------|---------------|---------------------------------|
| 31:1 |      |       |               | Reserved                        |
| 0    | rw   | 0x0   | ADDRESS_SPACE | L2 sleep configuration register |

## PHYS\_IN\_USE

Number of PHYs on use

- Offset: 0x20
- Reset default: 0x1
- Reset mask: 0x1

### Fields

```
{"reg": [{"name": "PHYS_IN_USE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name        | Description   |
|------|------|-------|-------------|---|
| 31:1 |      |       |             | Reserved  |
| 0    | rw   | 0x1   | PHYS_IN_USE | Number of PHYs on use: - 1'b0: Uses 1 PHY - 1'b1: Uses 2 PHYs |

## WHICH\_PHY

PHY used in single PHY mode

- Offset: 0x24
- Reset default: 0x1
- Reset mask: 0x1

### Fields

```
{"reg": [{"name": "WHICH_PHY", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description  |
|------|------|-------|-----------|--|
| 31:1 |      |       |           | Reserved   |
| 0    | rw   | 0x1   | WHICH_PHY | PHY used in single PHY mode: - 1'b0: PHY 0 is used - 1'b1: PHY 1 is used |

## CS0\_BASE

CS0 Base address range

- Offset: 0x28
- Reset default: 0x80000000
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "CS0_BASE", "bits": 32, "attr": ["rw"], "rotate": 0}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset      | Name     | Description            |
|------|------|------------|----------|------------------------|
| 31:0 | rw   | 0x80000000 | CS0_BASE | CS0 Base address range |

## CS0\_END

CS0 End address range

- Offset: 0x2c

- **Reset default:** 0x81000000
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "CS0_END", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset      | Name    | Description           |
|------|------|------------|---------|-----------------------|
| 31:0 | rw   | 0x81000000 | CS0_END | CS0 End address range |

CS1\_BASE

CS1 Base address range

- **Offset:** 0x30
- **Reset default:** 0x81000000
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "CS1_BASE", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset      | Name     | Description            |
|------|------|------------|----------|------------------------|
| 31:0 | rw   | 0x81000000 | CS1_BASE | CS1 Base address range |

CS1\_END

CS1 End address range

- **Offset:** 0x34
- **Reset default:** 0x82000000
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "CS1_END", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset      | Name    | Description           |
|------|------|------------|---------|-----------------------|
| 31:0 | rw   | 0x82000000 | CS1_END | CS1 End address range |

CS2\_BASE

CS2 Base address range

- **Offset:** 0x38
- **Reset default:** 0x82000000
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "CS2_BASE", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset      | Name     | Description            |
|------|------|------------|----------|------------------------|
| 31:0 | rw   | 0x82000000 | CS2_BASE | CS2 Base address range |

CS2\_END

CS2 End address range

- **Offset:** 0x3c
- **Reset default:** 0x83000000
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "CS2_END", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset      | Name    | Description           |
|------|------|------------|---------|-----------------------|
| 31:0 | rw   | 0x83000000 | CS2_END | CS2 End address range |

## CS3\_BASE

CS3 Base address range

- Offset: 0x40
- Reset default: 0x83000000
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "CS3_BASE", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset      | Name     | Description            |
|------|------|------------|----------|------------------------|
| 31:0 | rw   | 0x83000000 | CS3_BASE | CS3 Base address range |

## CS3\_END

CS3 End address range

- Offset: 0x44
- Reset default: 0x84000000
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "CS3_END", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset      | Name    | Description           |
|------|------|------------|---------|-----------------------|
| 31:0 | rw   | 0x84000000 | CS3_END | CS3 End address range |

## i2c / doc / registers.md

## Summary

| Name                                   | Offset | Length | Description  |
|--|--------|--------|--|
| <a href="#">i2c.INTR_STATE</a>         | 0x0    | 4      | Interrupt State Register   |
| <a href="#">i2c.INTR_ENABLE</a>        | 0x4    | 4      | Interrupt Enable Register  |
| <a href="#">i2c.INTR_TEST</a>          | 0x8    | 4      | Interrupt Test Register  |
| <a href="#">i2c.ALERT_TEST</a>         | 0xc    | 4      | Alert Test Register  |
| <a href="#">i2c.CTRL</a>               | 0x10   | 4      | I2C Control Register   |
| <a href="#">i2c.STATUS</a>             | 0x14   | 4      | I2C Live Status Register for Host and Target modes                                   |
| <a href="#">i2c.RDATA</a>              | 0x18   | 4      | I2C Read Data  |
| <a href="#">i2c.FDATA</a>              | 0x1c   | 4      | I2C Host Format Data   |
| <a href="#">i2c.FIFO_CTRL</a>          | 0x20   | 4      | I2C FIFO control register  |
| <a href="#">i2c.HOST_FIFO_CONFIG</a>   | 0x24   | 4      | Host mode FIFO configuration   |
| <a href="#">i2c.TARGET_FIFO_CONFIG</a> | 0x28   | 4      | Target mode FIFO configuration   |
| <a href="#">i2c.HOST_FIFO_STATUS</a>   | 0x2c   | 4      | Host mode FIFO status register   |
| <a href="#">i2c.TARGET_FIFO_STATUS</a> | 0x30   | 4      | Target mode FIFO status register   |
| <a href="#">i2c.OVRD</a>               | 0x34   | 4      | I2C Override Control Register  |
| <a href="#">i2c.VAL</a>                | 0x38   | 4      | Oversampled RX values  |
| <a href="#">i2c.TIMING0</a>            | 0x3c   | 4      | Detailed I2C Timings (directly corresponding to table 10 in the I2C Specification).  |
| <a href="#">i2c.TIMING1</a>            | 0x40   | 4      | Detailed I2C Timings (directly corresponding to table 10 in the I2C Specification).  |
| <a href="#">i2c.TIMING2</a>            | 0x44   | 4      | Detailed I2C Timings (directly corresponding to table 10 in the I2C Specification).  |
| <a href="#">i2c.TIMING3</a>            | 0x48   | 4      | Detailed I2C Timings (directly corresponding to table 10, in the I2C Specification). |

| Name  | Offset | Length | Description   |
|---|--------|--------|---|
| <a href="#">i2c.TIMING4</a>                   | 0x4c   | 4      | Detailed I2C Timings (directly corresponding to table 10, in the I2C Specification).                      |
| <a href="#">i2c.TIMEOUT_CTRL</a>              | 0x50   | 4      | I2C clock stretching and bus timeout control.   |
| <a href="#">i2c.TARGET_ID</a>                 | 0x54   | 4      | I2C target address and mask pairs   |
| <a href="#">i2c.ACQDATA</a>                   | 0x58   | 4      | I2C target acquired data  |
| <a href="#">i2c.TXDATA</a>                    | 0x5c   | 4      | I2C target transmit data  |
| <a href="#">i2c.HOST_TIMEOUT_CTRL</a>         | 0x60   | 4      | I2C host clock generation timeout value (in units of input clock frequency).                              |
| <a href="#">i2c.TARGET_TIMEOUT_CTRL</a>       | 0x64   | 4      | I2C target internal stretching timeout control.   |
| <a href="#">i2c.TARGET_NACK_COUNT</a>         | 0x68   | 4      | Number of times the I2C target has NACK'ed a new transaction since the last read of this register.        |
| <a href="#">i2c.TARGET_ACK_CTRL</a>           | 0x6c   | 4      | Controls for mid-transfer (N)ACK phase handling   |
| <a href="#">i2c.ACO_FIFO_NEXT_DATA</a>        | 0x70   | 4      | The data byte pending to be written to the ACQ FIFO.  |
| <a href="#">i2c.HOST_NACK_HANDLER_TIMEOUT</a> | 0x74   | 4      | Timeout in Host-Mode for an unhandled NACK before hardware automatically ends the transaction.            |
| <a href="#">i2c.CONTROLLER_EVENTS</a>         | 0x78   | 4      | Latched events that explain why the controller halted.  |
| <a href="#">i2c.TARGET_EVENTS</a>             | 0x7c   | 4      | Latched events that can cause the target module to stretch the clock at the beginning of a read transfer. |

## INTR\_STATE

Interrupt State Register

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0x7fff

### Fields

```
{ "reg": [ { "name": "fmt_threshold", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "rx_threshold", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "tx_threshold", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "acq_threshold", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "tx_stretch", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "tx_threshold", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "cmd_complete", "bits": 1, "attr": [ "rw" ], "rotate": -90 }, { "name": "sda_unstable", "bits": 1, "attr": [ "rw" ], "rotate": -90 }, { "name": "stretch_timeout", "bits": 1, "attr": [ "rw" ], "rotate": -90 }, { "name": "sda_interference", "bits": 1, "attr": [ "rw" ], "rotate": -90 }, { "name": "scl_interference", "bits": 1, "attr": [ "rw" ], "rotate": -90 }, { "name": "controller_halt", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "rx_overflow", "bits": 1, "attr": [ "rw" ], "rotate": -90 }, { "name": "acq_threshold", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "rx_threshold", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "fmt_threshold", "bits": 1, "attr": [ "ro" ], "rotate": -90 } ] }
```

| Bits  | Type | Reset | Name             | Description  |
|-------|------|-------|------------------|--|
| 31:15 |      |       |                  | Reserved   |
| 14    | rw1c | 0x0   | host_timeout     | target mode interrupt: raised if the host stops sending the clock during an ongoing transaction.   |
| 13    | rw1c | 0x0   | unexp_stop       | target mode interrupt: raised if STOP is received without a preceding NACK during an external host read.   |
| 12    | ro   | 0x0   | acq_stretch      | target mode interrupt: raised if the target is stretching clocks due to full ACQ FIFO or zero count in <a href="#">TARGET_ACK_CTRL.NBYTES</a> (if enabled). This is a level status interrupt.  |
| 11    | ro   | 0x0   | tx_threshold     | target mode interrupt: asserted whilst the TX FIFO level is below the low threshold. This is a level status interrupt.   |
| 10    | ro   | 0x0   | tx_stretch       | target mode interrupt: raised if the target is stretching clocks for a read command. This is a level status interrupt.   |
| 9     | rw1c | 0x0   | cmd_complete     | host and target mode interrupt. In host mode, raised if the host issues a repeated START or terminates the transaction by issuing STOP. In target mode, raised if the external host issues a STOP or repeated START.   |
| 8     | rw1c | 0x0   | sda_unstable     | host mode interrupt: raised if the target does not assert a constant value of SDA during transmission.   |
| 7     | rw1c | 0x0   | stretch_timeout  | host mode interrupt: raised if target stretches the clock beyond the allowed timeout period  |
| 6     | rw1c | 0x0   | sda_interference | host mode interrupt: raised if the SDA line goes low when host is trying to assert high  |
| 5     | rw1c | 0x0   | scl_interference | host mode interrupt: raised if the SCL line drops early (not supported without clock synchronization).   |
| 4     | ro   | 0x0   | controller_halt  | host mode interrupt: raised if the controller FSM is halted, such as on an unexpected NACK or lost arbitration. Check <a href="#">CONTROLLER_EVENTS</a> for the reason. The interrupt will be released when the bits in <a href="#">CONTROLLER_EVENTS</a> are cleared. |
| 3     | rw1c | 0x0   | rx_overflow      | host mode interrupt: raised if the RX FIFO has overflowed.   |
| 2     | ro   | 0x0   | acq_threshold    | target mode interrupt: asserted whilst the ACQ FIFO level is above the high threshold. This is a level status interrupt.   |
| 1     | ro   | 0x0   | rx_threshold     | host mode interrupt: asserted whilst the RX FIFO level is above the high threshold. This is a level status interrupt.  |
| 0     | ro   | 0x0   | fmt_threshold    | host mode interrupt: asserted whilst the FMT FIFO level is below the low threshold. This is a level status interrupt.  |

## INTR\_ENABLE

Interrupt Enable Register

- Offset: 0x4
- Reset default: 0x0



- Reset mask: 0x7fff

## Fields

```
{"reg": [{"name": "fmt_threshold", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "rx_threshold", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "tx_threshold", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "tx_stretch", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "cmd_complete", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "sda_unstable", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "stretch_timeout", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "sda_interference", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "scl_interference", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "controller_halt", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "rx_overflow", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "acq_threshold", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "rx_threshold", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "fmt_threshold", "bits": 1, "attr": ["rw"], "rotate": -90}]}
```

| Bits  | Type | Reset | Name             | Description   |
|-------|------|-------|------------------|---|
| 31:15 |      |       |                  | Reserved  |
| 14    | rw   | 0x0   | host_timeout     | Enable interrupt when <a href="#">INTR_STATE.host_timeout</a> is set.     |
| 13    | rw   | 0x0   | unexp_stop       | Enable interrupt when <a href="#">INTR_STATE.unexp_stop</a> is set.       |
| 12    | rw   | 0x0   | acq_stretch      | Enable interrupt when <a href="#">INTR_STATE.acq_stretch</a> is set.      |
| 11    | rw   | 0x0   | tx_threshold     | Enable interrupt when <a href="#">INTR_STATE.tx_threshold</a> is set.     |
| 10    | rw   | 0x0   | tx_stretch       | Enable interrupt when <a href="#">INTR_STATE.tx_stretch</a> is set.       |
| 9     | rw   | 0x0   | cmd_complete     | Enable interrupt when <a href="#">INTR_STATE.cmd_complete</a> is set.     |
| 8     | rw   | 0x0   | sda_unstable     | Enable interrupt when <a href="#">INTR_STATE.sda_unstable</a> is set.     |
| 7     | rw   | 0x0   | stretch_timeout  | Enable interrupt when <a href="#">INTR_STATE.stretch_timeout</a> is set.  |
| 6     | rw   | 0x0   | sda_interference | Enable interrupt when <a href="#">INTR_STATE.sda_interference</a> is set. |
| 5     | rw   | 0x0   | scl_interference | Enable interrupt when <a href="#">INTR_STATE.scl_interference</a> is set. |
| 4     | rw   | 0x0   | controller_halt  | Enable interrupt when <a href="#">INTR_STATE.controller_halt</a> is set.  |
| 3     | rw   | 0x0   | rx_overflow      | Enable interrupt when <a href="#">INTR_STATE.rx_overflow</a> is set.      |
| 2     | rw   | 0x0   | acq_threshold    | Enable interrupt when <a href="#">INTR_STATE.acq_threshold</a> is set.    |
| 1     | rw   | 0x0   | rx_threshold     | Enable interrupt when <a href="#">INTR_STATE.rx_threshold</a> is set.     |
| 0     | rw   | 0x0   | fmt_threshold    | Enable interrupt when <a href="#">INTR_STATE.fmt_threshold</a> is set.    |

## INTR\_TEST

Interrupt Test Register

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0x7fff

## Fields

```
{"reg": [{"name": "fmt_threshold", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "rx_threshold", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "tx_threshold", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "tx_stretch", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "cmd_complete", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "sda_unstable", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "stretch_timeout", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "sda_interference", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "scl_interference", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "controller_halt", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "rx_overflow", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "acq_threshold", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "rx_threshold", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "fmt_threshold", "bits": 1, "attr": ["wo"], "rotate": -90}]}
```

| Bits  | Type | Reset | Name             | Description  |
|-------|------|-------|------------------|--|
| 31:15 |      |       |                  | Reserved   |
| 14    | wo   | 0x0   | host_timeout     | Write 1 to force <a href="#">INTR_STATE.host_timeout</a> to 1.     |
| 13    | wo   | 0x0   | unexp_stop       | Write 1 to force <a href="#">INTR_STATE.unexp_stop</a> to 1.       |
| 12    | wo   | 0x0   | acq_stretch      | Write 1 to force <a href="#">INTR_STATE.acq_stretch</a> to 1.      |
| 11    | wo   | 0x0   | tx_threshold     | Write 1 to force <a href="#">INTR_STATE.tx_threshold</a> to 1.     |
| 10    | wo   | 0x0   | tx_stretch       | Write 1 to force <a href="#">INTR_STATE.tx_stretch</a> to 1.       |
| 9     | wo   | 0x0   | cmd_complete     | Write 1 to force <a href="#">INTR_STATE.cmd_complete</a> to 1.     |
| 8     | wo   | 0x0   | sda_unstable     | Write 1 to force <a href="#">INTR_STATE.sda_unstable</a> to 1.     |
| 7     | wo   | 0x0   | stretch_timeout  | Write 1 to force <a href="#">INTR_STATE.stretch_timeout</a> to 1.  |
| 6     | wo   | 0x0   | sda_interference | Write 1 to force <a href="#">INTR_STATE.sda_interference</a> to 1. |
| 5     | wo   | 0x0   | scl_interference | Write 1 to force <a href="#">INTR_STATE.scl_interference</a> to 1. |
| 4     | wo   | 0x0   | controller_halt  | Write 1 to force <a href="#">INTR_STATE.controller_halt</a> to 1.  |
| 3     | wo   | 0x0   | rx_overflow      | Write 1 to force <a href="#">INTR_STATE.rx_overflow</a> to 1.      |
| 2     | wo   | 0x0   | acq_threshold    | Write 1 to force <a href="#">INTR_STATE.acq_threshold</a> to 1.    |
| 1     | wo   | 0x0   | rx_threshold     | Write 1 to force <a href="#">INTR_STATE.rx_threshold</a> to 1.     |
| 0     | wo   | 0x0   | fmt_threshold    | Write 1 to force <a href="#">INTR_STATE.fmt_threshold</a> to 1.    |

## ALERT\_TEST

Alert Test Register

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "fatal_fault", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "v
```

| Bits | Type | Reset Name      | Description                                      |
|------|------|-----------------|--|
| 31:1 |      |                 | Reserved   |
| 0    | wo   | 0x0 fatal_fault | Write 1 to trigger one alert event of this kind. |

# CTRL

I2C Control Register

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0x7f

## Fields

```
{"reg": [{"name": "ENABLEHOST", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "ENABLETARGET", "bits": 1, "attr": ["rw"], "rota
```

| Bits | Type | Reset Name                      | Description |
|------|------|---------------------------------|-------------|
| 31:7 |      |                                 | Reserved    |
| 6    | rw   | 0x0 TX_STRETCH_CTRL_EN          |             |
| 5    | rw   | 0x0 MULTI_CONTROLLER_MONITOR_EN |             |
| 4    | rw   | 0x0 ACK_CTRL_EN                 |             |
| 3    | rw   | 0x0 NACK_ADDR_AFTER_TIMEOUT     |             |
| 2    | rw   | 0x0 LLPBK                       |             |
| 1    | rw   | 0x0 ENABLETARGET                |             |
| 0    | rw   | 0x0 ENABLEHOST                  |             |

## CTRL . TX\_STRETCH\_CTRL\_EN

If set to 1, this bit causes a read transfer addressed to this target to set the corresponding bit in [TARGET\\_EVENTS](#).

While [TARGET\\_EVENTS.TX\\_PENDING](#) is 1, subsequent read transactions will stretch the clock, even if there is data in the TX FIFO.

If enabled, this function allows software to confirm the data in the TX FIFO should be released for the current read. This may be useful for cases where the TX FIFO has data that does not apply to the current transfer. For example, the transaction could've targeted an alternate function via another address.

## CTRL . MULTI\_CONTROLLER\_MONITOR\_EN

Enable the bus monitor in multi-controller mode.

If a 0->1 transition happens while [CTRL.ENABLEHOST](#) and [CTRL.ENABLETARGET](#) are both 0, the bus monitor will enable and begin in the "bus busy" state. To transition to a bus free state, [HOST\\_TIMEOUT\\_CTRL](#) must be nonzero, so the bus monitor may count out idle cycles to confirm the freedom to transmit. In addition, the bus monitor will track whether the bus is free based on the enabled timeouts and detected Stop symbols. For multi-controller mode, ensure [CTRL.MULTI\\_CONTROLLER\\_MONITOR\\_EN](#) becomes 1 no later than [CTRL.ENABLEHOST](#) or [CTRL.ENABLETARGET](#). This bit can be set at the same time as either or both of the other two, though.

Note that if [CTRL.MULTI\\_CONTROLLER\\_MONITOR\\_EN](#) is set after [CTRL.ENABLEHOST](#) or [CTRL.ENABLETARGET](#), the bus monitor will begin in the "bus free" state instead. This would violate the proper protocol for a controller to join a multi-controller environment. However, if this controller is known to be the first to join, this ordering will enable skipping the idle wait.

When 0, the bus monitor will report that the bus is always free, so the controller FSM is never blocked from transmitting.

## CTRL . ACK\_CTRL\_EN

Enable I2C Target ACK Control Mode.

ACK Control Mode works together with [TARGET\\_ACK\\_CTRL.NBYTES](#) to allow software to control upper-layer protocol (N)ACKing (e.g. as in SMBus). This bit enables the mode when 1, and [TARGET\\_ACK\\_CTRL.NBYTES](#) limits how many bytes may be automatically ACK'd while the ACQ FIFO has space. If it is 0, the decision to ACK or NACK is made only from stretching timeouts and [CTRL.NACK\\_ADDR\\_AFTER\\_TIMEOUT](#).

## CTRL . NACK\_ADDR\_AFTER\_TIMEOUT

Enable NACKing the address on a stretch timeout.

This is a Target mode feature. If enabled (1), a stretch timeout will cause the device to NACK the address byte. If disabled (0), a stretch timeout will cause the device to ACK the address byte. SMBus requires that devices always ACK their address, even for read commands. However, non-SMBus protocols may have a different approach and can choose to NACK instead.

Note that both cases handle data bytes the same way. For writes, the Target module will NACK all subsequent data bytes until it receives a Stop. For reads, the Target module will release SDA, causing 0xff to be returned for all data bytes until it receives a Stop.

## CTRL . LLPBK

Enable I2C line loopback test If line loopback is enabled, the internal design sees ACQ and RX data as "1"

## CTRL . ENABLETARGET

Enable Target I2C functionality

## CTRL . ENABLEHOST

Enable Host I2C functionality

# STATUS

I2C Live Status Register for Host and Target modes

- Offset: 0x14
- Reset default: 0x33c
- Reset mask: 0x7ff

## Fields

```
{ "reg": [ { "name": "FMTFULL", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "RXFULL", "bits": 1, "attr": [ "ro" ], "rotate": -90 },
```

| Bits  | Type | Reset | Name             | Description  |
|-------|------|-------|------------------|--|
| 31:11 |      |       |                  | Reserved   |
| 10    | ro   | x     | ACK_CTRL_STRETCH | Target mode stretching at (N)ACK phase due to zero count in <a href="#">TARGET_ACK_CTRL.NBYTES</a> |
| 9     | ro   | 0x1   | ACQEMPTY         | Target mode receive FIFO is empty  |
| 8     | ro   | 0x1   | TXEMPTY          | Target mode TX FIFO is empty   |
| 7     | ro   | x     | ACQFULL          | Target mode receive FIFO is full   |
| 6     | ro   | x     | TXFULL           | Target mode TX FIFO is full  |
| 5     | ro   | 0x1   | RXEMPTY          | Host mode RX FIFO is empty   |
| 4     | ro   | 0x1   | TARGETIDLE       | Target functionality is idle. No Target transaction is in progress                                 |
| 3     | ro   | 0x1   | HOSTIDLE         | Host functionality is idle. No Host transaction is in progress                                     |
| 2     | ro   | 0x1   | FMTEMPTY         | Host mode FMT FIFO is empty  |
| 1     | ro   | x     | RXFULL           | Host mode RX FIFO is full  |
| 0     | ro   | x     | FMTFULL          | Host mode FMT FIFO is full   |

# RDATA

I2C Read Data

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{ "reg": [ { "name": "RDATA", "bits": 8, "attr": [ "ro" ], "rotate": 0 }, { "bits": 24 } ], "config": { "lanes": 1, "fontsize": 10, "vspace": 8 }
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:8 |      |       |       | Reserved    |
| 7:0  | ro   | x     | RDATA |             |

# FDATA

I2C Host Format Data

Writes to this register are used to define and drive Controller-Mode transactions.

- **Offset:** 0x1c
- **Reset default:** 0x0
- **Reset mask:** 0x1fff

## Fields

```
{"reg": [{"name": "FBYTE", "bits": 8, "attr": ["wo"], "rotate": 0}, {"name": "START", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RCONT", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "READB", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "STOP", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "START", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "FBYTE", "bits": 8, "attr": ["wo"], "rotate": 0}]}
```

| Bits  | Type | Reset | Name         |
|-------|------|-------|--------------|
| 31:13 |      |       | Reserved     |
| 12    | wo   | 0x0   | <u>NAKOK</u> |
| 11    | wo   | 0x0   | <u>RCONT</u> |
| 10    | wo   | 0x0   | <u>READB</u> |
| 9     | wo   | 0x0   | <u>STOP</u>  |
| 8     | wo   | 0x0   | <u>START</u> |
| 7:0   | wo   | 0x0   | <u>FBYTE</u> |

## FDATA . NAKOK

For the current controller-transmitter byte (WRITE), do not halt via CONTROLLER\_EVENTS or assert the 'controller\_half' interrupt if the current byte is not ACK'd.

## FDATA . RCONT

Do not NACK the last byte read, let the read operation continue.

## FDATA . READB

Transfer Direction Indicator.

If unset, this write to FDATA defines a controller-transmitter operation (WRITE). A single byte of data (FBYTE) is written to the bus.

If set, this write to FDATA defines a controller-receiver operation (READ). The value of FBYTE defines the number of bytes read from the bus. (256 if FBYTE==0) After this number of bytes are read, the final byte will be NACKed to end the transfer unless RCONT is also set.

## FDATA . STOP

Issue a STOP condition after transmitting FBYTE.

## FDATA . START

Issue a START condition before transmitting FBYTE.

## FDATA . FBYTE

Format Byte.

If no flags are set, hardware will transmit this byte directly.

If READB is set, this field becomes the number of bytes hardware will automatically read from the bus.

## FIFO\_CTRL

I2C FIFO control register

- **Offset:** 0x20
- **Reset default:** 0x0
- **Reset mask:** 0x183

## Fields

```
{"reg": [{"name": "RXRST", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "FMTRST", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "FIFO", "bits": 7, "attr": ["wo"], "rotate": 0}]}
```

| Bits | Type | Reset | Name     | Description |
|------|------|-------|----------|-------------|
| 31:9 |      |       | Reserved |             |

| Bits | Type | Reset | Name   | Description   |
|------|------|-------|--------|---|
| 8    | wo   | 0x0   | TXRST  | TX FIFO reset. Write 1 to the register resets it. Read returns 0        |
| 7    | wo   | 0x0   | ACQRST | ACQ FIFO reset. Write 1 to the register resets it. Read returns 0       |
| 6:2  |      |       |        | Reserved  |
| 1    | wo   | 0x0   | FMTRST | FMT fifo reset. Write 1 to the register resets FMT_FIFO. Read returns 0 |
| 0    | wo   | 0x0   | RXRST  | RX fifo reset. Write 1 to the register resets RX_FIFO. Read returns 0   |

# HOST\_FIFO\_CONFIG

Host mode FIFO configuration

- Offset: 0x24
- Reset default: 0x0
- Reset mask: 0xffff0fff

## Fields

```
{"reg": [{"name": "RX_THRESH", "bits": 12, "attr": ["rw"], "rotate": 0}, {"bits": 4}, {"name": "FMT_THRESH", "bits": 12, "attr": ["rw"]}]}
```

| Bits  | Type | Reset | Name       | Description  |
|-------|------|-------|------------|--|
| 31:28 |      |       |            | Reserved   |
| 27:16 | rw   | 0x0   | FMT_THRESH | Threshold level for FMT interrupts. Whilst the number of used entries in the FMT FIFO is below this setting, the fmt_threshold interrupt will be asserted. |
| 15:12 |      |       |            | Reserved   |
| 11:0  | rw   | 0x0   | RX_THRESH  | Threshold level for RX interrupts. Whilst the level of data in the RX FIFO is above this setting, the rx_threshold interrupt will be asserted.             |

# TARGET\_FIFO\_CONFIG

Target mode FIFO configuration

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0xffff0fff

## Fields

```
{"reg": [{"name": "TX_THRESH", "bits": 12, "attr": ["rw"], "rotate": 0}, {"bits": 4}, {"name": "ACQ_THRESH", "bits": 12, "attr": ["rw"]}]}
```

| Bits  | Type | Reset | Name       | Description   |
|-------|------|-------|------------|---|
| 31:28 |      |       |            | Reserved  |
| 27:16 | rw   | 0x0   | ACQ_THRESH | Threshold level for ACQ interrupts. Whilst the level of data in the ACQ FIFO is above this setting, the acq_threshold interrupt will be asserted.       |
| 15:12 |      |       |            | Reserved  |
| 11:0  | rw   | 0x0   | TX_THRESH  | Threshold level for TX interrupts. Whilst the number of used entries in the TX FIFO is below this setting, the tx_threshold interrupt will be asserted. |

# HOST\_FIFO\_STATUS

Host mode FIFO status register

- Offset: 0x2c
- Reset default: 0x0
- Reset mask: 0xffff0fff

## Fields

```
{"reg": [{"name": "FMTLVL", "bits": 12, "attr": ["ro"], "rotate": 0}, {"bits": 4}, {"name": "RXLVL", "bits": 12, "attr": ["ro"], "rotate": 0}]}
```

| Bits  | Type | Reset | Name   | Description                    |
|-------|------|-------|--------|--------------------------------|
| 31:28 |      |       |        | Reserved                       |
| 27:16 | ro   | x     | RXLVL  | Current fill level of RX fifo  |
| 15:12 |      |       |        | Reserved                       |
| 11:0  | ro   | x     | FMTLVL | Current fill level of FMT fifo |

# TARGET\_FIFO\_STATUS

Target mode FIFO status register

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0xffff0fff

## Fields

```
{"reg": [{"name": "TXLVL", "bits": 12, "attr": ["ro"], "rotate": 0}, {"bits": 4}, {"name": "ACQLVL", "bits": 12, "attr": ["ro"], "rotate": 0}, {"bits": 4}]}
```

| Bits  | Type | Reset | Name   | Description                    |
|-------|------|-------|--------|--------------------------------|
| 31:28 |      |       |        | Reserved                       |
| 27:16 | ro   | x     | ACQLVL | Current fill level of ACQ fifo |
| 15:12 |      |       |        | Reserved                       |
| 11:0  | ro   | x     | TXLVL  | Current fill level of TX fifo  |

# OVRD

I2C Override Control Register

- Offset: 0x34
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "TXOVRDEN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "SCLVAL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "SDAVAL", "bits": 1, "attr": ["rw"], "rotate": -90}]}
```

| Bits | Type | Reset | Name     | Description   |
|------|------|-------|----------|---|
| 31:3 |      |       |          | Reserved  |
| 2    | rw   | 0x0   | SDAVAL   | Value for SDA Override. Set to 0 to drive TX Low, and set to 1 for high-Z |
| 1    | rw   | 0x0   | SCLVAL   | Value for SCL Override. Set to 0 to drive TX Low, and set to 1 for high-Z |
| 0    | rw   | 0x0   | TXOVRDEN | Override the SDA and SCL TX signals.                                      |

# VAL

Oversampled RX values

- Offset: 0x38
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "SCL_RX", "bits": 16, "attr": ["ro"], "rotate": 0}, {"name": "SDA_RX", "bits": 16, "attr": ["ro"], "rotate": 0}]}
```

| Bits  | Type | Reset | Name   | Description  |
|-------|------|-------|--------|--|
| 31:16 | ro   | x     | SDA_RX | Last 16 oversampled values of SDA. Most recent bit is bit 16, oldest 31. |
| 15:0  | ro   | x     | SCL_RX | Last 16 oversampled values of SCL. Most recent bit is bit 0, oldest 15.  |

# TIMING0

Detailed I2C Timings (directly corresponding to table 10 in the I2C Specification). All values are expressed in units of the input clock period. These must be greater than 2 in order for the change in SCL to propagate to the input of the FSM so that acknowledgements are detected correctly.

- Offset: 0x3c
- Reset default: 0x0
- Reset mask: 0x1ffff1fff

## Fields

```
{"reg": [{"name": "THIGH", "bits": 13, "attr": ["rw"], "rotate": 0}, {"bits": 3}, {"name": "TLOW", "bits": 13, "attr": ["rw"], "rotate": 0}]}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |     |       |  |
|-------|----|-----|-------|--|
| 31:29 |    |     |       | Reserved   |
| 28:16 | rw | 0x0 | TLOW  | The actual time to hold SCL low between any two SCL pulses. This field is sized to have a range of at least Standard Mode's 4.7 us max with a core clock at 1 GHz. |
| 15:13 |    |     |       | Reserved   |
| 12:0  | rw | 0x0 | THIGH | The actual time to hold SCL high in a given pulse. This field is sized to have a range of at least Standard Mode's 4.0 us max with a core clock at 1 GHz.          |

## TIMING1

Detailed I2C Timings (directly corresponding to table 10 in the I2C Specification). All values are expressed in units of the input clock period.

- Offset: 0x40
- Reset default: 0x0
- Reset mask: 0x1ff03ff

## Fields

```
{"reg": [{"name": "T_R", "bits": 10, "attr": ["rw"], "rotate": 0}, {"bits": 6}, {"name": "T_F", "bits": 9, "attr": ["rw"], "rotate": 0}]}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |     |     |   |
|-------|----|-----|-----|---|
| 31:25 |    |     |     | Reserved  |
| 24:16 | rw | 0x0 | T_F | The nominal fall time to anticipate for the bus (influences SDA hold times). This field is sized to have a range of at least Standard Mode's 300 ns max with a core clock at 1 GHz. |
| 15:10 |    |     |     | Reserved  |
| 9:0   | rw | 0x0 | T_R | The nominal rise time to anticipate for the bus (depends on capacitance). This field is sized to have a range of at least Standard Mode's 1000 ns max with a core clock at 1 GHz.   |

## TIMING2

Detailed I2C Timings (directly corresponding to table 10 in the I2C Specification). All values are expressed in units of the input clock period.

- Offset: 0x44
- Reset default: 0x0
- Reset mask: 0x1fff1fff

## Fields

```
{"reg": [{"name": "TSU_STA", "bits": 13, "attr": ["rw"], "rotate": 0}, {"bits": 3}, {"name": "THD_STA", "bits": 13, "attr": ["rw"], "rotate": 0}]}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

|       |    |     |         |  |
|-------|----|-----|---------|--|
| 31:29 |    |     |         | Reserved   |
| 28:16 | rw | 0x0 | THD_STA | Actual hold time for start signals. This field is sized to have a range of at least Standard Mode's 4.0 us max with a core clock at 1 GHz.           |
| 15:13 |    |     |         | Reserved   |
| 12:0  | rw | 0x0 | TSU_STA | Actual setup time for repeated start signals. This field is sized to have a range of at least Standard Mode's 4.7 us max with a core clock at 1 GHz. |

## TIMING3

Detailed I2C Timings (directly corresponding to table 10, in the I2C Specification). All values are expressed in units of the input clock period.

- Offset: 0x48
- Reset default: 0x0
- Reset mask: 0x1fff01ff

## Fields

```
{"reg": [{"name": "TSU_DAT", "bits": 9, "attr": ["rw"], "rotate": 0}, {"bits": 7}, {"name": "THD_DAT", "bits": 13, "attr": ["rw"], "rotate": 0}]}
```

| Bits  | Type | Reset | Name           |
|-------|------|-------|----------------|
| 31:29 |      |       | Reserved       |
| 28:16 | rw   | 0x0   | <u>THD_DAT</u> |
| 15:9  |      |       | Reserved       |
| 8:0   | rw   | 0x0   | <u>TSU_DAT</u> |

### TIMING3 . THD\_DAT

Actual hold time for data (or ack) bits. (Note, where required, the parameters TVD\_DAT is taken to be THD\_DAT+T\_F) This field is sized to have a range that accommodates Standard Mode's 3.45 us max for TVD\_DAT with a core clock at 1 GHz. However, this field is generally expected to represent a time substantially shorter than that. It should be long enough to cover the maximum round-trip latency from output pins, through pads and voltage transitions on the board, and back to the input pins, but it should not be substantially greater.

### TIMING3 . TSU\_DAT

Actual setup time for data (or ack) bits. This field is sized to have a range of at least Standard Mode's 250 ns max with a core clock at 1 GHz.

## TIMING4

Detailed I2C Timings (directly corresponding to table 10, in the I2C Specification). All values are expressed in units of the input clock period.

- Offset: 0x4c
- Reset default: 0x0
- Reset mask: 0x1ffff1fff

### Fields

```
{"reg": [{"name": "TSU_STO", "bits": 13, "attr": ["rw"], "rotate": 0}, {"bits": 3}, {"name": "T_BUF", "bits": 13, "attr": ["rw"], "rotate": 0}, {"bits": 3}, {"name": "TSU_DAT", "bits": 13, "attr": ["rw"], "rotate": 0}, {"bits": 3}, {"name": "THD_DAT", "bits": 13, "attr": ["rw"], "rotate": 0}, {"bits": 3}]}
```

| Bits  | Type | Reset | Name    | Description   |
|-------|------|-------|---------|---|
| 31:29 |      |       |         | Reserved  |
| 28:16 | rw   | 0x0   | T_BUF   | Actual time between each STOP signal and the following START signal. This field is sized to have a range of at least Standard Mode's 4.7 us max with a core clock at 1 GHz. |
| 15:13 |      |       |         | Reserved  |
| 12:0  | rw   | 0x0   | TSU_STO | Actual setup time for stop signals. This field is sized to have a range of at least Standard Mode's 4.0 us max with a core clock at 1 GHz.                                  |

## TIMEOUT\_CTRL

I2C clock stretching and bus timeout control.

This timeout must be enabled by setting TIMEOUT\_CTRL.EN to 1, and the behavior of this feature depends on the value of TIMEOUT\_CTRL.MODE.

If the mode is "STRETCH\_TIMEOUT", this is used in I2C controller mode to detect whether a connected target is stretching a single low time beyond the timeout value. Configured as such, this timeout is more informative and doesn't do more than assert the "stretch\_timeout" interrupt.

If the mode is "BUS\_TIMEOUT", it is used to detect whether the clock has been held low for too long instead, inclusive of the controller's clock low time. This is useful for an SMBus context, where the VAL programmed should be tTIMEOUT:MIN.

- Offset: 0x50
- Reset default: 0x0
- Reset mask: 0xfffffffff

### Fields

```
{"reg": [{"name": "VAL", "bits": 30, "attr": ["rw"], "rotate": 0}, {"name": "MODE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "EN", "bits": 1, "attr": ["rw"], "rotate": 0}]}
```

| Bits | Type | Reset | Name        |
|------|------|-------|-------------|
| 31   | rw   | 0x0   | <u>EN</u>   |
| 30   | rw   | 0x0   | <u>MODE</u> |
| 29:0 | rw   | 0x0   | <u>VAL</u>  |

### TIMEOUT\_CTRL . EN

Enable stretch timeout or bus timeout feature



# TIMEOUT\_CTRL . MODE

Selects the timeout mode, between a stretch timeout and a bus timeout.

Between the two modes, the primary difference is how much of the clock low period is counted. For a stretch timeout, only the time that another device holds the clock low will be counted. For a bus timeout, the entire clock low time is counted, consistent with the SMBus tTIMEOUT type.

`TIMEOUT_CTRL.EN` must be 1 for either of these features to be enabled.

| Value | Name            | Description   |
|-------|-----------------|---|
| 0x0   | STRETCH_TIMEOUT | The timeout is a target stretch timeout. The counter will track how long the clock has been stretched by another device while the controller is active.   |
| 0x1   | BUS_TIMEOUT     | The timeout is a clock low timeout. The counter will track how long the clock low period is, inclusive of the controller's ordinary low count. A timeout will set <code>!!CONTROLLER_EVENTS.BUS_TIMEOUT</code> and cause a "controller_halt" interrupt. |

# TIMEOUT\_CTRL . VAL

Clock stretching timeout value (in units of input clock frequency)

# TARGET\_ID

I2C target address and mask pairs

- Offset: 0x54
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "ADDRESS0", "bits": 7, "attr": ["rw"], "rotate": 0}, {"name": "MASK0", "bits": 7, "attr": ["rw"], "rotate": 0}, {"name": "ADDRESS1", "bits": 7, "attr": ["rw"], "rotate": 0}, {"name": "MASK1", "bits": 7, "attr": ["rw"], "rotate": 0}]}
```

| Bits  | Type | Reset | Name     | Description   |
|-------|------|-------|----------|---|
| 31:28 |      |       |          | Reserved  |
| 27:21 | rw   | 0x0   | MASK1    | I2C target mask number 1. At least one bit in MASK1 must be set to 1 for ADDRESS1 to be used. |
| 20:14 | rw   | 0x0   | ADDRESS1 | I2C target address number 1   |
| 13:7  | rw   | 0x0   | MASK0    | I2C target mask number 0. At least one bit in MASK0 must be set to 1 for ADDRESS0 to be used. |
| 6:0   | rw   | 0x0   | ADDRESS0 | I2C target address number 0   |

# ACQDATA

I2C target acquired data

- Offset: 0x58
- Reset default: 0x0
- Reset mask: 0x7ff

## Fields

```
{"reg": [{"name": "ABYTE", "bits": 8, "attr": ["ro"], "rotate": 0}, {"name": "SIGNAL", "bits": 3, "attr": ["ro"], "rotate": -90}, {"name": "RESERVED", "bits": 21, "attr": ["ro"], "rotate": 0}]}
```

| Bits  | Type | Reset | Name          |
|-------|------|-------|---------------|
| 31:11 |      |       | Reserved      |
| 10:8  | ro   | x     | <u>SIGNAL</u> |
| 7:0   | ro   | x     | <u>ABYTE</u>  |

# ACQDATA . SIGNAL

Indicates any control symbols associated with the ABYTE.

For the STOP symbol, a stretch timeout or other unexpected events will cause a NACK\_STOP to appear in the ACQ FIFO. If the ACQ FIFO doesn't have enough space to record a START and a STOP, the transaction will be dropped entirely on a stretch timeout. In that case, the START byte will not appear (neither as START nor NACK\_START), but a standalone NACK\_STOP may, if there was space. Software can discard any standalone NACK\_STOP that appears.

See the associated values for more information about the contents.

| Value                      | Name       | Description   |
|----------------------------|------------|---|
| 0x0                        | NONE       | ABYTE contains an ordinary data byte that was received and ACK'd.   |
| 0x1                        | START      | A START condition preceded the ABYTE to start a new transaction. ABYTE contains the 7-bit I2C address plus R/W command bit in the order received on the bus, MSB first.   |
| 0x2                        | STOP       | A STOP condition was received for a transaction including a transfer that addressed this Target. No transfers addressing this Target in that transaction were NACK'd. ABYTE contains no data.   |
| 0x3                        | RESTART    | A repeated START condition preceded the ABYTE, extending the current transaction with a new transfer. ABYTE contains the 7-bit I2C address plus R/W command bit in the order received on the bus, MSB first.  |
| 0x4                        | NACK       | ABYTE contains an ordinary data byte that was received and NACK'd.  |
| 0x5                        | NACK_START | A START condition preceded the ABYTE (including repeated START) that was part of a NACK'd transfer. The ABYTE contains the matching I2C address and command bit. The ABYTE was ACK'd, but the rest of the transaction was NACK'ed.  |
| 0x6                        | NACK_STOP  | A transaction including a transfer that addressed this Target was ended, but the transaction ended abnormally and/or the transfer was NACK'd. The end can be due to a STOP condition or unexpected events, such as a bus timeout (if enabled). ABYTE contains no data. NACKing can occur for multiple reasons, including a stretch timeout, a SW-directed NACK, or lost arbitration. This signal is a bucket for all these error-type terminations. |
| Other values are reserved. |            |   |

## ACQDATA . ABYTE

Address for accepted transaction or acquired byte

## TXDATA

I2C target transmit data

- Offset: 0x5c
- Reset default: 0x0
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "TXDATA", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:8 |      |       |        | Reserved    |
| 7:0  | rw   | 0x0   | TXDATA |             |

## HOST\_TIMEOUT\_CTRL

I2C host clock generation timeout value (in units of input clock frequency).

In an active transaction in Target-Mode, if the Controller ceases to send SCL pulses for this number of cycles then the "host\_timeout" interrupt will be asserted.

In multi-controller monitoring mode, HOST\_TIMEOUT\_CTRL is required to be nonzero to transition out of the initial busy state. Set this CSR to 0 to disable this behaviour.

- Offset: 0x60
- Reset default: 0x0
- Reset mask: 0xffff

### Fields

```
{"reg": [{"name": "HOST_TIMEOUT_CTRL", "bits": 20, "attr": ["rw"], "rotate": 0}, {"bits": 12}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits  | Type | Reset | Name              | Description |
|-------|------|-------|-------------------|-------------|
| 31:20 |      |       |                   | Reserved    |
| 19:0  | rw   | 0x0   | HOST_TIMEOUT_CTRL |             |

## TARGET\_TIMEOUT\_CTRL

I2C target internal stretching timeout control. When the target has stretched beyond this time it will send a NACK for incoming data bytes or release SDA for outgoing data bytes. The behavior for the address byte is configurable via CTRL\_ACK\_ADDR\_AFTER\_TIMEOUT. Note that the count accumulates stretching time over the course of a transaction. In other words, this is equivalent to the SMBus cumulative target clock extension time.

- Offset: 0x64

- Reset default: 0x0
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "VAL", "bits": 31, "attr": ["rw"], "rotate": 0}, {"name": "EN", "bits": 1, "attr": ["rw"], "rotate": -90}], "config": {}}
```

| Bits | Type | Reset | Name | Description  |
|------|------|-------|------|--|
| 31   | rw   | 0x0   | EN   | Enable timeout feature and send NACK once the timeout has been reached |
| 30:0 | rw   | 0x0   | VAL  | Clock stretching timeout value (in units of input clock frequency)     |

## TARGET\_NACK\_COUNT

Number of times the I2C target has NACK'ed a new transaction since the last read of this register. Reading this register clears it. This is useful because when the ACQ FIFO is full the software know that a NACK has occurred, but without this register would not know how many transactions it missed. When it reaches its maximum value it will stay at that value.

- Offset: 0x68
- Reset default: 0x0
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "TARGET_NACK_COUNT", "bits": 8, "attr": ["rc"], "rotate": -90}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset | Name              | Description |
|------|------|-------|-------------------|-------------|
| 31:8 |      |       |                   | Reserved    |
| 7:0  | rc   | 0x0   | TARGET_NACK_COUNT |             |

## TARGET\_ACK\_CTRL

Controls for mid-transfer (N)ACK phase handling

- Offset: 0x6c
- Reset default: 0x0
- Reset mask: 0x800001ff

### Fields

```
{"reg": [{"name": "NBYTES", "bits": 9, "attr": ["rw"], "rotate": 0}, {"bits": 22}, {"name": "NACK", "bits": 1, "attr": ["wo"], "rotate": 0}], "config": {}}
```

| Bits | Type | Reset | Name          |
|------|------|-------|---------------|
| 31   | wo   | x     | <u>NACK</u>   |
| 30:9 |      |       | Reserved      |
| 8:0  | rw   | x     | <u>NBYTES</u> |

### TARGET\_ACK\_CTRL . NACK

When the Target module stretches on the (N)ACK phase of a Write due to [TARGET\\_ACK\\_CTRL.NBYTES](#) being 0, writing a 1 here will cause it to send a NACK.

If software chooses to NACK, note that the NACKing behavior is the same as if a stretch timeout occurred. The rest of the transaction will be NACK'd, including subsequent transfers.

For the address byte, the (N)ACK phase of subsequent transfers will follow the behavior specified by [CTRL.NACK\\_ADDR\\_AFTER\\_TIMEOUT](#).

Automatically clears to 0.

### TARGET\_ACK\_CTRL . NBYTES

Remaining number of bytes the Target module may ACK automatically.

If [CTRL\\_ACK\\_CTRL\\_EN](#) is set to 1, the Target module will stretch the clock at the (N)ACK phase of a byte if this CSR is 0, awaiting software's instructions.

At the beginning of each Write transfer, this byte count is reset to 0. Writes to this CSR also are only accepted while the Target module is stretching the clock. The Target module will always ACK its address if the ACQ FIFO has space. For data bytes afterwards, it will stop at the (N)ACK phase and stretch the clock when this CSR is 0. For each data byte that is ACK'd in a transaction, the byte count will decrease by 1.

Note that a full ACQ FIFO can still cause the Target module to halt at the beginning of a new byte. The ACK Control Mode provides an additional synchronization point, during the (N)ACK phase instead of after. For both cases, [TARGET\\_TIMEOUT\\_CTRL](#) applies, and stretching past the timeout will produce an automatic NACK.

This mode can be used to implement the mid-transfer (N)ACK responses required by various SMBus protocols.

# ACQ\_FIFO\_NEXT\_DATA

The data byte pending to be written to the ACQ FIFO.

This CSR is only valid while the Target module is stretching in the (N)ACK phase, indicated by [STATUS\\_ACK\\_CTRL\\_STRETCH](#) . It is intended to be used with ACK Control Mode, so software may check the current byte.

- Offset: 0x70
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "ACQ_FIFO_NEXT_DATA", "bits": 8, "attr": ["ro"], "rotate": -90}, {"bits": 24}], "config": {"lanes": 1, "fontsize":
```

| Bits | Type | Reset | Name               | Description |
|------|------|-------|--------------------|-------------|
| 31:8 |      |       |                    | Reserved    |
| 7:0  | ro   | x     | ACQ_FIFO_NEXT_DATA |             |

# HOST\_NACK\_HANDLER\_TIMEOUT

Timeout in Host-Mode for an unhandled NACK before hardware automatically ends the transaction. (in units of input clock frequency)

If an active Controller-Transmitter transfer receives a NACK from the Target, the [CONTROLLER\\_EVENTS\\_NACK](#) bit is set. In turn, this causes the Controller FSM to halt awaiting software intervention, and the 'controller\_halt' interrupt may assert. Software must clear the [CONTROLLER\\_EVENTS\\_NACK](#) bit to allow the state machine to continue, typically after clearing out the FMTFIFO to start a new transfer. While halted, the active transaction is not ended (no STOP (P) condition is created), and the block asserts SCL and leaves SDA released.

This timeout can be used to automatically produce a STOP condition, whether as a backstop for slow software responses (longer timeout) or as a convenience (short timeout). If the timeout expires, the Controller FSM will issue a STOP (P) condition on the bus to end the active transaction. Additionally, the [CONTROLLER\\_EVENTS\\_UNHANDLED\\_NACK\\_TIMEOUT](#) bit is set to alert software, and the FSM will return to the idle state and halt until the bit is cleared.

The enable bit must be set for this feature to operate.

- Offset: 0x74
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "VAL", "bits": 31, "attr": ["rw"], "rotate": 0}, {"name": "EN", "bits": 1, "attr": ["rw"], "rotate": -90}], "confi
```

| Bits | Type | Reset | Name | Description   |
|------|------|-------|------|---|
| 31   | rw   | 0x0   | EN   | Timeout enable  |
| 30:0 | rw   | 0x0   | VAL  | Unhandled NAK timeout value (in units of input clock frequency) |

# CONTROLLER\_EVENTS

Latched events that explain why the controller halted.

Any bits that are set must be written (with a 1) to clear the CONTROLLER\_HALT interrupt.

- Offset: 0x78
- Reset default: 0x0
- Reset mask: 0xf

## Fields

```
{"reg": [{"name": "NACK", "bits": 1, "attr": ["rw1c"], "rotate": -90}, {"name": "UNHANDLED_NACK_TIMEOUT", "bits": 1, "attr": ["rw1c"]
```

| Bits | Type | Reset | Name                   | Description  |
|------|------|-------|------------------------|--|
| 31:4 |      |       |                        | Reserved   |
| 3    | rw1c | 0x0   | ARBITRATION_LOST       | A Host-Mode active transaction has terminated due to lost arbitration.   |
| 2    | rw1c | 0x0   | BUS_TIMEOUT            | A Host-Mode active transaction has terminated due to a bus timeout activated by <a href="#">TIMEOUT_CTRL</a> . |
| 1    | rw1c | 0x0   | UNHANDLED_NACK_TIMEOUT | A Host-Mode active transaction has been ended by the <a href="#">HOST_NACK_HANDLER_TIMEOUT</a> mechanism.      |
| 0    | rw1c | 0x0   | NACK                   | Received an unexpected NACK  |

# TARGET\_EVENTS

Latched events that can cause the target module to stretch the clock at the beginning of a read transfer.

These events cause TX FIFO-related stretching even when the TX FIFO has data available. Any bits that are set must be written (with a 1) to clear the tx\_stretch interrupt.

This CSR serves as a gate to prevent the Target module from responding to a read command with unrelated, leftover data.

- Offset: 0x7c
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{ "reg": [ { "name": "TX_PENDING", "bits": 1, "attr": ["rw1c"], "rotate": -90 }, { "name": "BUS_TIMEOUT", "bits": 1, "attr": ["rw1c"], "rotate": -90 }, { "name": "UNHANDLED_NACK_TIMEOUT", "bits": 1, "attr": ["rw1c"], "rotate": -90 }, { "name": "NACK", "bits": 1, "attr": ["rw1c"], "rotate": -90 } ] }
```

| Bits | Type | Reset | Name                             |
|------|------|-------|----------------------------------|
| 31:3 |      |       | Reserved                         |
| 2    | rw1c | 0x0   | <a href="#">ARBITRATION_LOST</a> |
| 1    | rw1c | 0x0   | <a href="#">BUS_TIMEOUT</a>      |
| 0    | rw1c | 0x0   | <a href="#">TX_PENDING</a>       |

## TARGET\_EVENTS . ARBITRATION\_LOST

A Target-Mode read transfer has terminated due to lost arbitration.

## TARGET\_EVENTS . BUS\_TIMEOUT

A Target-Mode read transfer has terminated due to a bus timeout activated by [TIMEOUT\\_CTRL](#).

## TARGET\_EVENTS . TX\_PENDING

A new Target-Mode read transfer has arrived that addressed this target.

This bit is used by software to confirm the release of the contents in the TX FIFO. If the contents do not apply, software should first reset the TX FIFO, then load it with the correct data, then clear this bit.

Optionally enabled by [CTRL.TX\\_STRETCH\\_CTRL\\_EN](#).

# integer\_cluster / doc / pulp\_cluster\_peripherals\_memory\_map.md

## PULP Cluster Peripheral Memory Map

This document describes the memory-mapped peripheral devices accessible from the PULP cluster through the peripheral interconnect slave port.

# Base Address

- **Cluster Base Address:** 0x5000\_0000
- **Peripheral Offset:** 0x0020\_0000
- **External Offset:** 0x0040\_0000

**Cluster Peripheral Base Address:**  
0x5020\_0000 â€“ 0x5040\_0000 (2 MiB region)

# Peripheral Layout

| Peripheral              | ID  | Offset (from Peripheral Base) | Address Range               |
|-------------------------|-----|-------------------------------|-----------------------------|
| EOC                     | 0   | 0x0000                        | 0x5020_0000 â€” 0x5020_03FF |
| Timer                   | 1   | 0x0400                        | 0x5020_0400 â€” 0x5020_07FF |
| Event Unit (also 3) 2/3 | 2/3 | 0x0800                        | 0x5020_0800 â€” 0x5020_0FFF |
| HWPE                    | 4   | 0x1000                        | 0x5020_1000 â€” 0x5020_13FF |
| ICache Controller       | 5   | 0x1400                        | 0x5020_1400 â€” 0x5020_17FF |
| DMA (Cluster)           | 6   | 0x1800                        | 0x5020_1800 â€” 0x5020_1BFF |
| DMA (Fabric Ctrl)       | 7   | 0x1C00                        | 0x5020_1C00 â€” 0x5020_1FFF |
| HMR Unit                | 8   | 0x2000                        | 0x5020_2000 â€” 0x5020_23FF |
| External                | 9   | 0x2400                        | 0x5020_2400 â€” 0x5020_27FF |
| Error Unit              | 10  | 0x2800                        | 0x5020_2800 â€” 0x5020_2BFF |

## Address Mapping Summary

| Region        | Index | Start Address | End Address             | Notes                       |
|---------------|-------|---------------|-------------------------|-----------------------------|
| TCDM          | 0     | 0x5000_0000   | 0x5000_0000 + TCDM_SIZE | Tightly Coupled Data Memory |
| Peripherals   | 1     | 0x5020_0000   | 0x5040_0000             | Cluster Peripheral Region   |
| External      | 2     | 0x5040_0000   | 0xFFFF_FFFF             | Access beyond cluster       |
| Below Cluster | 3     | 0x0000_0000   | 0x5000_0000             | Not cluster-related         |

# irq\_router / doc / registers.md

## Summary

| Name                               | Offset | Length | Description                               |
|------------------------------------|--------|--------|---|
| irq_router. <u>IRQ_TARGET_MASK</u> | 0x0    | 4      | Target selection bitmask control register |

## IRQ\_TARGET\_MASK

Target selection bitmask control register

- Offset: 0x0
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "mask", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

### Bits Type Reset Name Description

31:0 rw 0x1 mask Target selection bitmask control register for single interrupt line. Reflects interrupt line logic level.

# l2\_ecc\_config / doc / registers.md

## Summary

| Name  | Offset | Length | Description                                     |
|---|--------|--------|---|
| ECC_manager. <u>mismatch_count</u>            | 0x0    | 4      | Correctable mismatches caught by ecc on access  |
| ECC_manager. <u>scrub_interval</u>            | 0x4    | 4      | Interval between scrubs                         |
| ECC_manager. <u>scrub_fix_count</u>           | 0x8    | 4      | Correctable mismatches caught by ecc on scrub   |
| ECC_manager. <u>scrub_uncorrectable_count</u> | 0xc    | 4      | Uncorrectable mismatches caught by ecc on scrub |
| ECC_manager. <u>write_mask_data_n</u>         | 0x10   | 4      | Testing: Inverted write mask for data bits      |
| ECC_manager. <u>write_mask_ecc_n</u>          | 0x14   | 4      | Testing: Inverted write mask for ECC bits       |

## mismatch\_count

Correctable mismatches caught by ecc on access

- Offset: 0x0

- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "correctable_mismatches", "bits": 32, "attr": ["rw0c"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspa
```

| Bits | Type | Reset | Name                   | Description                                    |
|------|------|-------|------------------------|--|
| 31:0 | rw0c | 0x0   | correctable_mismatches | Correctable mismatches caught by ecc on access |

scrub\_interval

Interval between scrubs

- **Offset:** 0x4
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "scrub_interval", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name           | Description             |
|------|------|-------|----------------|-------------------------|
| 31:0 | rw   | 0x0   | scrub_interval | Interval between scrubs |

scrub\_fix\_count

Correctable mismatches caught by ecc on scrub

- **Offset:** 0x8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "correctable_mismatches", "bits": 32, "attr": ["rw0c"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspa
```

| Bits | Type | Reset | Name                   | Description                                   |
|------|------|-------|------------------------|---|
| 31:0 | rw0c | 0x0   | correctable_mismatches | Correctable mismatches caught by ecc on scrub |

scrub\_uncorrectable\_count

Uncorrectable mismatches caught by ecc on scrub

- **Offset:** 0xc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "uncorrectable_mismatches", "bits": 32, "attr": ["rw0c"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vs
```

| Bits | Type | Reset | Name                     | Description                                     |
|------|------|-------|--------------------------|---|
| 31:0 | rw0c | 0x0   | uncorrectable_mismatches | Uncorrectable mismatches caught by ecc on scrub |

write\_mask\_data\_n

Testing: Inverted write mask for data bits

- **Offset:** 0x10
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "write_mask_data_n", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset Name            | Description                                |
|------|------|-----------------------|--|
| 31:0 | rw   | 0x0 write_mask_data_n | Testing: Inverted write mask for data bits |

## write\_mask\_ecc\_n

Testing: Inverted write mask for ECC bits

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0x7f

## Fields

```
{"reg": [{"name": "write_mask_ecc_n", "bits": 7, "attr": ["rw"], "rotate": -90}, {"bits": 25}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset Name           | Description                               |
|------|------|----------------------|---|
| 31:7 |      |                      | Reserved                                  |
| 6:0  | rw   | 0x0 write_mask_ecc_n | Testing: Inverted write mask for ECC bits |

## mailbox / doc / registers.md

## Summary

| Name                                  | Offset | Length | Description                                 |
|---------------------------------------|--------|--------|---|
| mailbox. <a href="#">IRQ_SND_STAT</a> | 0x0    | 4      | Sender interrupt status register            |
| mailbox. <a href="#">IRQ_SND_SET</a>  | 0x4    | 4      | Sender interrupt set register               |
| mailbox. <a href="#">IRQ_SND_CLR</a>  | 0x8    | 4      | Sender interrupt clear register             |
| mailbox. <a href="#">IRQ_SND_EN</a>   | 0xc    | 4      | Sender interrupt enable register            |
| mailbox. <a href="#">IRQ_RCV_STAT</a> | 0x40   | 4      | Receiver interrupt status register          |
| mailbox. <a href="#">IRQ_RCV_SET</a>  | 0x44   | 4      | Receiver interrupt set register             |
| mailbox. <a href="#">IRQ_RCV_CLR</a>  | 0x48   | 4      | Receiver interrupt clear register           |
| mailbox. <a href="#">IRQ_RCV_EN</a>   | 0x4c   | 4      | Receiver interrupt enable register          |
| mailbox. <a href="#">LETTER0</a>      | 0x80   | 4      | Memory region 0 to put a message or pointer |
| mailbox. <a href="#">LETTER1</a>      | 0x84   | 4      | Memory region 1 to put a message or pointer |

## IRQ\_SND\_STAT

Sender interrupt status register

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "stat", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "reserved", "bits": 31, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset Name | Description  |
|------|------|------------|--|
| 31:1 | ro   | x reserved | reserved   |
| 0    | ro   | x stat     | Sender side interrupt status. Receiver confirms letter. Reflects interrupt line logic level. |

## IRQ\_SND\_SET

Sender interrupt set register

- Offset: 0x4
- Reset default: 0x0



- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "set", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "reserved", "bits": 31, "attr": ["ro"], "rotate": 0}], "}
```

| Bits | Type | Reset | Name     | Description  |
|------|------|-------|----------|--|
| 31:1 | ro   | x     | reserved | reserved   |
| 0    | wo   | x     | set      | Sender side interrupt set. Receiver confirms letter. |

# IRQ\_SND\_CLR

Sender interrupt clear register

- **Offset:** 0x8
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "clr", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "reserved", "bits": 31, "attr": ["ro"], "rotate": 0}], "}
```

| Bits | Type | Reset | Name     | Description  |
|------|------|-------|----------|--|
| 31:1 | ro   | x     | reserved | reserved   |
| 0    | wo   | x     | clr      | Sender side interrupt clear. Receiver confirms letter. |

# IRQ\_SND\_EN

Sender interrupt enable register

- **Offset:** 0xc
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "en", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "reserved", "bits": 31, "attr": ["ro"], "rotate": 0}], "}
```

| Bits | Type | Reset | Name     | Description   |
|------|------|-------|----------|---|
| 31:1 | ro   | 0x0   | reserved | reserved  |
| 0    | rw   | 0x0   | en       | Sender side interrupt enable. Receiver confirms letter. |

# IRQ\_RCV\_STAT

Receiver interrupt status register

- **Offset:** 0x40
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "stat", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "reserved", "bits": 31, "attr": ["ro"], "rotate": 0}], "}
```

| Bits | Type | Reset | Name     | Description   |
|------|------|-------|----------|---|
| 31:1 | ro   | x     | reserved | reserved  |
| 0    | ro   | x     | stat     | Receiver side interrupt status. Sender notifies receiver of a new letter arriving. Reflects interrupt line logic level. |

# IRQ\_RCV\_SET

Receiver interrupt set register

- **Offset:** 0x44
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "set", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "reserved", "bits": 31, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description   |
|------|------|-------|----------|---|
| 31:1 | ro   | x     | reserved | reserved  |
| 0    | wo   | x     | set      | Receiver side interrupt set. Sender notifies receiver of a new letter arriving. |

IRQ\_RCV\_CLR

Receiver interrupt clear register

- **Offset:** 0x48
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "clr", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "reserved", "bits": 31, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description   |
|------|------|-------|----------|---|
| 31:1 | ro   | x     | reserved | reserved  |
| 0    | wo   | x     | clr      | Receiver side interrupt clear. Sender notifies receiver of a new letter arriving. |

IRQ\_RCV\_EN

Receiver interrupt enable register

- **Offset:** 0x4c
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "en", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "reserved", "bits": 31, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description  |
|------|------|-------|----------|--|
| 31:1 | ro   | 0x0   | reserved | reserved   |
| 0    | rw   | 0x0   | en       | Receiver side interrupt enable. Sender notifies receiver of a new letter arriving. |

LETTER0

Memory region 0 to put a message or pointer

- **Offset:** 0x80
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

Fields

```
{"reg": [{"name": "LETTER0", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name    | Description |
|------|------|-------|---------|-------------|
| 31:0 | rw   | 0x0   | LETTER0 |             |

LETTER1

Memory region 1 to put a message or pointer

- Offset: 0x84
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "LETTER1", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name    | Description |
|------|------|-------|---------|-------------|
| 31:0 | rw   | 0x0   | LETTER1 |             |

plic / doc / registers.md

Summary

| Name               | Offset    | Length | Description  |
|--------------------|-----------|--------|--|
| rv_plic.PRIO0      | 0x0       | 4      | Interrupt Source 0 Priority  |
| rv_plic.PRIO1      | 0x4       | 4      | Interrupt Source 1 Priority  |
| rv_plic.PRIO2      | 0x8       | 4      | Interrupt Source 2 Priority  |
| rv_plic.PRIO3      | 0xc       | 4      | Interrupt Source 3 Priority  |
| rv_plic.PRIO4      | 0x10      | 4      | Interrupt Source 4 Priority  |
| rv_plic.PRIO5      | 0x14      | 4      | Interrupt Source 5 Priority  |
| rv_plic.PRIO6      | 0x18      | 4      | Interrupt Source 6 Priority  |
| rv_plic.PRIO7      | 0x1c      | 4      | Interrupt Source 7 Priority  |
| rv_plic.PRIO8      | 0x20      | 4      | Interrupt Source 8 Priority  |
| rv_plic.PRIO9      | 0x24      | 4      | Interrupt Source 9 Priority  |
| rv_plic.PRIO10     | 0x28      | 4      | Interrupt Source 10 Priority                                       |
| rv_plic.PRIO11     | 0x2c      | 4      | Interrupt Source 11 Priority                                       |
| rv_plic.PRIO12     | 0x30      | 4      | Interrupt Source 12 Priority                                       |
| rv_plic.PRIO13     | 0x34      | 4      | Interrupt Source 13 Priority                                       |
| rv_plic.PRIO14     | 0x38      | 4      | Interrupt Source 14 Priority                                       |
| rv_plic.PRIO15     | 0x3c      | 4      | Interrupt Source 15 Priority                                       |
| rv_plic.PRIO16     | 0x40      | 4      | Interrupt Source 16 Priority                                       |
| rv_plic.PRIO17     | 0x44      | 4      | Interrupt Source 17 Priority                                       |
| rv_plic.PRIO18     | 0x48      | 4      | Interrupt Source 18 Priority                                       |
| rv_plic.PRIO19     | 0x4c      | 4      | Interrupt Source 19 Priority                                       |
| rv_plic.PRIO20     | 0x50      | 4      | Interrupt Source 20 Priority                                       |
| rv_plic.PRIO21     | 0x54      | 4      | Interrupt Source 21 Priority                                       |
| rv_plic.PRIO22     | 0x58      | 4      | Interrupt Source 22 Priority                                       |
| rv_plic.PRIO23     | 0x5c      | 4      | Interrupt Source 23 Priority                                       |
| rv_plic.PRIO24     | 0x60      | 4      | Interrupt Source 24 Priority                                       |
| rv_plic.PRIO25     | 0x64      | 4      | Interrupt Source 25 Priority                                       |
| rv_plic.PRIO26     | 0x68      | 4      | Interrupt Source 26 Priority                                       |
| rv_plic.PRIO27     | 0x6c      | 4      | Interrupt Source 27 Priority                                       |
| rv_plic.PRIO28     | 0x70      | 4      | Interrupt Source 28 Priority                                       |
| rv_plic.PRIO29     | 0x74      | 4      | Interrupt Source 29 Priority                                       |
| rv_plic.PRIO30     | 0x78      | 4      | Interrupt Source 30 Priority                                       |
| rv_plic.PRIO31     | 0x7c      | 4      | Interrupt Source 31 Priority                                       |
| rv_plic.IP         | 0x1000    | 4      | Interrupt Pending  |
| rv_plic.IE0        | 0x2000    | 4      | Interrupt Enable for Target 0                                      |
| rv_plic.THRESHOLD0 | 0x200000  | 4      | Threshold of priority for Target 0                                 |
| rv_plic.CC0        | 0x200004  | 4      | Claim interrupt by read, complete interrupt by write for Target 0. |
| rv_plic.MSIP0      | 0x4000000 | 4      | msip for Hart 0.   |
| rv_plic.ALERT_TEST | 0x4004000 | 4      | Alert Test Register.   |

PRIO0

Interrupt Source 0 Priority

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO0", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace"
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO0 |             |

## PRIO1

Interrupt Source 1 Priority

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO1", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace"
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO1 |             |

## PRIO2

Interrupt Source 2 Priority

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO2", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace"
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO2 |             |

## PRIO3

Interrupt Source 3 Priority

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO3", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace"
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO3 |             |

## PRIO4

Interrupt Source 4 Priority

- Offset: 0x10
- Reset default: 0x0

- **Reset mask:** 0x7

## Fields

```
{"reg": [{"name": "PRIO4", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace"
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO4 |             |

## PRIO5

Interrupt Source 5 Priority

- **Offset:** 0x14
- **Reset default:** 0x0
- **Reset mask:** 0x7

## Fields

```
{"reg": [{"name": "PRIO5", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace"
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO5 |             |

## PRIO6

Interrupt Source 6 Priority

- **Offset:** 0x18
- **Reset default:** 0x0
- **Reset mask:** 0x7

## Fields

```
{"reg": [{"name": "PRIO6", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace"
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO6 |             |

## PRIO7

Interrupt Source 7 Priority

- **Offset:** 0x1c
- **Reset default:** 0x0
- **Reset mask:** 0x7

## Fields

```
{"reg": [{"name": "PRIO7", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace"
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO7 |             |

## PRIO8

Interrupt Source 8 Priority

- **Offset:** 0x20
- **Reset default:** 0x0
- **Reset mask:** 0x7

Fields

```
{"reg": [{"name": "PRIO8", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO8 |             |

PRIO9

Interrupt Source 9 Priority

- **Offset:** 0x24
- **Reset default:** 0x0
- **Reset mask:** 0x7

Fields

```
{"reg": [{"name": "PRIO9", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:3 |      |       |       | Reserved    |
| 2:0  | rw   | 0x0   | PRIO9 |             |

PRIO10

Interrupt Source 10 Priority

- **Offset:** 0x28
- **Reset default:** 0x0
- **Reset mask:** 0x7

Fields

```
{"reg": [{"name": "PRIO10", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO10 |             |

PRIO11

Interrupt Source 11 Priority

- **Offset:** 0x2c
- **Reset default:** 0x0
- **Reset mask:** 0x7

Fields

```
{"reg": [{"name": "PRIO11", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO11 |             |

PRIO12

Interrupt Source 12 Priority

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0x7

Fields

```
{"reg": [{"name": "PRIO12", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontSize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO12 |             |

PRIO13

Interrupt Source 13 Priority

- Offset: 0x34
- Reset default: 0x0
- Reset mask: 0x7

Fields

```
{"reg": [{"name": "PRIO13", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontSize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO13 |             |

PRIO14

Interrupt Source 14 Priority

- Offset: 0x38
- Reset default: 0x0
- Reset mask: 0x7

Fields

```
{"reg": [{"name": "PRIO14", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontSize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO14 |             |

PRIO15

Interrupt Source 15 Priority

- Offset: 0x3c
- Reset default: 0x0
- Reset mask: 0x7

Fields

```
{"reg": [{"name": "PRIO15", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontSize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO15 |             |

# PRIO16

Interrupt Source 16 Priority

- Offset: 0x40
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO16", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO16 |             |

# PRIO17

Interrupt Source 17 Priority

- Offset: 0x44
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO17", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO17 |             |

# PRIO18

Interrupt Source 18 Priority

- Offset: 0x48
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO18", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO18 |             |

# PRIO19

Interrupt Source 19 Priority

- Offset: 0x4c
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO19", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
| 31:3 |      |       |      | Reserved    |



| Bits | Type | Reset Name | Description |
|------|------|------------|-------------|
| 2:0  | rw   | 0x0        | PRIO19      |

# PRIO20

Interrupt Source 20 Priority

- Offset: 0x50
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO20", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset Name | Description |
|------|------|------------|-------------|
| 31:3 |      |            | Reserved    |
| 2:0  | rw   | 0x0        | PRIO20      |

# PRIO21

Interrupt Source 21 Priority

- Offset: 0x54
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO21", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset Name | Description |
|------|------|------------|-------------|
| 31:3 |      |            | Reserved    |
| 2:0  | rw   | 0x0        | PRIO21      |

# PRIO22

Interrupt Source 22 Priority

- Offset: 0x58
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO22", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset Name | Description |
|------|------|------------|-------------|
| 31:3 |      |            | Reserved    |
| 2:0  | rw   | 0x0        | PRIO22      |

# PRIO23

Interrupt Source 23 Priority

- Offset: 0x5c
- Reset default: 0x0
- Reset mask: 0x7

## Fields

{"reg": [{"name": "PRIO23", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO23 |             |

# PRIO24

Interrupt Source 24 Priority

- Offset: 0x60
- Reset default: 0x0
- Reset mask: 0x7

## Fields

{"reg": [{"name": "PRIO24", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO24 |             |

# PRIO25

Interrupt Source 25 Priority

- Offset: 0x64
- Reset default: 0x0
- Reset mask: 0x7

## Fields

{"reg": [{"name": "PRIO25", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO25 |             |

# PRIO26

Interrupt Source 26 Priority

- Offset: 0x68
- Reset default: 0x0
- Reset mask: 0x7

## Fields

{"reg": [{"name": "PRIO26", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO26 |             |

# PRIO27

Interrupt Source 27 Priority

- Offset: 0x6c
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO27", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO27 |             |

## PRIO28

Interrupt Source 28 Priority

- Offset: 0x70
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO28", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO28 |             |

## PRIO29

Interrupt Source 29 Priority

- Offset: 0x74
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO29", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO29 |             |

## PRIO30

Interrupt Source 30 Priority

- Offset: 0x78
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "PRIO30", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO30 |             |

## PRIO31

Interrupt Source 31 Priority

- Offset: 0x7c
- Reset default: 0x0

- **Reset mask:** 0x7

## Fields

```
{"reg": [{"name": "PRIO31", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name   | Description |
|------|------|-------|--------|-------------|
| 31:3 |      |       |        | Reserved    |
| 2:0  | rw   | 0x0   | PRIO31 |             |

## IP

Interrupt Pending

- **Offset:** 0x1000
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "P_0", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_1", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_2", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_3", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_4", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_5", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_6", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_7", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_8", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_9", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_10", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_11", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_12", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_13", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_14", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_15", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_16", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_17", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_18", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_19", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_20", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_21", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_22", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_23", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_24", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_25", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_26", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_27", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_28", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_29", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_30", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "P_31", "bits": 1, "attr": ["ro"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name | Description                 |
|------|------|-------|------|-----------------------------|
| 31   | ro   | 0x0   | P_31 | Interrupt Pending of Source |
| 30   | ro   | 0x0   | P_30 | Interrupt Pending of Source |
| 29   | ro   | 0x0   | P_29 | Interrupt Pending of Source |
| 28   | ro   | 0x0   | P_28 | Interrupt Pending of Source |
| 27   | ro   | 0x0   | P_27 | Interrupt Pending of Source |
| 26   | ro   | 0x0   | P_26 | Interrupt Pending of Source |
| 25   | ro   | 0x0   | P_25 | Interrupt Pending of Source |
| 24   | ro   | 0x0   | P_24 | Interrupt Pending of Source |
| 23   | ro   | 0x0   | P_23 | Interrupt Pending of Source |
| 22   | ro   | 0x0   | P_22 | Interrupt Pending of Source |
| 21   | ro   | 0x0   | P_21 | Interrupt Pending of Source |
| 20   | ro   | 0x0   | P_20 | Interrupt Pending of Source |
| 19   | ro   | 0x0   | P_19 | Interrupt Pending of Source |
| 18   | ro   | 0x0   | P_18 | Interrupt Pending of Source |
| 17   | ro   | 0x0   | P_17 | Interrupt Pending of Source |
| 16   | ro   | 0x0   | P_16 | Interrupt Pending of Source |
| 15   | ro   | 0x0   | P_15 | Interrupt Pending of Source |
| 14   | ro   | 0x0   | P_14 | Interrupt Pending of Source |
| 13   | ro   | 0x0   | P_13 | Interrupt Pending of Source |
| 12   | ro   | 0x0   | P_12 | Interrupt Pending of Source |
| 11   | ro   | 0x0   | P_11 | Interrupt Pending of Source |
| 10   | ro   | 0x0   | P_10 | Interrupt Pending of Source |
| 9    | ro   | 0x0   | P_9  | Interrupt Pending of Source |
| 8    | ro   | 0x0   | P_8  | Interrupt Pending of Source |
| 7    | ro   | 0x0   | P_7  | Interrupt Pending of Source |
| 6    | ro   | 0x0   | P_6  | Interrupt Pending of Source |
| 5    | ro   | 0x0   | P_5  | Interrupt Pending of Source |
| 4    | ro   | 0x0   | P_4  | Interrupt Pending of Source |
| 3    | ro   | 0x0   | P_3  | Interrupt Pending of Source |
| 2    | ro   | 0x0   | P_2  | Interrupt Pending of Source |
| 1    | ro   | 0x0   | P_1  | Interrupt Pending of Source |
| 0    | ro   | 0x0   | P_0  | Interrupt Pending of Source |

## IE0

Interrupt Enable for Target 0

- **Offset:** 0x2000
- **Reset default:** 0x0
- **Reset mask:** 0xffffffff

## Fields

```
{"reg": [{"name": "E_0", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_1", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_2", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_3", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_4", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_5", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_6", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_7", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_8", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_9", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_10", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_11", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_12", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_13", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_14", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_15", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_16", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_17", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_18", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_19", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_20", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_21", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_22", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_23", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_24", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_25", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_26", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_27", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_28", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_29", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_30", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "E_31", "bits": 1, "attr": ["rw"], "rotate": -90}]}
```

### Bits Type Reset Name Description

|    |    |     |      |                            |
|----|----|-----|------|----------------------------|
| 31 | rw | 0x0 | E_31 | Interrupt Enable of Source |
| 30 | rw | 0x0 | E_30 | Interrupt Enable of Source |
| 29 | rw | 0x0 | E_29 | Interrupt Enable of Source |
| 28 | rw | 0x0 | E_28 | Interrupt Enable of Source |
| 27 | rw | 0x0 | E_27 | Interrupt Enable of Source |
| 26 | rw | 0x0 | E_26 | Interrupt Enable of Source |
| 25 | rw | 0x0 | E_25 | Interrupt Enable of Source |
| 24 | rw | 0x0 | E_24 | Interrupt Enable of Source |
| 23 | rw | 0x0 | E_23 | Interrupt Enable of Source |
| 22 | rw | 0x0 | E_22 | Interrupt Enable of Source |
| 21 | rw | 0x0 | E_21 | Interrupt Enable of Source |
| 20 | rw | 0x0 | E_20 | Interrupt Enable of Source |
| 19 | rw | 0x0 | E_19 | Interrupt Enable of Source |
| 18 | rw | 0x0 | E_18 | Interrupt Enable of Source |
| 17 | rw | 0x0 | E_17 | Interrupt Enable of Source |
| 16 | rw | 0x0 | E_16 | Interrupt Enable of Source |
| 15 | rw | 0x0 | E_15 | Interrupt Enable of Source |
| 14 | rw | 0x0 | E_14 | Interrupt Enable of Source |
| 13 | rw | 0x0 | E_13 | Interrupt Enable of Source |
| 12 | rw | 0x0 | E_12 | Interrupt Enable of Source |
| 11 | rw | 0x0 | E_11 | Interrupt Enable of Source |
| 10 | rw | 0x0 | E_10 | Interrupt Enable of Source |
| 9  | rw | 0x0 | E_9  | Interrupt Enable of Source |
| 8  | rw | 0x0 | E_8  | Interrupt Enable of Source |
| 7  | rw | 0x0 | E_7  | Interrupt Enable of Source |
| 6  | rw | 0x0 | E_6  | Interrupt Enable of Source |
| 5  | rw | 0x0 | E_5  | Interrupt Enable of Source |
| 4  | rw | 0x0 | E_4  | Interrupt Enable of Source |
| 3  | rw | 0x0 | E_3  | Interrupt Enable of Source |
| 2  | rw | 0x0 | E_2  | Interrupt Enable of Source |
| 1  | rw | 0x0 | E_1  | Interrupt Enable of Source |
| 0  | rw | 0x0 | E_0  | Interrupt Enable of Source |

## THRESHOLD0

Threshold of priority for Target 0

- Offset: 0x200000
- Reset default: 0x0
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "THRESHOLD0", "bits": 3, "attr": ["rw"], "rotate": -90}, {"bits": 29}], "config": {"lanes": 1, "fontsize": 10, "vs": 10}}
```

| Bits | Type | Reset | Name       | Description |
|------|------|-------|------------|-------------|
| 31:3 |      |       |            | Reserved    |
| 2:0  | rw   | 0x0   | THRESHOLD0 |             |

## CC0

Claim interrupt by read, complete interrupt by write for Target 0. Value read/written is interrupt ID. Reading a value of 0 means no pending interrupts.

- Offset: 0x200004
- Reset default: 0x0
- Reset mask: 0x1f

## Fields

```
{"reg": [{"name": "CC0", "bits": 5, "attr": ["rw"], "rotate": 0}, {"bits": 27}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:5                      Reserved  
4:0    rw        x    CC0

# MSIP0

msip for Hart 0. Write 1 to here asserts software interrupt for Hart msip\_o[0], write 0 to clear.

- Offset: 0x4000000
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "MSIP0", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:1                      Reserved  
0        rw        0x0    MSIP0 Software Interrupt Pending register

# ALERT\_TEST

Alert Test Register.

- Offset: 0x4004000
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "fatal_fault", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

31:1                      Reserved  
0        wo        x        fatal\_fault 'Write 1 to trigger one alert event of this kind.'

# safety\_island / doc / registers.md

## Summary

| Name                       | Offset | Length | Description                            |
|----------------------------|--------|--------|--|
| safety_soc_ctrl.bootaddr   | 0x0    | 4      | Core Boot Address                      |
| safety_soc_ctrl.fetchen    | 0x4    | 4      | Core Fetch Enable                      |
| safety_soc_ctrl.corestatus | 0x8    | 4      | Core Return Status (return value, EOC) |
| safety_soc_ctrl.bootmode   | 0xc    | 4      | Core Boot Mode                         |

# bootaddr

Core Boot Address

- Offset: 0x0
- Reset default: 0x1a000000
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "bootaddr", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

**Bits Type Reset Name Description**

| Bits | Type | Reset      | Name     | Description  |
|------|------|------------|----------|--------------|
| 31:0 | rw   | 0x1a000000 | bootaddr | Boot Address |

# fetchen

Core Fetch Enable

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0x1

## Fields

|   |
|---|
| <pre>{"reg": [{"name": "fetchen", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}</pre> |
|---|

| Bits | Type | Reset | Name    | Description  |
|------|------|-------|---------|--------------|
| 31:1 |      |       |         | Reserved     |
| 0    | rw   | 0x0   | fetchen | Fetch Enable |

# corestatus

Core Return Status (return value, EOC)

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

|  |
|--|
| <pre>{"reg": [{"name": "core_status", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}</pre> |
|--|

| Bits | Type | Reset | Name        | Description   |
|------|------|-------|-------------|---|
| 31:0 | rw   | 0x0   | core_status | Core Return Status (EOC(bit[31]) and status(bit[30:0])) |

# bootmode

Core Boot Mode

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0x3

## Fields

|  |
|--|
| <pre>{"reg": [{"name": "bootmode", "bits": 2, "attr": ["rw"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}</pre> |
|--|

| Bits | Type | Reset | Name     | Description |
|------|------|-------|----------|-------------|
| 31:2 |      |       |          | Reserved    |
| 1:0  | rw   | 0x0   | bootmode | Boot Mode   |

# serial\_link / doc / registers.md

## Summary

| Name                         | Offset | Length | Description   |
|------------------------------|--------|--------|---|
| serial_link.CTRL             | 0x0    | 4      | Global clock, isolation and reset control configuration       |
| serial_link.ISOLATED         | 0x4    | 4      | Isolation status of AXI ports                                 |
| serial_link.TX_PHY_CLK_DIV_0 | 0x8    | 4      | Holds clock divider factor for forwarded clock of the TX Phys |
| serial_link.TX_PHY_CLK_DIV_1 | 0xc    | 4      | Holds clock divider factor for forwarded clock of the TX Phys |
| serial_link.TX_PHY_CLK_DIV_2 | 0x10   | 4      | Holds clock divider factor for forwarded clock of the TX Phys |
| serial_link.TX_PHY_CLK_DIV_3 | 0x14   | 4      | Holds clock divider factor for forwarded clock of the TX Phys |

[illegible]



| Name   | Offset | Length | Description  |
|--|--------|--------|--|
| <a href="#"><u>serial_link.TX_PHY_CLK_START_30</u></a>         | 0x118  | 4      | Controls duty cycle and phase of rising edge in TX Phys                        |
| <a href="#"><u>serial_link.TX_PHY_CLK_START_31</u></a>         | 0x11c  | 4      | Controls duty cycle and phase of rising edge in TX Phys                        |
| <a href="#"><u>serial_link.TX_PHY_CLK_START_32</u></a>         | 0x120  | 4      | Controls duty cycle and phase of rising edge in TX Phys                        |
| <a href="#"><u>serial_link.TX_PHY_CLK_START_33</u></a>         | 0x124  | 4      | Controls duty cycle and phase of rising edge in TX Phys                        |
| <a href="#"><u>serial_link.TX_PHY_CLK_START_34</u></a>         | 0x128  | 4      | Controls duty cycle and phase of rising edge in TX Phys                        |
| <a href="#"><u>serial_link.TX_PHY_CLK_START_35</u></a>         | 0x12c  | 4      | Controls duty cycle and phase of rising edge in TX Phys                        |
| <a href="#"><u>serial_link.TX_PHY_CLK_START_36</u></a>         | 0x130  | 4      | Controls duty cycle and phase of rising edge in TX Phys                        |
| <a href="#"><u>serial_link.TX_PHY_CLK_START_37</u></a>         | 0x134  | 4      | Controls duty cycle and phase of rising edge in TX Phys                        |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_0</u></a>            | 0x138  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_1</u></a>            | 0x13c  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_2</u></a>            | 0x140  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_3</u></a>            | 0x144  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_4</u></a>            | 0x148  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_5</u></a>            | 0x14c  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_6</u></a>            | 0x150  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_7</u></a>            | 0x154  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_8</u></a>            | 0x158  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_9</u></a>            | 0x15c  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_10</u></a>           | 0x160  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_11</u></a>           | 0x164  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_12</u></a>           | 0x168  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_13</u></a>           | 0x16c  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_14</u></a>           | 0x170  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_15</u></a>           | 0x174  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_16</u></a>           | 0x178  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_17</u></a>           | 0x17c  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_18</u></a>           | 0x180  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_19</u></a>           | 0x184  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_20</u></a>           | 0x188  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_21</u></a>           | 0x18c  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_22</u></a>           | 0x190  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_23</u></a>           | 0x194  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_24</u></a>           | 0x198  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_25</u></a>           | 0x19c  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_26</u></a>           | 0x1a0  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_27</u></a>           | 0x1a4  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_28</u></a>           | 0x1a8  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_29</u></a>           | 0x1ac  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_30</u></a>           | 0x1b0  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_31</u></a>           | 0x1b4  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_32</u></a>           | 0x1b8  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_33</u></a>           | 0x1bc  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_34</u></a>           | 0x1c0  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_35</u></a>           | 0x1c4  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_36</u></a>           | 0x1c8  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.TX_PHY_CLK_END_37</u></a>           | 0x1cc  | 4      | Controls duty cycle and phase of falling edge in TX Phys                       |
| <a href="#"><u>serial_link.RAW_MODE_EN</u></a>                 | 0x1d0  | 4      | Enables Raw mode   |
| <a href="#"><u>serial_link.RAW_MODE_IN_CH_SEL</u></a>          | 0x1d4  | 4      | Receive channel select in RAW mode   |
| <a href="#"><u>serial_link.RAW_MODE_IN_DATA_VALID_0</u></a>    | 0x1d8  | 4      | Mask for valid data in RX FIFOs during RAW mode.                               |
| <a href="#"><u>serial_link.RAW_MODE_IN_DATA_VALID_1</u></a>    | 0x1dc  | 4      | Mask for valid data in RX FIFOs during RAW mode.                               |
| <a href="#"><u>serial_link.RAW_MODE_IN_DATA</u></a>            | 0x1e0  | 4      | Data received by the selected channel in RAW mode                              |
| <a href="#"><u>serial_link.RAW_MODE_OUT_CH_MASK_0</u></a>      | 0x1e4  | 4      | Selects channels to send out data in RAW mode, '1' corresponds to broadcasting |
| <a href="#"><u>serial_link.RAW_MODE_OUT_CH_MASK_1</u></a>      | 0x1e8  | 4      | Selects channels to send out data in RAW mode, '1' corresponds to broadcasting |
| <a href="#"><u>serial_link.RAW_MODE_OUT_DATA_FIFO</u></a>      | 0x1ec  | 4      | Data that will be pushed to the RAW mode output FIFO                           |
| <a href="#"><u>serial_link.RAW_MODE_OUT_DATA_FIFO_CTRL</u></a> | 0x1f0  | 4      | Status and control register for the RAW mode data out FIFO                     |
| <a href="#"><u>serial_link.RAW_MODE_OUT_EN</u></a>             | 0x1f4  | 4      | Enable transmission of data currently hold in the output FIFO                  |
| <a href="#"><u>serial_link.FLOW_CONTROL_FIFO_CLEAR</u></a>     | 0x1f8  | 4      | Clears the flow control Fifo   |
| <a href="#"><u>serial_link.CHANNEL_ALLOC_TX_CFG</u></a>        | 0x1fc  | 4      | Configuration settings for the TX side in the channel allocator                |
| <a href="#"><u>serial_link.CHANNEL_ALLOC_TX_CH_EN_0</u></a>    | 0x200  | 4      | Channel enable mask for the TX side.   |
| <a href="#"><u>serial_link.CHANNEL_ALLOC_TX_CH_EN_1</u></a>    | 0x204  | 4      | Channel enable mask for the TX side.   |
| <a href="#"><u>serial_link.CHANNEL_ALLOC_TX_CTRL</u></a>       | 0x208  | 4      | Soft clear or force flush the TX side of the channel allocator                 |
| <a href="#"><u>serial_link.CHANNEL_ALLOC_RX_CFG</u></a>        | 0x20c  | 4      | Configuration settings for the RX side in the channel allocator                |
| <a href="#"><u>serial_link.CHANNEL_ALLOC_RX_CTRL</u></a>       | 0x210  | 4      | Soft clear the RX side of the channel allocator                                |

| Name                                 | Offset | Length | Description                          |
|--------------------------------------|--------|--------|--------------------------------------|
| serial_link.CHANNEL_ALLOC_RX_CH_EN_0 | 0x214  | 4      | Channel enable mask for the RX side. |
| serial_link.CHANNEL_ALLOC_RX_CH_EN_1 | 0x218  | 4      | Channel enable mask for the RX side. |

# CTRL

Global clock, isolation and reset control configuration

- Offset: 0x0
- Reset default: 0x302
- Reset mask: 0x303

## Fields

```
{"reg": [{"name": "clk_ena", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "reset_n", "bits": 1, "attr": ["rw"], "rotate": -90}
```

| Bits  | Type | Reset | Name            | Description  |
|-------|------|-------|-----------------|--|
| 31:10 |      |       |                 | Reserved   |
| 9     | rw   | 0x1   | axi_out_isolate | Isolate AXI master out port. (active-high)                         |
| 8     | rw   | 0x1   | axi_in_isolate  | Isolate AXI slave in port. (active-high)                           |
| 7:2   |      |       |                 | Reserved   |
| 1     | rw   | 0x1   | reset_n         | SW controlled synchronous reset. (active-low)                      |
| 0     | rw   | 0x0   | clk_ena         | Clock gate enable for network, link, physical layer. (active-high) |

# ISOLATED

Isolation status of AXI ports

- Offset: 0x4
- Reset default: 0x3
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "axi_in", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "axi_out", "bits": 1, "attr": ["ro"], "rotate": -90},
```

| Bits | Type | Reset | Name    | Description                 |
|------|------|-------|---------|-----------------------------|
| 31:2 |      |       |         | Reserved                    |
| 1    | ro   | 0x1   | axi_out | master out isolation status |
| 0    | ro   | 0x1   | axi_in  | slave in isolation status   |

# TX\_PHY\_CLK\_DIV

Holds clock divider factor for forwarded clock of the TX Phys

- Reset default: 0x8
- Reset mask: 0x7ff

## Instances

| Name              | Offset |
|-------------------|--------|
| TX_PHY_CLK_DIV_0  | 0x8    |
| TX_PHY_CLK_DIV_1  | 0xc    |
| TX_PHY_CLK_DIV_2  | 0x10   |
| TX_PHY_CLK_DIV_3  | 0x14   |
| TX_PHY_CLK_DIV_4  | 0x18   |
| TX_PHY_CLK_DIV_5  | 0x1c   |
| TX_PHY_CLK_DIV_6  | 0x20   |
| TX_PHY_CLK_DIV_7  | 0x24   |
| TX_PHY_CLK_DIV_8  | 0x28   |
| TX_PHY_CLK_DIV_9  | 0x2c   |
| TX_PHY_CLK_DIV_10 | 0x30   |
| TX_PHY_CLK_DIV_11 | 0x34   |
| TX_PHY_CLK_DIV_12 | 0x38   |

| Name              | Offset |
|-------------------|--------|
| TX_PHY_CLK_DIV_13 | 0x3c   |
| TX_PHY_CLK_DIV_14 | 0x40   |
| TX_PHY_CLK_DIV_15 | 0x44   |
| TX_PHY_CLK_DIV_16 | 0x48   |
| TX_PHY_CLK_DIV_17 | 0x4c   |
| TX_PHY_CLK_DIV_18 | 0x50   |
| TX_PHY_CLK_DIV_19 | 0x54   |
| TX_PHY_CLK_DIV_20 | 0x58   |
| TX_PHY_CLK_DIV_21 | 0x5c   |
| TX_PHY_CLK_DIV_22 | 0x60   |
| TX_PHY_CLK_DIV_23 | 0x64   |
| TX_PHY_CLK_DIV_24 | 0x68   |
| TX_PHY_CLK_DIV_25 | 0x6c   |
| TX_PHY_CLK_DIV_26 | 0x70   |
| TX_PHY_CLK_DIV_27 | 0x74   |
| TX_PHY_CLK_DIV_28 | 0x78   |
| TX_PHY_CLK_DIV_29 | 0x7c   |
| TX_PHY_CLK_DIV_30 | 0x80   |
| TX_PHY_CLK_DIV_31 | 0x84   |
| TX_PHY_CLK_DIV_32 | 0x88   |
| TX_PHY_CLK_DIV_33 | 0x8c   |
| TX_PHY_CLK_DIV_34 | 0x90   |
| TX_PHY_CLK_DIV_35 | 0x94   |
| TX_PHY_CLK_DIV_36 | 0x98   |
| TX_PHY_CLK_DIV_37 | 0x9c   |

Fields

|  |
|--|
| { "reg": [ { "name": "clk_divs", "bits": 11, "attr": [ "rw" ], "rotate": 0 }, { "bits": 21 } ], "config": { "lanes": 1, "fontsize": 10, "vspace": 10 } } |
|--|

| Bits  | Type | Reset | Name     | Description                       |
|-------|------|-------|----------|-----------------------------------|
| 31:11 |      |       |          | Reserved                          |
| 10:0  | rw   | 0x8   | clk_divs | Clock division factor of TX clock |

TX\_PHY\_CLK\_START

Controls duty cycle and phase of rising edge in TX Phys

- Reset default: 0x2
- Reset mask: 0x7ff

Instances

| Name                | Offset |
|---------------------|--------|
| TX_PHY_CLK_START_0  | 0xa0   |
| TX_PHY_CLK_START_1  | 0xa4   |
| TX_PHY_CLK_START_2  | 0xa8   |
| TX_PHY_CLK_START_3  | 0xac   |
| TX_PHY_CLK_START_4  | 0xb0   |
| TX_PHY_CLK_START_5  | 0xb4   |
| TX_PHY_CLK_START_6  | 0xb8   |
| TX_PHY_CLK_START_7  | 0xbc   |
| TX_PHY_CLK_START_8  | 0xc0   |
| TX_PHY_CLK_START_9  | 0xc4   |
| TX_PHY_CLK_START_10 | 0xc8   |
| TX_PHY_CLK_START_11 | 0xcc   |
| TX_PHY_CLK_START_12 | 0xd0   |
| TX_PHY_CLK_START_13 | 0xd4   |
| TX_PHY_CLK_START_14 | 0xd8   |
| TX_PHY_CLK_START_15 | 0xdc   |
| TX_PHY_CLK_START_16 | 0xe0   |
| TX_PHY_CLK_START_17 | 0xe4   |
| TX_PHY_CLK_START_18 | 0xe8   |
| TX_PHY_CLK_START_19 | 0xec   |

| Name                | Offset |
|---------------------|--------|
| TX_PHY_CLK_START_20 | 0xf0   |
| TX_PHY_CLK_START_21 | 0xf4   |
| TX_PHY_CLK_START_22 | 0xf8   |
| TX_PHY_CLK_START_23 | 0xfc   |
| TX_PHY_CLK_START_24 | 0x100  |
| TX_PHY_CLK_START_25 | 0x104  |
| TX_PHY_CLK_START_26 | 0x108  |
| TX_PHY_CLK_START_27 | 0x10c  |
| TX_PHY_CLK_START_28 | 0x110  |
| TX_PHY_CLK_START_29 | 0x114  |
| TX_PHY_CLK_START_30 | 0x118  |
| TX_PHY_CLK_START_31 | 0x11c  |
| TX_PHY_CLK_START_32 | 0x120  |
| TX_PHY_CLK_START_33 | 0x124  |
| TX_PHY_CLK_START_34 | 0x128  |
| TX_PHY_CLK_START_35 | 0x12c  |
| TX_PHY_CLK_START_36 | 0x130  |
| TX_PHY_CLK_START_37 | 0x134  |

## Fields

```
{"reg": [{"name": "clk_shift_start", "bits": 11, "attr": ["rw"], "rotate": 0}, {"bits": 21}], "config": {"lanes": 1, "fontsize": 10,
```

| Bits  | Type | Reset | Name            | Description                             |
|-------|------|-------|-----------------|---|
| 31:11 |      |       |                 | Reserved                                |
| 10:0  | rw   | 0x2   | clk_shift_start | Positive Edge of divided, shifted clock |

# TX\_PHY\_CLK\_END

Controls duty cycle and phase of falling edge in TX Phys

- Reset default: 0x6
- Reset mask: 0x7ff

## Instances

| Name              | Offset |
|-------------------|--------|
| TX_PHY_CLK_END_0  | 0x138  |
| TX_PHY_CLK_END_1  | 0x13c  |
| TX_PHY_CLK_END_2  | 0x140  |
| TX_PHY_CLK_END_3  | 0x144  |
| TX_PHY_CLK_END_4  | 0x148  |
| TX_PHY_CLK_END_5  | 0x14c  |
| TX_PHY_CLK_END_6  | 0x150  |
| TX_PHY_CLK_END_7  | 0x154  |
| TX_PHY_CLK_END_8  | 0x158  |
| TX_PHY_CLK_END_9  | 0x15c  |
| TX_PHY_CLK_END_10 | 0x160  |
| TX_PHY_CLK_END_11 | 0x164  |
| TX_PHY_CLK_END_12 | 0x168  |
| TX_PHY_CLK_END_13 | 0x16c  |
| TX_PHY_CLK_END_14 | 0x170  |
| TX_PHY_CLK_END_15 | 0x174  |
| TX_PHY_CLK_END_16 | 0x178  |
| TX_PHY_CLK_END_17 | 0x17c  |
| TX_PHY_CLK_END_18 | 0x180  |
| TX_PHY_CLK_END_19 | 0x184  |
| TX_PHY_CLK_END_20 | 0x188  |
| TX_PHY_CLK_END_21 | 0x18c  |
| TX_PHY_CLK_END_22 | 0x190  |
| TX_PHY_CLK_END_23 | 0x194  |
| TX_PHY_CLK_END_24 | 0x198  |
| TX_PHY_CLK_END_25 | 0x19c  |
| TX_PHY_CLK_END_26 | 0x1a0  |

| Name              | Offset |
|-------------------|--------|
| TX_PHY_CLK_END_27 | 0x1a4  |
| TX_PHY_CLK_END_28 | 0x1a8  |
| TX_PHY_CLK_END_29 | 0x1ac  |
| TX_PHY_CLK_END_30 | 0x1b0  |
| TX_PHY_CLK_END_31 | 0x1b4  |
| TX_PHY_CLK_END_32 | 0x1b8  |
| TX_PHY_CLK_END_33 | 0x1bc  |
| TX_PHY_CLK_END_34 | 0x1c0  |
| TX_PHY_CLK_END_35 | 0x1c4  |
| TX_PHY_CLK_END_36 | 0x1c8  |
| TX_PHY_CLK_END_37 | 0x1cc  |

Fields

|   |  |
|---|--|
| {"reg": [{"name": "clk_shift_end", "bits": 11, "attr": [{"rw"}, {"rotate": 0}], [{"bits": 21}], "config": {"lanes": 1, "fontsize": 10, "v |  |
|---|--|

| Bits  | Type | Reset | Name          | Description                             |
|-------|------|-------|---------------|---|
| 31:11 |      |       |               | Reserved                                |
| 10:0  | rw   | 0x6   | clk_shift_end | Negative Edge of divided, shifted clock |

RAW\_MODE\_EN

Enables Raw mode

- Offset: 0x1d0
- Reset default: 0x0
- Reset mask: 0x1

Fields

|   |  |
|---|--|
| {"reg": [{"name": "RAW_MODE_EN", "bits": 1, "attr": [{"wo"}], {"rotate": -90}], [{"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "v |  |
|---|--|

| Bits | Type | Reset | Name        | Description |
|------|------|-------|-------------|-------------|
| 31:1 |      |       |             | Reserved    |
| 0    | wo   | 0x0   | RAW_MODE_EN |             |

RAW\_MODE\_IN\_CH\_SEL

Receive channel select in RAW mode

- Offset: 0x1d4
- Reset default: 0x0
- Reset mask: 0x3f

Fields

|   |  |
|---|--|
| {"reg": [{"name": "RAW_MODE_IN_CH_SEL", "bits": 6, "attr": [{"wo"}], {"rotate": -90}], [{"bits": 26}], "config": {"lanes": 1, "fontsize": |  |
|---|--|

| Bits | Type | Reset | Name               | Description |
|------|------|-------|--------------------|-------------|
| 31:6 |      |       |                    | Reserved    |
| 5:0  | wo   | 0x0   | RAW_MODE_IN_CH_SEL |             |

RAW\_MODE\_IN\_DATA\_VALID\_0

Mask for valid data in RX FIFOs during RAW mode.

- Offset: 0x1d8
- Reset default: 0x0
- Reset mask: 0xffffffff

Fields

```
{"reg": [{"name": "RAW_MODE_IN_DATA_VALID_0", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_1", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_2", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_3", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_4", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_5", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_6", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_7", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_8", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_9", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_10", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_11", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_12", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_13", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_14", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_15", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_16", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_17", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_18", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_19", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_20", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_21", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_22", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_23", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_24", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_25", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_26", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_27", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_28", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_29", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_30", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_31", "bits": 1, "attr": ["ro"], "rotate": -90}]}
```

| Bits | Type | Reset | Name                      | Description |
|------|------|-------|---------------------------|-------------|
| 31   | ro   | x     | RAW_MODE_IN_DATA_VALID_31 |             |
| 30   | ro   | x     | RAW_MODE_IN_DATA_VALID_30 |             |
| 29   | ro   | x     | RAW_MODE_IN_DATA_VALID_29 |             |
| 28   | ro   | x     | RAW_MODE_IN_DATA_VALID_28 |             |
| 27   | ro   | x     | RAW_MODE_IN_DATA_VALID_27 |             |
| 26   | ro   | x     | RAW_MODE_IN_DATA_VALID_26 |             |
| 25   | ro   | x     | RAW_MODE_IN_DATA_VALID_25 |             |
| 24   | ro   | x     | RAW_MODE_IN_DATA_VALID_24 |             |
| 23   | ro   | x     | RAW_MODE_IN_DATA_VALID_23 |             |
| 22   | ro   | x     | RAW_MODE_IN_DATA_VALID_22 |             |
| 21   | ro   | x     | RAW_MODE_IN_DATA_VALID_21 |             |
| 20   | ro   | x     | RAW_MODE_IN_DATA_VALID_20 |             |
| 19   | ro   | x     | RAW_MODE_IN_DATA_VALID_19 |             |
| 18   | ro   | x     | RAW_MODE_IN_DATA_VALID_18 |             |
| 17   | ro   | x     | RAW_MODE_IN_DATA_VALID_17 |             |
| 16   | ro   | x     | RAW_MODE_IN_DATA_VALID_16 |             |
| 15   | ro   | x     | RAW_MODE_IN_DATA_VALID_15 |             |
| 14   | ro   | x     | RAW_MODE_IN_DATA_VALID_14 |             |
| 13   | ro   | x     | RAW_MODE_IN_DATA_VALID_13 |             |
| 12   | ro   | x     | RAW_MODE_IN_DATA_VALID_12 |             |
| 11   | ro   | x     | RAW_MODE_IN_DATA_VALID_11 |             |
| 10   | ro   | x     | RAW_MODE_IN_DATA_VALID_10 |             |
| 9    | ro   | x     | RAW_MODE_IN_DATA_VALID_9  |             |
| 8    | ro   | x     | RAW_MODE_IN_DATA_VALID_8  |             |
| 7    | ro   | x     | RAW_MODE_IN_DATA_VALID_7  |             |
| 6    | ro   | x     | RAW_MODE_IN_DATA_VALID_6  |             |
| 5    | ro   | x     | RAW_MODE_IN_DATA_VALID_5  |             |
| 4    | ro   | x     | RAW_MODE_IN_DATA_VALID_4  |             |
| 3    | ro   | x     | RAW_MODE_IN_DATA_VALID_3  |             |
| 2    | ro   | x     | RAW_MODE_IN_DATA_VALID_2  |             |
| 1    | ro   | x     | RAW_MODE_IN_DATA_VALID_1  |             |
| 0    | ro   | x     | RAW_MODE_IN_DATA_VALID_0  |             |

# RAW\_MODE\_IN\_DATA\_VALID\_1

Mask for valid data in RX FIFOs during RAW mode.

- Offset: 0x1dc
- Reset default: 0x0
- Reset mask: 0x3f

## Fields

```
{"reg": [{"name": "RAW_MODE_IN_DATA_VALID_32", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_33", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_34", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_35", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_36", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RAW_MODE_IN_DATA_VALID_37", "bits": 1, "attr": ["ro"], "rotate": -90}]}
```

| Bits | Type | Reset | Name                      | Description                 |
|------|------|-------|---------------------------|-----------------------------|
| 31:6 |      |       |                           | Reserved                    |
| 5    | ro   | x     | RAW_MODE_IN_DATA_VALID_37 | For RAW_MODE_IN_DATA_VALID1 |
| 4    | ro   | x     | RAW_MODE_IN_DATA_VALID_36 | For RAW_MODE_IN_DATA_VALID1 |
| 3    | ro   | x     | RAW_MODE_IN_DATA_VALID_35 | For RAW_MODE_IN_DATA_VALID1 |
| 2    | ro   | x     | RAW_MODE_IN_DATA_VALID_34 | For RAW_MODE_IN_DATA_VALID1 |
| 1    | ro   | x     | RAW_MODE_IN_DATA_VALID_33 | For RAW_MODE_IN_DATA_VALID1 |
| 0    | ro   | x     | RAW_MODE_IN_DATA_VALID_32 | For RAW_MODE_IN_DATA_VALID1 |

# RAW\_MODE\_IN\_DATA

Data received by the selected channel in RAW mode

- Offset: 0x1e0
- Reset default: 0x0
- Reset mask: 0xffff

## Fields

```
{"reg": [{"name": "RAW_MODE_IN_DATA", "bits": 16, "attr": ["ro"], "rotate": 0}, {"bits": 16}], "config": {"lanes": 1, "fontsize": 10,
```

| Bits  | Type | Reset | Name             | Description |
|-------|------|-------|------------------|-------------|
| 31:16 |      |       |                  | Reserved    |
| 15:0  | ro   | x     | RAW_MODE_IN_DATA |             |

## RAW\_MODE\_OUT\_CH\_MASK\_0

Selects channels to send out data in RAW mode, '1 corresponds to broadcasting

- Offset: 0x1e4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "RAW_MODE_OUT_CH_MASK_0", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RAW_MODE_OUT_CH_MASK_1", "bits": 1,
```

| Bits | Type | Reset | Name                    | Description |
|------|------|-------|-------------------------|-------------|
| 31   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_31 |             |
| 30   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_30 |             |
| 29   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_29 |             |
| 28   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_28 |             |
| 27   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_27 |             |
| 26   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_26 |             |
| 25   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_25 |             |
| 24   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_24 |             |
| 23   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_23 |             |
| 22   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_22 |             |
| 21   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_21 |             |
| 20   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_20 |             |
| 19   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_19 |             |
| 18   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_18 |             |
| 17   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_17 |             |
| 16   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_16 |             |
| 15   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_15 |             |
| 14   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_14 |             |
| 13   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_13 |             |
| 12   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_12 |             |
| 11   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_11 |             |
| 10   | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_10 |             |
| 9    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_9  |             |
| 8    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_8  |             |
| 7    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_7  |             |
| 6    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_6  |             |
| 5    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_5  |             |
| 4    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_4  |             |
| 3    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_3  |             |
| 2    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_2  |             |
| 1    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_1  |             |
| 0    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_0  |             |

## RAW\_MODE\_OUT\_CH\_MASK\_1

Selects channels to send out data in RAW mode, '1 corresponds to broadcasting

- Offset: 0x1e8
- Reset default: 0x0
- Reset mask: 0x3f

## Fields

{"reg": [{"name": "RAW\_MODE\_OUT\_CH\_MASK\_32", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RAW\_MODE\_OUT\_CH\_MASK\_33", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RAW\_MODE\_OUT\_CH\_MASK\_34", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RAW\_MODE\_OUT\_CH\_MASK\_35", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RAW\_MODE\_OUT\_CH\_MASK\_36", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "RAW\_MODE\_OUT\_CH\_MASK\_37", "bits": 1, "attr": ["wo"], "rotate": -90}]}

| Bits | Type | Reset | Name                    | Description               |
|------|------|-------|-------------------------|---------------------------|
| 31:6 |      |       |                         | Reserved                  |
| 5    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_37 | For RAW_MODE_OUT_CH_MASK1 |
| 4    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_36 | For RAW_MODE_OUT_CH_MASK1 |
| 3    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_35 | For RAW_MODE_OUT_CH_MASK1 |
| 2    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_34 | For RAW_MODE_OUT_CH_MASK1 |
| 1    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_33 | For RAW_MODE_OUT_CH_MASK1 |
| 0    | wo   | 0x0   | RAW_MODE_OUT_CH_MASK_32 | For RAW_MODE_OUT_CH_MASK1 |

# RAW\_MODE\_OUT\_DATA\_FIFO

Data that will be pushed to the RAW mode output FIFO

- Offset: 0x1ec
- Reset default: 0x0
- Reset mask: 0xffff

## Fields

{"reg": [{"name": "RAW\_MODE\_OUT\_DATA\_FIFO", "bits": 16, "attr": ["wo"], "rotate": 0}, {"bits": 16}], "config": {"lanes": 1, "fontsize": 10}}

| Bits  | Type | Reset | Name                   | Description |
|-------|------|-------|------------------------|-------------|
| 31:16 |      |       |                        | Reserved    |
| 15:0  | wo   | 0x0   | RAW_MODE_OUT_DATA_FIFO |             |

# RAW\_MODE\_OUT\_DATA\_FIFO\_CTRL

Status and control register for the RAW mode data out FIFO

- Offset: 0x1f0
- Reset default: 0x0
- Reset mask: 0x80000701

## Fields

{"reg": [{"name": "clear", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 7}, {"name": "fill\_state", "bits": 3, "attr": ["ro"], "rotate": 0}, {"bits": 10}]}

| Bits  | Type | Reset | Name       | Description   |
|-------|------|-------|------------|---|
| 31    | ro   | 0x0   | is_full    | If '1' the FIFO is full and does not accept any more items. Any additional write to the data fill register will be ignored until there is sufficient space again. |
| 30:11 |      |       |            | Reserved  |
| 10:8  | ro   | 0x0   | fill_state | The number of elements currently stored in the RAW mode TX FIFO that are ready to be sent.  |
| 7:1   |      |       |            | Reserved  |
| 0     | wo   | x     | clear      | Clears the raw mode TX FIFO.  |

# RAW\_MODE\_OUT\_EN

Enable transmission of data currently hold in the output FIFO

- Offset: 0x1f4
- Reset default: 0x0
- Reset mask: 0x1

## Fields

{"reg": [{"name": "RAW\_MODE\_OUT\_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10}}

| Bits | Type | Reset | Name            | Description |
|------|------|-------|-----------------|-------------|
| 31:1 |      |       |                 | Reserved    |
| 0    | rw   | 0x0   | RAW_MODE_OUT_EN |             |



# FLOW\_CONTROL\_FIFO\_CLEAR

Clears the flow control Fifo

- Offset: 0x1f8
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "FLOW_CONTROL_FIFO_CLEAR", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset | Name                    | Description |
|------|------|-------|-------------------------|-------------|
| 31:1 |      |       |                         | Reserved    |
| 0    | wo   | 0x0   | FLOW_CONTROL_FIFO_CLEAR |             |

# CHANNEL\_ALLOC\_TX\_CFG

Configuration settings for the TX side in the channel allocator

- Offset: 0x1fc
- Reset default: 0x203
- Reset mask: 0xff03

## Fields

```
{"reg": [{"name": "bypass_en", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "auto_flush_en", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 15}, {"name": "auto_flush_count", "bits": 8, "attr": ["rw"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits  | Type | Reset | Name             | Description  |
|-------|------|-------|------------------|--|
| 31:16 |      |       |                  | Reserved   |
| 15:8  | rw   | 0x2   | auto_flush_count | The number of cycles to wait before auto flushing (sending) packets in the channel allocator |
| 7:2   |      |       |                  | Reserved   |
| 1     | rw   | 0x1   | auto_flush_en    | Enable the auto-flush feature of the TX side in the channel allocator                        |
| 0     | rw   | 0x1   | bypass_en        | Enable bypassing the TX channel allocator  |

# CHANNEL\_ALLOC\_TX\_CH\_EN\_0

Channel enable mask for the TX side.

- Offset: 0x200
- Reset default: 0xffffffff
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "CHANNEL_ALLOC_TX_CH_EN_0", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_TX_CH_EN_1", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 17}], "config": {"lanes": 1, "fontsize": 12}}
```

| Bits | Type | Reset | Name                      | Description |
|------|------|-------|---------------------------|-------------|
| 31   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_31 |             |
| 30   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_30 |             |
| 29   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_29 |             |
| 28   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_28 |             |
| 27   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_27 |             |
| 26   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_26 |             |
| 25   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_25 |             |
| 24   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_24 |             |
| 23   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_23 |             |
| 22   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_22 |             |
| 21   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_21 |             |
| 20   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_20 |             |
| 19   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_19 |             |
| 18   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_18 |             |
| 17   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_17 |             |

| Bits | Type | Reset | Name                      | Description |
|------|------|-------|---------------------------|-------------|
| 16   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_16 |             |
| 15   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_15 |             |
| 14   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_14 |             |
| 13   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_13 |             |
| 12   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_12 |             |
| 11   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_11 |             |
| 10   | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_10 |             |
| 9    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_9  |             |
| 8    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_8  |             |
| 7    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_7  |             |
| 6    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_6  |             |
| 5    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_5  |             |
| 4    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_4  |             |
| 3    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_3  |             |
| 2    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_2  |             |
| 1    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_1  |             |
| 0    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_0  |             |

# CHANNEL\_ALLOC\_TX\_CH\_EN\_1

Channel enable mask for the TX side.

- Offset: 0x204
- Reset default: 0x3f
- Reset mask: 0x3f

## Fields

```
{"reg": [{"name": "CHANNEL_ALLOC_TX_CH_EN_32", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_TX_CH_EN_33", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_TX_CH_EN_34", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_TX_CH_EN_35", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_TX_CH_EN_36", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_TX_CH_EN_37", "bits": 1, "attr": ["rw"], "rotate": -90}]}
```

| Bits | Type | Reset | Name                      | Description                 |
|------|------|-------|---------------------------|-----------------------------|
| 31:6 |      |       |                           | Reserved                    |
| 5    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_37 | For CHANNEL_ALLOC_TX_CH_EN1 |
| 4    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_36 | For CHANNEL_ALLOC_TX_CH_EN1 |
| 3    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_35 | For CHANNEL_ALLOC_TX_CH_EN1 |
| 2    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_34 | For CHANNEL_ALLOC_TX_CH_EN1 |
| 1    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_33 | For CHANNEL_ALLOC_TX_CH_EN1 |
| 0    | rw   | 0x1   | CHANNEL_ALLOC_TX_CH_EN_32 | For CHANNEL_ALLOC_TX_CH_EN1 |

# CHANNEL\_ALLOC\_TX\_CTRL

Soft clear or force flush the TX side of the channel allocator

- Offset: 0x208
- Reset default: 0x0
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "clear", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "flush", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "reserved", "bits": 30, "attr": ["wo"], "rotate": -90}]}
```

| Bits | Type | Reset | Name  | Description  |
|------|------|-------|-------|--|
| 31:2 |      |       |       | Reserved   |
| 1    | wo   | x     | flush | Flush (transmit remaining data) in the TX side of the channel allocator. |
| 0    | wo   | x     | clear | Software clear the TX side of the channel allocator                      |

# CHANNEL\_ALLOC\_RX\_CFG

Configuration settings for the RX side in the channel allocator

- Offset: 0x20c
- Reset default: 0x10203

- Reset mask: 0x1ff03

## Fields

```

{"reg": [{"name": "bypass_en", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "auto_flush_en", "bits": 1, "attr": ["rw"], "rotate": 0}]}

```

| Bits  | Type | Reset | Name             | Description  |
|-------|------|-------|------------------|--|
| 31:17 |      |       |                  | Reserved   |
| 16    | rw   | 0x1   | sync_en          | Enable (1) or disable (0) the synchronization barrier between the channels (needs to be disabled in raw mode). |
| 15:8  | rw   | 0x2   | auto_flush_count | The number of cycles to wait before synchronizing on partial packets on the RX side                            |
| 7:2   |      |       |                  | Reserved   |
| 1     | rw   | 0x1   | auto_flush_en    | Enable the auto-flush feature of the RX side in the channel allocator  |
| 0     | rw   | 0x1   | bypass_en        | Enable bypassing the RX channel allocator  |

## CHANNEL\_ALLOC\_RX\_CTRL

Soft clear the RX side of the channel allocator

- Offset: 0x210
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "clear", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace":
```

| Bits | Type | Reset | Name  | Description   |
|------|------|-------|-------|---|
| 31:1 |      |       |       | Reserved  |
| 0    | wo   | x     | clear | Software clear the TX side of the channel allocator |

## CHANNEL\_ALLOC\_RX\_CH\_EN\_0

Channel enable mask for the RX side.

- Offset: 0x214
- Reset default: 0xffffffff
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "CHANNEL_ALLOC_RX_CH_EN_0", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_RX_CH_EN_1", "bits":
```

| Bits | Type | Reset | Name                      | Description |
|------|------|-------|---------------------------|-------------|
| 31   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_31 |             |
| 30   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_30 |             |
| 29   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_29 |             |
| 28   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_28 |             |
| 27   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_27 |             |
| 26   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_26 |             |
| 25   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_25 |             |
| 24   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_24 |             |
| 23   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_23 |             |
| 22   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_22 |             |
| 21   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_21 |             |
| 20   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_20 |             |
| 19   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_19 |             |
| 18   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_18 |             |
| 17   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_17 |             |
| 16   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_16 |             |
| 15   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_15 |             |
| 14   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_14 |             |
| 13   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_13 |             |

| Bits | Type | Reset | Name                      | Description |
|------|------|-------|---------------------------|-------------|
| 12   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_12 |             |
| 11   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_11 |             |
| 10   | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_10 |             |
| 9    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_9  |             |
| 8    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_8  |             |
| 7    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_7  |             |
| 6    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_6  |             |
| 5    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_5  |             |
| 4    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_4  |             |
| 3    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_3  |             |
| 2    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_2  |             |
| 1    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_1  |             |
| 0    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_0  |             |

## CHANNEL\_ALLOC\_RX\_CH\_EN\_1

Channel enable mask for the RX side.

- Offset: 0x218
- Reset default: 0x3f
- Reset mask: 0x3f

### Fields

```
{"reg": [{"name": "CHANNEL_ALLOC_RX_CH_EN_32", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_RX_CH_EN_33", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_RX_CH_EN_34", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_RX_CH_EN_35", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_RX_CH_EN_36", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "CHANNEL_ALLOC_RX_CH_EN_37", "bits": 1, "attr": ["rw"], "rotate": -90}]}
```

| Bits | Type | Reset | Name                      | Description                 |
|------|------|-------|---------------------------|-----------------------------|
| 31:6 |      |       |                           | Reserved                    |
| 5    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_37 | For CHANNEL_ALLOC_RX_CH_EN1 |
| 4    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_36 | For CHANNEL_ALLOC_RX_CH_EN1 |
| 3    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_35 | For CHANNEL_ALLOC_RX_CH_EN1 |
| 2    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_34 | For CHANNEL_ALLOC_RX_CH_EN1 |
| 1    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_33 | For CHANNEL_ALLOC_RX_CH_EN1 |
| 0    | rw   | 0x1   | CHANNEL_ALLOC_RX_CH_EN_32 | For CHANNEL_ALLOC_RX_CH_EN1 |

spim / doc / registers.md

## Summary

| Name                                   | Offset | Length | Description  |
|--|--------|--------|--|
| spi_host. <a href="#">INTR_STATE</a>   | 0x0    | 4      | Interrupt State Register                                 |
| spi_host. <a href="#">INTR_ENABLE</a>  | 0x4    | 4      | Interrupt Enable Register                                |
| spi_host. <a href="#">INTR_TEST</a>    | 0x8    | 4      | Interrupt Test Register                                  |
| spi_host. <a href="#">ALERT_TEST</a>   | 0xc    | 4      | Alert Test Register                                      |
| spi_host. <a href="#">CONTROL</a>      | 0x10   | 4      | Control register   |
| spi_host. <a href="#">STATUS</a>       | 0x14   | 4      | Status register  |
| spi_host. <a href="#">CONFIGOPTS</a>   | 0x18   | 4      | Configuration options register.                          |
| spi_host. <a href="#">CSID</a>         | 0x1c   | 4      | Chip-Select ID   |
| spi_host. <a href="#">COMMAND</a>      | 0x20   | 4      | Command Register   |
| spi_host. <a href="#">RXDATA</a>       | 0x24   | 4      | SPI Receive Data.  |
| spi_host. <a href="#">TXDATA</a>       | 0x28   | 4      | SPI Transmit Data.                                       |
| spi_host. <a href="#">ERROR_ENABLE</a> | 0x2c   | 4      | Controls which classes of errors raise an interrupt.     |
| spi_host. <a href="#">ERROR_STATUS</a> | 0x30   | 4      | Indicates that any errors that have occurred.            |
| spi_host. <a href="#">EVENT_ENABLE</a> | 0x34   | 4      | Controls which classes of SPI events raise an interrupt. |

## INTR\_STATE

Interrupt State Register

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "error", "bits": 1, "attr": ["rwl"], "rotate": -90}, {"name": "spi_event", "bits": 1, "attr": ["ro"], "rotate": -90}]}
```

| Bits | Type | Reset | Name      | Description   |
|------|------|-------|-----------|---|
| 31:2 |      |       |           | Reserved  |
| 1    | ro   | 0x0   | spi_event | Event-related interrupts, see <a href="#">EVENT_ENABLE</a> register for more information. |
| 0    | rw1c | 0x0   | error     | Error-related interrupts, see <a href="#">ERROR_ENABLE</a> register for more information. |

## INTR\_ENABLE

Interrupt Enable Register

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "error", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "spi_event", "bits": 1, "attr": ["rw"], "rotate": -90}]}
```

| Bits | Type | Reset | Name      | Description  |
|------|------|-------|-----------|--|
| 31:2 |      |       |           | Reserved   |
| 1    | rw   | 0x0   | spi_event | Enable interrupt when <a href="#">INTR_STATE.spi_event</a> is set. |
| 0    | rw   | 0x0   | error     | Enable interrupt when <a href="#">INTR_STATE.error</a> is set.     |

## INTR\_TEST

Interrupt Test Register

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "error", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "spi_event", "bits": 1, "attr": ["wo"], "rotate": -90}]}
```

| Bits | Type | Reset | Name      | Description   |
|------|------|-------|-----------|---|
| 31:2 |      |       |           | Reserved  |
| 1    | wo   | 0x0   | spi_event | Write 1 to force <a href="#">INTR_STATE.spi_event</a> to 1. |
| 0    | wo   | 0x0   | error     | Write 1 to force <a href="#">INTR_STATE.error</a> to 1.     |

## ALERT\_TEST

Alert Test Register

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "fatal_fault", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "v": 1}}
```

| Bits | Type | Reset | Name        | Description                                      |
|------|------|-------|-------------|--|
| 31:1 |      |       |             | Reserved   |
| 0    | wo   | 0x0   | fatal_fault | Write 1 to trigger one alert event of this kind. |

## CONTROL

Control register

- Offset: 0x10
- Reset default: 0x7f
- Reset mask: 0xe000ffff

Fields

{"reg": [{"name": "RX\_WATERMARK", "bits": 8, "attr": ["rw"], "rotate": 0}, {"name": "TX\_WATERMARK", "bits": 8, "attr": ["rw"], "rotate": 0}, {"name": "OUTPUT\_EN", "bits": 1, "attr": ["rw"], "rotate": 0}, {"name": "SW\_RST", "bits": 1, "attr": ["rw"], "rotate": 0}, {"name": "SPIEN", "bits": 1, "attr": ["rw"], "rotate": 0}]}

| Bits  | Type | Reset | Name                |
|-------|------|-------|---------------------|
| 31    | rw   | 0x0   | <u>SPIEN</u>        |
| 30    | rw   | 0x0   | <u>SW_RST</u>       |
| 29    | rw   | 0x0   | <u>OUTPUT_EN</u>    |
| 28:16 |      |       | Reserved            |
| 15:8  | rw   | 0x0   | <u>TX_WATERMARK</u> |
| 7:0   | rw   | 0x7f  | <u>RX_WATERMARK</u> |

CONTROL . SPIEN

Enables the SPI host. On reset, this field is 0, meaning that no transactions can proceed.

CONTROL . SW\_RST

Clears the internal state (not registers) to the reset state when set to 1, including the FIFOs, the CDC's, the core state machine and the shift register. In the current implementation, the CDC FIFOs are drained not reset. Therefore software must confirm that both FIFO's empty before releasing the IP from reset.

CONTROL . OUTPUT\_EN

Enable the SPI host output buffers for the sck, csb, and sd lines. This allows the SPI\_HOST IP to connect to the same bus as other SPI controllers without interference.

CONTROL . TX\_WATERMARK

If EVENT\_ENABLE.TXWM is set, the IP will send an interrupt when the depth of the TX FIFO drops below TX\_WATERMARK words (32b each).

CONTROL . RX\_WATERMARK

If EVENT\_ENABLE.RXWM is set, the IP will send an interrupt when the depth of the RX FIFO reaches RX\_WATERMARK words (32b each).

STATUS

Status register

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0xffdfffff

Fields

{"reg": [{"name": "TXQD", "bits": 8, "attr": ["ro"], "rotate": 0}, {"name": "RXQD", "bits": 8, "attr": ["ro"], "rotate": 0}, {"name": "TXFULL", "bits": 1, "attr": ["ro"], "rotate": 0}, {"name": "TXEMPTY", "bits": 1, "attr": ["ro"], "rotate": 0}, {"name": "TXSTALL", "bits": 1, "attr": ["ro"], "rotate": 0}, {"name": "TXWM", "bits": 1, "attr": ["ro"], "rotate": 0}, {"name": "RXFULL", "bits": 1, "attr": ["ro"], "rotate": 0}, {"name": "RXEMPTY", "bits": 1, "attr": ["ro"], "rotate": 0}, {"name": "RXSTALL", "bits": 1, "attr": ["ro"], "rotate": 0}]}

| Bits | Type | Reset | Name    | Description  |
|------|------|-------|---------|--|
| 31   | ro   | 0x0   | READY   | When high, indicates the SPI host is ready to receive commands. Writing to COMMAND when READY is low is an error, and will trigger an interrupt. |
| 30   | ro   | 0x0   | ACTIVE  | When high, indicates the SPI host is processing a previously issued command.   |
| 29   | ro   | 0x0   | TXFULL  | When high, indicates that the transmit data fifo is full. Any further writes to <u>TXDATA</u> will create an error interrupt.                    |
| 28   | ro   | 0x0   | TXEMPTY | When high, indicates that the transmit data fifo is empty.   |
| 27   | ro   | 0x0   | TXSTALL | If high, signifies that an ongoing transaction has stalled due to lack of data in the TX FIFO  |
| 26   | ro   | 0x0   | TXWM    | If high, the amount of data in the TX FIFO has fallen below the level of <u>CONTROL.TX_WATERMARK</u> words (32b each).                           |
| 25   | ro   | 0x0   | RXFULL  | When high, indicates that the receive fifo is full. Any ongoing transactions will stall until firmware reads some data from <u>RXDATA</u> .      |
| 24   | ro   | 0x0   | RXEMPTY | When high, indicates that the receive fifo is empty. Any reads from RX FIFO will cause an error interrupt.                                       |
| 23   | ro   | 0x0   | RXSTALL | If high, signifies that an ongoing transaction has stalled due to lack of available space in the RX FIFO   |

| Bits  | Type | Reset | Name      | Description   |
|-------|------|-------|-----------|---|
| 22    | ro   | 0x0   | BYTEORDER | The value of the ByteOrder parameter, provided so that firmware can confirm proper IP configuration.  |
| 21    |      |       |           | Reserved  |
| 20    | ro   | 0x0   | RXWM      | If high, the number of 32-bits in the RX FIFO now exceeds the <a href="#">CONTROL.RX_WATERMARK</a> entries (32b each).  |
| 19:16 | ro   | 0x0   | CMDQD     | Command queue depth. Indicates how many unread 32-bit words are currently in the command segment queue.   |
| 15:8  | ro   | 0x0   | RXQD      | Receive queue depth. Indicates how many unread 32-bit words are currently in the RX FIFO. When active, this result may an underestimate due to synchronization delays.    |
| 7:0   | ro   | 0x0   | TXQD      | Transmit queue depth. Indicates how many unsent 32-bit words are currently in the TX FIFO. When active, this result may be an overestimate due to synchronization delays. |

## CONFIGOPTS

Configuration options register.

Contains options for controlling the current peripheral. Firmware needs to configure the options before the transfer.

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xefffffff

### Fields

```
{"reg": [{"name": "CLKDIV", "bits": 16, "attr": ["rw"], "rotate": 0}, {"name": "CSNIDLE", "bits": 4, "attr": ["rw"], "rotate": -90},
```

| Bits  | Type | Reset | Name                     |
|-------|------|-------|--------------------------|
| 31    | rw   | 0x0   | <a href="#">CPOL</a>     |
| 30    | rw   | 0x0   | <a href="#">CPHA</a>     |
| 29    | rw   | 0x0   | <a href="#">FULLCYC</a>  |
| 28    |      |       | Reserved                 |
| 27:24 | rw   | 0x0   | <a href="#">CSNLEAD</a>  |
| 23:20 | rw   | 0x0   | <a href="#">CSNTRAIL</a> |
| 19:16 | rw   | 0x0   | <a href="#">CSNIDLE</a>  |
| 15:0  | rw   | 0x0   | <a href="#">CLKDIV</a>   |

### CONFIGOPTS . CPOL

The polarity of the sck clock signal. When CPOL is 0, sck is low when idle, and emits high pulses. When CPOL is 1, sck is high when idle, and emits a series of low pulses.

### CONFIGOPTS . CPHA

The phase of the sck clock signal relative to the data. When CPHA = 0, the data changes on the trailing edge of sck and is typically sampled on the leading edge. Conversely if CPHA = 1 high, data lines change on the leading edge of sck and are typically sampled on the trailing edge. CPHA should be chosen to match the phase of the selected device. The sampling behavior is modified by the [CONFIGOPTS.FULLCYC](#) bit.

### CONFIGOPTS . FULLCYC

Full cycle. Modifies the CPHA sampling behaviour to allow for longer device logic setup times. Rather than sampling the SD bus a half cycle after shifting out data, the data is sampled a full cycle after shifting data out. This means that if CPHA = 0, data is shifted out on the trailing edge, and sampled a full cycle later. If CPHA = 1, data is shifted and sampled with the trailing edge, also separated by a full cycle.

### CONFIGOPTS . CSNLEAD

CS\_N Leading Time. Indicates the number of half sck cycles, CSNLEAD+1, to leave between the falling edge of cs\_n and the first edge of sck. Setting this register to zero corresponds to the minimum delay of one-half sck cycle

### CONFIGOPTS . CSNTRAIL

CS\_N Trailing Time. Indicates the number of half sck cycles, CSNTRAIL+1, to leave between last edge of sck and the rising edge of cs\_n. Setting this register to zero corresponds to the minimum delay of one-half sck cycle.

### CONFIGOPTS . CSNIDLE

Minimum idle time between commands. Indicates the minimum number of sck half-cycles to hold cs\_n high between commands. Setting this register to zero creates a minimally-wide CS\_N-high pulse of one-half sck cycle.

# CONFIGOPTS . CLKDIV

Core clock divider. Slows down subsequent SPI transactions by a factor of (CLKDIV+1) relative to the core clock frequency. The period of sck, T(sck) then becomes 2\*  
(CLK\_DIV+1) \*T (core)

# CSID

Chip-Select ID

Controls which device to target with the next command. This register is passed to the core whenever COMMAND is written. The core then asserts cio\_csb\_ofCSID during the execution of the command.

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "CSID", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description    |
|------|------|-------|------|----------------|
| 31:0 | rw   | 0x0   | CSID | Chip Select ID |

# COMMAND

Command Register

Parameters specific to each command segment. Unlike the CONFIGOPTS multi-register, there is only one command register for controlling all attached SPI devices

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0x1fffffff

## Fields

```
{"reg": [{"name": "CSAAT", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "SPEED", "bits": 2, "attr": ["wo"], "rotate": -90}, {"name": "DIRECTION", "bits": 4, "attr": ["wo"], "rotate": -90}, {"name": "LEN", "bits": 8, "attr": ["wo"], "rotate": -90}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits  | Type | Reset | Name             | Description |
|-------|------|-------|------------------|-------------|
| 31:25 |      |       | Reserved         |             |
| 24:5  | wo   | 0x0   | <u>LEN</u>       |             |
| 4:3   | wo   | 0x0   | <u>DIRECTION</u> |             |
| 2:1   | wo   | 0x0   | <u>SPEED</u>     |             |
| 0     | wo   | 0x0   | <u>CSAAT</u>     |             |

# COMMAND . LEN

Segment Length.

For read or write segments, this field controls the number of 1-byte bursts to transmit and or receive in this command segment. The number of cycles required to send or received a byte will depend on COMMAND.SPEED. For dummy segments, (COMMAND.DIRECTION == 0), this register controls the number of dummy cycles to issue. The number of bytes (or dummy cycles) in the segment will be equal to COMMAND.LEN + 1.

# COMMAND . DIRECTION

The direction for the following command: "0" = Dummy cycles (no TX/RX). "1" = Rx only, "2" = Tx only, "3" = Bidirectional Tx/Rx (Standard SPI mode only).

# COMMAND . SPEED

The speed for this command segment: "0" = Standard SPI. "1" = Dual SPI. "2"=Quad SPI, "3": RESERVED.

# COMMAND . CSAAT

Chip Select Active After Transaction. If COMMAND.CSAAT = 0, the chip select line is raised immediately at the end of the command segment. If COMMAND.CSAAT = 1, the chip select line is left low at the end of the current transaction segment. This allows the creation of longer, more complete SPI transactions, consisting of several separate segments for issuing instructions, pausing for dummy cycles, and transmitting or receiving data from the device.



# RXDATA

SPI Receive Data.

Reads from this window pull data from the RXFIFO.

The serial order of bit transmission is chosen to match SPI flash devices. Individual bytes are always transmitted with the most significant bit first. Only four-byte reads are supported. If ByteOrder = 0, the first byte received is packed in the MSB of !!RXDATA. For some processor architectures, this could lead to shuffling of flash data as compared to how it is written in memory. In which case, choosing ByteOrder = 1 can reverse the byte-order of each data read, causing the first byte received to be packed into the LSB of !!RXDATA. (Though within each byte the most significant bit is always pulled from the bus first.)

- Word Aligned Offset Range: 0x24to0x24
- Size (words): 1
- Access: r0
- Byte writes are *not* supported.

# TXDATA

SPI Transmit Data.

Data written to this window is placed into the TXFIFO. Byte-enables are supported for writes.

The serial order of bit transmission is chosen to match SPI flash devices. Individual bytes are always transmitted with the most significant bit first. Multi-byte writes are also supported, and if ByteOrder = 0, the bits of !!TXDATA are transmitted strictly in order of decreasing significance (i.e. most significant bit first). For some processor architectures, this could lead to shuffling of flash data as compared to how it is written in memory. In which case, choosing ByteOrder = 1 can reverse the byte-order of multi-byte data writes. (Though within each byte the most significant bit is always sent first.)

- Word Aligned Offset Range: 0x28to0x28
- Size (words): 1
- Access: w0
- Byte writes are supported.

# ERROR\_ENABLE

Controls which classes of errors raise an interrupt.

- Offset: 0x2c
- Reset default: 0x1f
- Reset mask: 0x1f

## Fields

```
{ "reg": [ { "name": "CMDBUSY", "bits": 1, "attr": [ "rw" ], "rotate": -90 }, { "name": "OVERFLOW", "bits": 1, "attr": [ "rw" ], "rotate": -90 }
```

| Bits | Type | Reset | Name      | Description  |
|------|------|-------|-----------|--|
| 31:5 |      |       |           | Reserved   |
| 4    | rw   | 0x1   | CSIDINVAL | Invalid CSID: If this bit is set, the block sends an error interrupt whenever a command is submitted, but CSID exceeds NumCS.  |
| 3    | rw   | 0x1   | CMDINVAL  | Invalid Command Errors: If this bit is set, the block sends an error interrupt whenever a command is sent with invalid values for <u>COMMAND.SPEED</u> or <u>COMMAND.DIRECTION</u> . |
| 2    | rw   | 0x1   | UNDERFLOW | Underflow Errors: If this bit is set, the block sends an error interrupt whenever there is a read from <u>RXDATA</u> but the RX FIFO is empty.                                       |
| 1    | rw   | 0x1   | OVERFLOW  | Overflow Errors: If this bit is set, the block sends an error interrupt whenever the TX FIFO overflows.  |
| 0    | rw   | 0x1   | CMDBUSY   | Command Error: If this bit is set, the block sends an error interrupt whenever a command is issued while busy (i.e. a 1 is when <u>STATUS.READY</u> is not asserted.)                |

# ERROR\_STATUS

Indicates that any errors that have occurred. When an error occurs, the corresponding bit must be cleared here before issuing any further commands.

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0x3f

## Fields

```
{"reg": [{"name": "CMDBUSY", "bits": 1, "attr": ["rwc"], "rotate": -90}, {"name": "OVERFLOW", "bits": 1, "attr": ["rwc"], "rotate": -90}]}
```

| Bits | Type | Reset | Name        | Description   |
|------|------|-------|-------------|---|
| 31:6 |      |       |             | Reserved  |
| 5    | rw1c | 0x0   | ACCESSINVAL | Indicates that TLUL attempted to write to TXDATA with no bytes enabled. Such 'zero byte' writes are not supported.  |
| 4    | rw1c | 0x0   | CSIDINVAL   | Indicates a command was attempted with an invalid value for <a href="#">CSID</a> .  |
| 3    | rw1c | 0x0   | CMDINVAL    | Indicates an invalid command segment, meaning either an invalid value of <a href="#">COMMAND.SPEED</a> or a request for bidirectional data transfer at dual or quad speed |
| 2    | rw1c | 0x0   | UNDERFLOW   | Indicates that firmware has attempted to read from <a href="#">RXDATA</a> when the RX FIFO is empty.  |
| 1    | rw1c | 0x0   | OVERFLOW    | Indicates that firmware has overflowed the TX FIFO  |
| 0    | rw1c | 0x0   | CMDBUSY     | Indicates a write to <a href="#">COMMAND</a> when <a href="#">STATUS.READY</a> = 0.   |

## EVENT\_ENABLE

Controls which classes of SPI events raise an interrupt.

- Offset: 0x34
- Reset default: 0x0
- Reset mask: 0x3f

### Fields

```
{"reg": [{"name": "RXFULL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "TXEMPTY", "bits": 1, "attr": ["rw"], "rotate": -90}]}
```

| Bits | Type | Reset | Name                    |
|------|------|-------|-------------------------|
| 31:6 |      |       | Reserved                |
| 5    | rw   | 0x0   | <a href="#">IDLE</a>    |
| 4    | rw   | 0x0   | <a href="#">READY</a>   |
| 3    | rw   | 0x0   | <a href="#">TXWM</a>    |
| 2    | rw   | 0x0   | <a href="#">RXWM</a>    |
| 1    | rw   | 0x0   | <a href="#">TXEMPTY</a> |
| 0    | rw   | 0x0   | <a href="#">RXFULL</a>  |

### EVENT\_ENABLE . IDLE

Assert to send a spi\_event interrupt whenever [STATUS.ACTIVE](#) goes low

### EVENT\_ENABLE . READY

Assert to send a spi\_event interrupt whenever [STATUS.READY](#) goes high

### EVENT\_ENABLE . TXWM

Assert to send a spi\_event interrupt whenever the number of 32-bit words in the TX FIFO is less than [CONTROL.TX\\_WATERMARK](#). To prevent the reassertion of this interrupt add more data to the TX FIFO, or reduce [CONTROL.TX\\_WATERMARK](#).

### EVENT\_ENABLE . RXWM

Assert to send a spi\_event interrupt whenever the number of 32-bit words in the RX FIFO is greater than [CONTROL.RX\\_WATERMARK](#). To prevent the reassertion of this interrupt, read more data from the RX FIFO, or increase [CONTROL.RX\\_WATERMARK](#).

### EVENT\_ENABLE . TXEMPTY

Assert to send a spi\_event interrupt whenever [STATUS.TXEMPTY](#) goes high

### EVENT\_ENABLE . RXFULL

Assert to send a spi\_event interrupt whenever [STATUS.RXFULL](#) goes high

tagger / doc / registers.md

## Summary

| Name                   | Offset | Length | Description                             |
|------------------------|--------|--------|---|
| tagger_reg.PAT_COMMIT  | 0x0    | 4      | Partition configuration commit register |
| tagger_reg.PAT_ADDR_0  | 0x4    | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_1  | 0x8    | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_2  | 0xc    | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_3  | 0x10   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_4  | 0x14   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_5  | 0x18   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_6  | 0x1c   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_7  | 0x20   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_8  | 0x24   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_9  | 0x28   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_10 | 0x2c   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_11 | 0x30   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_12 | 0x34   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_13 | 0x38   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_14 | 0x3c   | 4      | Partition address                       |
| tagger_reg.PAT_ADDR_15 | 0x40   | 4      | Partition address                       |
| tagger_reg.PATID_0     | 0x44   | 4      | Partition ID                            |
| tagger_reg.PATID_1     | 0x48   | 4      | Partition ID                            |
| tagger_reg.PATID_2     | 0x4c   | 4      | Partition ID                            |
| tagger_reg.ADDR_CONF   | 0x50   | 4      | Address encoding mode switch register   |

# PAT\_COMMIT

Partition configuration commit register

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{ "reg": [ { "name": "commit_0", "bits": 1, "attr": [ "rw" ], "rotate": -90, { "bits": 31 } }, { "config": { "lanes": 1, "fontsize": 10, "vspace": 10 } } ] }
```

| Bits | Type | Reset | Name     | Description                               |
|------|------|-------|----------|---|
| 31:1 |      |       |          | Reserved                                  |
| 0    | rw   | 0x0   | commit_0 | commit changes of partition configuration |

# PAT\_ADDR

Partition address

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name        | Offset |
|-------------|--------|
| PAT_ADDR_0  | 0x4    |
| PAT_ADDR_1  | 0x8    |
| PAT_ADDR_2  | 0xc    |
| PAT_ADDR_3  | 0x10   |
| PAT_ADDR_4  | 0x14   |
| PAT_ADDR_5  | 0x18   |
| PAT_ADDR_6  | 0x1c   |
| PAT_ADDR_7  | 0x20   |
| PAT_ADDR_8  | 0x24   |
| PAT_ADDR_9  | 0x28   |
| PAT_ADDR_10 | 0x2c   |
| PAT_ADDR_11 | 0x30   |
| PAT_ADDR_12 | 0x34   |
| PAT_ADDR_13 | 0x38   |
| PAT_ADDR_14 | 0x3c   |
| PAT_ADDR_15 | 0x40   |

## Fields

```
{"reg": [{"name": "PAT_ADDR", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name   | Description                              |
|------|------|--------------|--|
| 31:0 | rw   | 0x0 PAT_ADDR | Single partition configurations: address |

## PATID

Partition ID

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name    | Offset |
|---------|--------|
| PATID_0 | 0x44   |
| PATID_1 | 0x48   |
| PATID_2 | 0x4c   |

## Fields

```
{"reg": [{"name": "PATID", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name | Description  |
|------|------|------------|--|
| 31:0 | rw   | 0x0 PATID  | Partition ID (PatID) for each partition, length determined by params |

## ADDR\_CONF

Address encoding mode switch register

- Reset default: 0x0
- Reset mask: 0xffffffff

## Instances

| Name      | Offset |
|-----------|--------|
| ADDR_CONF | 0x50   |

## Fields

```
{"reg": [{"name": "addr_conf", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name    | Description   |
|------|------|---------------|---|
| 31:0 | rw   | 0x0 addr_conf | 2 bits configuration for each partition. 2'b00: OFF, 2'b01: TOR, 2'b10: NA4 |

## uart / doc / registers.md

## Summary

| Name             | Offset | Length | Description                |
|------------------|--------|--------|----------------------------|
| uart.INTR_STATE  | 0x0    | 4      | Interrupt State Register   |
| uart.INTR_ENABLE | 0x4    | 4      | Interrupt Enable Register  |
| uart.INTR_TEST   | 0x8    | 4      | Interrupt Test Register    |
| uart.ALERT_TEST  | 0xc    | 4      | Alert Test Register        |
| uart.CTRL        | 0x10   | 4      | UART control register      |
| uart.STATUS      | 0x14   | 4      | UART live status register  |
| uart.RDATA       | 0x18   | 4      | UART read data             |
| uart.WDATA       | 0x1c   | 4      | UART write data            |
| uart.FIFO_CTRL   | 0x20   | 4      | UART FIFO control register |
| uart.FIFO_STATUS | 0x24   | 4      | UART FIFO status register  |

| Name              | Offset | Length | Description  |
|-------------------|--------|--------|--|
| uart.OVRD         | 0x28   | 4      | TX pin override control. Gives direct SW control over TX pin state |
| uart.VAL          | 0x2c   | 4      | UART oversampled values  |
| uart.TIMEOUT_CTRL | 0x30   | 4      | UART RX timeout control  |

# INTR\_STATE

Interrupt State Register

- Offset: 0x0
- Reset default: 0x101
- Reset mask: 0x1fff

## Fields

{ "reg": [ { "name": "tx\_watermark", "bits": 1, "attr": [ "ro" ], "rotate": -90 }, { "name": "rx\_watermark", "bits": 1, "attr": [ "ro" ], "rotate": -90 } ] }

| Bits | Type | Reset | Name          | Description  |
|------|------|-------|---------------|--|
| 31:9 |      |       |               | Reserved   |
| 8    | ro   | 0x1   | tx_empty      | raised if the transmit FIFO is empty.  |
| 7    | rw1c | 0x0   | rx_parity_err | raised if the receiver has detected a parity error.  |
| 6    | rw1c | 0x0   | rx_timeout    | raised if RX FIFO has characters remaining in the FIFO without being retrieved for the programmed time period. |
| 5    | rw1c | 0x0   | rx_break_err  | raised if break condition has been detected on receive.  |
| 4    | rw1c | 0x0   | rx_frame_err  | raised if a framing error has been detected on receive.  |
| 3    | rw1c | 0x0   | rx_overflow   | raised if the receive FIFO has overflowed.   |
| 2    | rw1c | 0x0   | tx_done       | raised if the transmit FIFO has emptied and no transmit is ongoing.  |
| 1    | ro   | 0x0   | rx_watermark  | raised if the receive FIFO is past the high-water mark.  |
| 0    | ro   | 0x1   | tx_watermark  | raised if the transmit FIFO is past the high-water mark.   |

# INTR\_ENABLE

Interrupt Enable Register

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0x1fff

## Fields

{ "reg": [ { "name": "tx\_watermark", "bits": 1, "attr": [ "rw" ], "rotate": -90 }, { "name": "rx\_watermark", "bits": 1, "attr": [ "rw" ], "rotate": -90 } ] }

| Bits | Type | Reset | Name          | Description  |
|------|------|-------|---------------|--|
| 31:9 |      |       |               | Reserved   |
| 8    | rw   | 0x0   | tx_empty      | Enable interrupt when <a href="#">INTR_STATE.tx_empty</a> is set.      |
| 7    | rw   | 0x0   | rx_parity_err | Enable interrupt when <a href="#">INTR_STATE.rx_parity_err</a> is set. |
| 6    | rw   | 0x0   | rx_timeout    | Enable interrupt when <a href="#">INTR_STATE.rx_timeout</a> is set.    |
| 5    | rw   | 0x0   | rx_break_err  | Enable interrupt when <a href="#">INTR_STATE.rx_break_err</a> is set.  |
| 4    | rw   | 0x0   | rx_frame_err  | Enable interrupt when <a href="#">INTR_STATE.rx_frame_err</a> is set.  |
| 3    | rw   | 0x0   | rx_overflow   | Enable interrupt when <a href="#">INTR_STATE.rx_overflow</a> is set.   |
| 2    | rw   | 0x0   | tx_done       | Enable interrupt when <a href="#">INTR_STATE.tx_done</a> is set.       |
| 1    | rw   | 0x0   | rx_watermark  | Enable interrupt when <a href="#">INTR_STATE.rx_watermark</a> is set.  |
| 0    | rw   | 0x0   | tx_watermark  | Enable interrupt when <a href="#">INTR_STATE.tx_watermark</a> is set.  |

# INTR\_TEST

Interrupt Test Register

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0x1fff

## Fields

{"reg": [{"name": "tx\_watermark", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "rx\_watermark", "bits": 1, "attr": ["wo"], "rotate": -90}]}

| Bits | Type | Reset | Name          | Description   |
|------|------|-------|---------------|---|
| 31:9 |      |       |               | Reserved  |
| 8    | wo   | 0x0   | tx_empty      | Write 1 to force <a href="#">INTR_STATE.tx_empty</a> to 1.      |
| 7    | wo   | 0x0   | rx_parity_err | Write 1 to force <a href="#">INTR_STATE.rx_parity_err</a> to 1. |
| 6    | wo   | 0x0   | rx_timeout    | Write 1 to force <a href="#">INTR_STATE.rx_timeout</a> to 1.    |
| 5    | wo   | 0x0   | rx_break_err  | Write 1 to force <a href="#">INTR_STATE.rx_break_err</a> to 1.  |
| 4    | wo   | 0x0   | rx_frame_err  | Write 1 to force <a href="#">INTR_STATE.rx_frame_err</a> to 1.  |
| 3    | wo   | 0x0   | rx_overflow   | Write 1 to force <a href="#">INTR_STATE.rx_overflow</a> to 1.   |
| 2    | wo   | 0x0   | tx_done       | Write 1 to force <a href="#">INTR_STATE.tx_done</a> to 1.       |
| 1    | wo   | 0x0   | rx_watermark  | Write 1 to force <a href="#">INTR_STATE.rx_watermark</a> to 1.  |
| 0    | wo   | 0x0   | tx_watermark  | Write 1 to force <a href="#">INTR_STATE.tx_watermark</a> to 1.  |

# ALERT\_TEST

Alert Test Register

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0x1

## Fields

{"reg": [{"name": "fatal\_fault", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "value": 0}}

| Bits | Type | Reset | Name        | Description                                      |
|------|------|-------|-------------|--|
| 31:1 |      |       |             | Reserved   |
| 0    | wo   | 0x0   | fatal_fault | Write 1 to trigger one alert event of this kind. |

# CTRL

UART control register

- Offset: 0x10
- Reset default: 0x0
- Reset mask: 0xffff03f7

## Fields

{"reg": [{"name": "TX", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "RX", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "NCO", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "RXBLVL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "PARITY\_ODD", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "PARITY\_EN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "LLPBK", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "SLPBK", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "NE", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "RX", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "TX", "bits": 1, "attr": ["rw"], "rotate": -90}]}

| Bits  | Type | Reset | Name                       | Description |
|-------|------|-------|----------------------------|-------------|
| 31:16 | rw   | 0x0   | <a href="#">NCO</a>        |             |
| 15:10 |      |       |                            | Reserved    |
| 9:8   | rw   | 0x0   | <a href="#">RXBLVL</a>     |             |
| 7     | rw   | 0x0   | <a href="#">PARITY_ODD</a> |             |
| 6     | rw   | 0x0   | <a href="#">PARITY_EN</a>  |             |
| 5     | rw   | 0x0   | <a href="#">LLPBK</a>      |             |
| 4     | rw   | 0x0   | <a href="#">SLPBK</a>      |             |
| 3     |      |       |                            | Reserved    |
| 2     | rw   | 0x0   | <a href="#">NE</a>         |             |
| 1     | rw   | 0x0   | <a href="#">RX</a>         |             |
| 0     | rw   | 0x0   | <a href="#">TX</a>         |             |

## CTRL . NCO

BAUD clock rate control.

## CTRL . RXBLVL

Trigger level for RX break detection. Sets the number of character times the line must be low to detect a break.

| Value | Name | Description |
|-------|------|-------------|
|-------|------|-------------|

| Value | Name    | Description   |
|-------|---------|---------------|
| 0x1   | break4  | 4 characters  |
| 0x2   | break8  | 8 characters  |
| 0x3   | break16 | 16 characters |

## CTRL . PARITY\_ODD

If PARITY\_EN is true, this determines the type, 1 for odd parity, 0 for even.

## CTRL . PARITY\_EN

If true, parity is enabled in both RX and TX directions.

## CTRL . LLPBK

Line loopback enable.

If this bit is turned on, incoming bits are forwarded to TX for testing purpose. See Block Diagram. Note that the internal design sees RX value as 1 always if line loopback is enabled.

## CTRL . SLPBK

System loopback enable.

If this bit is turned on, any outgoing bits to TX are received through RX. See Block Diagram. Note that the TX line goes 1 if System loopback is enabled.

## CTRL . NF

RX noise filter enable. If the noise filter is enabled, RX line goes through the 3-tap repetition code. It ignores single IP clock period noise.

## CTRL . RX

RX enable

## CTRL . TX

TX enable

# STATUS

UART live status register

- Offset: 0x14
- Reset default: 0x3c
- Reset mask: 0x3f

## Fields

```
{"reg": [{"name": "TXFULL", "bits": 1, "attr": ["ro"], "rotate": -90}, {"name": "RXFULL", "bits": 1, "attr": ["ro"], "rotate": -90},
```

| Bits | Type | Reset | Name    | Description   |
|------|------|-------|---------|---|
| 31:6 |      |       |         | Reserved  |
| 5    | ro   | 0x1   | RXEMPTY | RX FIFO is empty                                    |
| 4    | ro   | 0x1   | RXIDLE  | RX is idle  |
| 3    | ro   | 0x1   | TXIDLE  | TX FIFO is empty and all bits have been transmitted |
| 2    | ro   | 0x1   | TXEMPTY | TX FIFO is empty                                    |
| 1    | ro   | x     | RXFULL  | RX buffer is full                                   |
| 0    | ro   | x     | TXFULL  | TX buffer is full                                   |

# RDATA

UART read data

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "RDATA", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:8 |      |       |       | Reserved    |
| 7:0  | ro   | x     | RDATA |             |

## WDATA

UART write data

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "WDATA", "bits": 8, "attr": ["wo"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name  | Description |
|------|------|-------|-------|-------------|
| 31:8 |      |       |       | Reserved    |
| 7:0  | wo   | 0x0   | WDATA |             |

## FIFO\_CTRL

UART FIFO control register

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "RXRST", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "TXRST", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 30}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name          | Description |
|------|------|-------|---------------|-------------|
| 31:8 |      |       |               | Reserved    |
| 7:5  | rw   | 0x0   | <u>TXILVL</u> |             |
| 4:2  | rw   | 0x0   | <u>RXILVL</u> |             |
| 1    | wo   | 0x0   | <u>TXRST</u>  |             |
| 0    | wo   | 0x0   | <u>RXRST</u>  |             |

## FIFO\_CTRL . TXILVL

Trigger level for TX interrupts. If the FIFO depth is less than the setting, it raises tx\_watermark interrupt.

| Value | Name    | Description   |
|-------|---------|---------------|
| 0x0   | txlvl1  | 1 character   |
| 0x1   | txlvl2  | 2 characters  |
| 0x2   | txlvl4  | 4 characters  |
| 0x3   | txlvl8  | 8 characters  |
| 0x4   | txlvl16 | 16 characters |

Other values are reserved.

## FIFO\_CTRL . RXILVL

Trigger level for RX interrupts. If the FIFO depth is greater than or equal to the setting, it raises rx\_watermark interrupt.

| Value | Name   | Description  |
|-------|--------|--------------|
| 0x0   | rxlvl1 | 1 character  |
| 0x1   | rxlvl2 | 2 characters |
| 0x2   | rxlvl4 | 4 characters |



| Value | Name    | Description   |
|-------|---------|---------------|
| 0x3   | rxlvl8  | 8 characters  |
| 0x4   | rxlvl16 | 16 characters |
| 0x5   | rxlvl32 | 32 characters |
| 0x6   | rxlvl62 | 62 characters |

Other values are reserved.

## FIFO\_CTRL . TXRST

TX fifo reset. Write 1 to the register resets TX\_FIFO. Read returns 0

## FIFO\_CTRL . RXRST

RX fifo reset. Write 1 to the register resets RX\_FIFO. Read returns 0

# FIFO\_STATUS

UART FIFO status register

- Offset: 0x24
- Reset default: 0x0
- Reset mask: 0xff00ff

## Fields

```
{"reg": [{"name": "TXLVL", "bits": 8, "attr": ["ro"], "rotate": 0}, {"bits": 8}, {"name": "RXLVL", "bits": 8, "attr": ["ro"], "rotate": 0}]}
```

| Bits  | Type | Reset | Name  | Description                   |
|-------|------|-------|-------|-------------------------------|
| 31:24 |      |       |       | Reserved                      |
| 23:16 | ro   | x     | RXLVL | Current fill level of RX fifo |
| 15:8  |      |       |       | Reserved                      |
| 7:0   | ro   | x     | TXLVL | Current fill level of TX fifo |

# OVRD

TX pin override control. Gives direct SW control over TX pin state

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "TXEN", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "TXVAL", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31:2}]}>
```

| Bits | Type | Reset | Name  | Description                          |
|------|------|-------|-------|--------------------------------------|
| 31:2 |      |       |       | Reserved                             |
| 1    | rw   | 0x0   | TXVAL | Write to set the value of the TX pin |
| 0    | rw   | 0x0   | TXEN  | Enable TX pin override control       |

# VAL

UART oversampled values

- Offset: 0x2c
- Reset default: 0x0
- Reset mask: 0xffff

## Fields

```
{"reg": [{"name": "RX", "bits": 16, "attr": ["ro"], "rotate": 0}, {"bits": 16}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}>
```

| Bits | Type | Reset | Name | Description |
|------|------|-------|------|-------------|
|------|------|-------|------|-------------|

| Bits  | Type | Reset | Name | Description  |
|-------|------|-------|------|--|
| 31:16 |      |       |      | Reserved   |
| 15:0  | ro   | x     | RX   | Last 16 oversampled values of RX. Most recent bit is bit 0, oldest 15. |

# TIMEOUT\_CTRL

UART RX timeout control

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0x80ffffff

## Fields

|  |  |
|--|--|
| {"reg": [{"name": "VAL", "bits": 24, "attr": ["rw"], "rotate": 0}, {"bits": 7}, {"name": "EN", "bits": 1, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}} |  |
|--|--|

| Bits  | Type | Reset | Name | Description                        |
|-------|------|-------|------|------------------------------------|
| 31    | rw   | 0x0   | EN   | Enable RX timeout feature          |
| 30:24 |      |       |      | Reserved                           |
| 23:0  | rw   | 0x0   | VAL  | RX timeout value in UART bit times |

# unbent / doc / registers.md

## Summary

| Name                      | Offset | Length | Description                         |
|---------------------------|--------|--------|-------------------------------------|
| bus_err_unit.err_addr     | 0x0    | 4      | Address of the bus error            |
| bus_err_unit.err_addr_top | 0x4    | 4      | Top of the address of the bus error |
| bus_err_unit.err_code     | 0x8    | 4      | Error code of the bus error         |
| bus_err_unit.meta         | 0xc    | 4      | Meta information of the bus error   |

# err\_addr

Address of the bus error

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

|  |  |
|--|--|
| {"reg": [{"name": "err_addr", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}} |  |
|--|--|

| Bits | Type | Reset | Name     | Description              |
|------|------|-------|----------|--------------------------|
| 31:0 | ro   | x     | err_addr | Address of the bus error |

# err\_addr\_top

Top of the address of the bus error

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

|  |  |
|--|--|
| {"reg": [{"name": "err_addr", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}} |  |
|--|--|

| Bits | Type | Reset | Name     | Description              |
|------|------|-------|----------|--------------------------|
| 31:0 | ro   | x     | err_addr | Address of the bus error |

# err\_code

Error code of the bus error

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "err_code", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name     | Description                 |
|------|------|-------|----------|-----------------------------|
| 31:0 | ro   | x     | err_code | Error code of the bus error |

# meta

Meta information of the bus error

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "meta", "bits": 32, "attr": ["ro"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name | Description                       |
|------|------|-------|------|-----------------------------------|
| 31:0 | ro   | x     | meta | Meta information of the bus error |

# vga / doc / registers.md

## Summary

| Name                                  | Offset | Length | Description                               |
|---------------------------------------|--------|--------|---|
| axi_vga. <u>CONTROL</u>               | 0x0    | 4      | Control register                          |
| axi_vga. <u>CLK_DIV</u>               | 0x4    | 4      | Clock divider                             |
| axi_vga. <u>HORI_VISIBLE_SIZE</u>     | 0x8    | 4      | Size of horizontal visible area           |
| axi_vga. <u>HORI_FRONT_PORCH_SIZE</u> | 0xc    | 4      | Size of horizontal front porch            |
| axi_vga. <u>HORI_SYNC_SIZE</u>        | 0x10   | 4      | Size of horizontal sync area              |
| axi_vga. <u>HORI_BACK_PORCH_SIZE</u>  | 0x14   | 4      | Size of horizontal back porch             |
| axi_vga. <u>VERT_VISIBLE_SIZE</u>     | 0x18   | 4      | Size of vertical visible area             |
| axi_vga. <u>VERT_FRONT_PORCH_SIZE</u> | 0x1c   | 4      | Size of vertical front porch              |
| axi_vga. <u>VERT_SYNC_SIZE</u>        | 0x20   | 4      | Size of vertical sync area                |
| axi_vga. <u>VERT_BACK_PORCH_SIZE</u>  | 0x24   | 4      | Size of vertical back porch               |
| axi_vga. <u>START_ADDR_LOW</u>        | 0x28   | 4      | Low end of start address of frame buffer  |
| axi_vga. <u>START_ADDR_HIGH</u>       | 0x2c   | 4      | High end of start address of frame buffer |
| axi_vga. <u>FRAME_SIZE</u>            | 0x30   | 4      | Size of whole frame                       |
| axi_vga. <u>BURST_LEN</u>             | 0x34   | 4      | Number of beats in a burst                |

## CONTROL

Control register

- Offset: 0x0
- Reset default: 0x6
- Reset mask: 0x7

## Fields

```
{"reg": [{"name": "enable", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "hsync_pol", "bits": 1, "attr": ["rw"], "rotate": -90}]}
```

| Bits | Type | Reset | Name      | Description  |
|------|------|-------|-----------|--|
| 31:3 |      |       |           | Reserved   |
| 2    | rw   | 0x1   | vsync_pol | Sets polarity for VSYNC 0 - Active Low 1 - Active High |
| 1    | rw   | 0x1   | hsync_pol | Sets polarity for HSYNC 0 - Active Low 1 - Active High |
| 0    | rw   | 0x0   | enable    | Enables FSM.   |

## CLK\_DIV

Clock divider

- Offset: 0x4
- Reset default: 0x1
- Reset mask: 0xff

### Fields

```
{"reg": [{"name": "clk_div", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name    | Description    |
|------|------|-------|---------|----------------|
| 31:8 |      |       |         | Reserved       |
| 7:0  | rw   | 0x1   | clk_div | Clock divider. |

## HORI\_VISIBLE\_SIZE

Size of horizontal visible area

- Offset: 0x8
- Reset default: 0x1
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "hori_visible_size", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name              | Description                      |
|------|------|-------|-------------------|----------------------------------|
| 31:0 | rw   | 0x1   | hori_visible_size | Size of horizontal visible area. |

## HORI\_FRONT\_PORCH\_SIZE

Size of horizontal front porch

- Offset: 0xc
- Reset default: 0x1
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "hori_front_porch_size", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 8}}
```

| Bits | Type | Reset | Name                  | Description                     |
|------|------|-------|-----------------------|---------------------------------|
| 31:0 | rw   | 0x1   | hori_front_porch_size | Size of horizontal front porch. |

## HORI\_SYNC\_SIZE

Size of horizontal sync area

- Offset: 0x10
- Reset default: 0x1
- Reset mask: 0xffffffff

### Fields

```
{"reg": [{"name": "hori_sync_size", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name         | Description                   |
|------|------|--------------------|-------------------------------|
| 31:0 | rw   | 0x1 hori_sync_size | Size of horizontal sync area. |

# HORI\_BACK\_PORCH\_SIZE

Size of horizontal back porch

- Offset: 0x14
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "hori_back_porch_size", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name               | Description                    |
|------|------|--------------------------|--------------------------------|
| 31:0 | rw   | 0x1 hori_back_porch_size | Size of horizontal back porch. |

# VERT\_VISIBLE\_SIZE

Size of vertical visible area

- Offset: 0x18
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "vert_visible_size", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name            | Description                    |
|------|------|-----------------------|--------------------------------|
| 31:0 | rw   | 0x1 vert_visible_size | Size of vertical visible area. |

# VERT\_FRONT\_PORCH\_SIZE

Size of vertical front porch

- Offset: 0x1c
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "vert_front_porch_size", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name                | Description                   |
|------|------|---------------------------|-------------------------------|
| 31:0 | rw   | 0x1 vert_front_porch_size | Size of vertical front porch. |

# VERT\_SYNC\_SIZE

Size of vertical sync area

- Offset: 0x20
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "vert_sync_size", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name         | Description                 |
|------|------|--------------------|-----------------------------|
| 31:0 | rw   | 0x1 vert_sync_size | Size of vertical sync area. |

# VERT\_BACK\_PORCH\_SIZE

Size of vertical back porch

- Offset: 0x24
- Reset default: 0x1
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "vert_back_porch_size", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name               | Description                  |
|------|------|--------------------------|------------------------------|
| 31:0 | rw   | 0x1 vert_back_porch_size | Size of vertical back porch. |

# START\_ADDR\_LOW

Low end of start address of frame buffer

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "start_addr_low", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name         | Description                               |
|------|------|--------------------|---|
| 31:0 | rw   | 0x0 start_addr_low | Low end of start address of frame buffer. |

# START\_ADDR\_HIGH

High end of start address of frame buffer

- Offset: 0x2c
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "start_addr_high", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name          | Description                                |
|------|------|---------------------|--|
| 31:0 | rw   | 0x0 start_addr_high | High end of start address of frame buffer. |

# FRAME\_SIZE

Size of whole frame

- Offset: 0x30
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "frame_size", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset Name     | Description          |
|------|------|----------------|----------------------|
| 31:0 | rw   | 0x0 frame_size | Size of whole frame. |

# BURST\_LEN

Number of beats in a burst

- Offset: 0x34
- Reset default: 0x0
- Reset mask: 0xff

## Fields

```
{"reg": [{"name": "burst_len", "bits": 8, "attr": ["rw"], "rotate": 0}, {"bits": 24}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name      | Description                 |
|------|------|-------|-----------|-----------------------------|
| 31:8 |      |       |           | Reserved                    |
| 7:0  | rw   | 0x0   | burst_len | Number of beats in a burst. |

# watchdog\_timer / doc / registers.md

## Summary

| Name                      | Offset | Length | Description                            |
|---------------------------|--------|--------|--|
| aon_timer.ALERT_TEST      | 0x0    | 4      | Alert Test Register                    |
| aon_timer.WKUP_CTRL       | 0x4    | 4      | Wakeup Timer Control register          |
| aon_timer.WKUP_THOLD      | 0x8    | 4      | Wakeup Timer Threshold Register        |
| aon_timer.WKUP_COUNT      | 0xc    | 4      | Wakeup Timer Count Register            |
| aon_timer.WDOG_REGWEN     | 0x10   | 4      | Watchdog Timer Write Enable Register   |
| aon_timer.WDOG_CTRL       | 0x14   | 4      | Watchdog Timer Control register        |
| aon_timer.WDOG_BARK_THOLD | 0x18   | 4      | Watchdog Timer Bark Threshold Register |
| aon_timer.WDOG_BITE_THOLD | 0x1c   | 4      | Watchdog Timer Bite Threshold Register |
| aon_timer.WDOG_COUNT      | 0x20   | 4      | Watchdog Timer Count Register          |
| aon_timer.INTR_STATE      | 0x24   | 4      | Interrupt State Register               |
| aon_timer.INTR_TEST       | 0x28   | 4      | Interrupt Test Register                |
| aon_timer.WKUP_CAUSE      | 0x2c   | 4      | Wakeup request status                  |

# ALERT\_TEST

Alert Test Register

- Offset: 0x0
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "fatal_fault", "bits": 1, "attr": ["wo"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name        | Description                                      |
|------|------|-------|-------------|--|
| 31:1 |      |       |             | Reserved   |
| 0    | wo   | 0x0   | fatal_fault | Write 1 to trigger one alert event of this kind. |

# WKUP\_CTRL

Wakeup Timer Control register

- Offset: 0x4
- Reset default: 0x0
- Reset mask: 0x1fff

## Fields

```
{"reg": [{"name": "enable", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "prescaler", "bits": 12, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits  | Type | Reset | Name      | Description                                |
|-------|------|-------|-----------|--|
| 31:13 |      |       |           | Reserved                                   |
| 12:1  | rw   | 0x0   | prescaler | Pre-scaler value for wakeup timer count    |
| 0     | rw   | 0x0   | enable    | When set to 1, the wakeup timer will count |

# WKUP\_THOLD

Wakeup Timer Threshold Register

- Offset: 0x8
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "threshold", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description   |
|------|------|-------|-----------|---|
| 31:0 | rw   | 0x0   | threshold | The count at which a wakeup interrupt should be generated |

# WKUP\_COUNT

Wakeup Timer Count Register

- Offset: 0xc
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "count", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                      |
|------|------|-------|-------|----------------------------------|
| 31:0 | rw   | 0x0   | count | The current wakeup counter value |

# WDOG\_REGWEN

Watchdog Timer Write Enable Register

- Offset: 0x10
- Reset default: 0x1
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "regwen", "bits": 1, "attr": ["rw0c"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name   | Description  |
|------|------|-------|--------|--|
| 31:1 |      |       |        | Reserved   |
| 0    | rw0c | 0x1   | regwen | Once cleared, the watchdog configuration will be locked until the next reset |

# WDOG\_CTRL

Watchdog Timer Control register

- Offset: 0x14
- Reset default: 0x0
- Reset mask: 0x3
- Register enable: [WDOG\\_REGWEN](#)

## Fields



```
{"reg": [{"name": "enable", "bits": 1, "attr": ["rw"], "rotate": -90}, {"name": "pause_in_sleep", "bits": 1, "attr": ["rw"], "rotate": 0}]}
```

| Bits | Type | Reset | Name           | Description   |
|------|------|-------|----------------|---|
| 31:2 |      |       |                | Reserved  |
| 1    | rw   | 0x0   | pause_in_sleep | When set to 1, the watchdog timer will not count during sleep |
| 0    | rw   | 0x0   | enable         | When set to 1, the watchdog timer will count                  |

# WDOG\_BARK\_THOLD

Watchdog Timer Bark Threshold Register

- Offset: 0x18
- Reset default: 0x0
- Reset mask: 0xffffffff
- Register enable: [WDOG\\_REGWEN](#)

## Fields

```
{"reg": [{"name": "threshold", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description  |
|------|------|-------|-----------|--|
| 31:0 | rw   | 0x0   | threshold | The count at which a watchdog bark interrupt should be generated |

# WDOG\_BITE\_THOLD

Watchdog Timer Bite Threshold Register

- Offset: 0x1c
- Reset default: 0x0
- Reset mask: 0xffffffff
- Register enable: [WDOG\\_REGWEN](#)

## Fields

```
{"reg": [{"name": "threshold", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name      | Description  |
|------|------|-------|-----------|--|
| 31:0 | rw   | 0x0   | threshold | The count at which a watchdog bite reset should be generated |

# WDOG\_COUNT

Watchdog Timer Count Register

- Offset: 0x20
- Reset default: 0x0
- Reset mask: 0xffffffff

## Fields

```
{"reg": [{"name": "count", "bits": 32, "attr": ["rw"], "rotate": 0}], "config": {"lanes": 1, "fontsize": 10, "vspace": 80}}
```

| Bits | Type | Reset | Name  | Description                        |
|------|------|-------|-------|------------------------------------|
| 31:0 | rw   | 0x0   | count | The current watchdog counter value |

# INTR\_STATE

Interrupt State Register

- Offset: 0x24
- Reset default: 0x0
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "wkup_timer_expired", "bits": 1, "attr": ["rwl"], "rotate": -90}, {"name": "wdog_timer_bark", "bits": 1, "attr": ["rwl"], "rotate": -90}]}
```

| Bits | Type | Reset | Name               | Description  |
|------|------|-------|--------------------|--|
| 31:2 |      |       |                    | Reserved   |
| 1    | rw   | 1c    | wdog_timer_bark    | Raised if the watchdog timer has hit the bark threshold    |
| 0    | rw   | 1c    | wkup_timer_expired | Raised if the wakeup timer has hit the specified threshold |

## INTR\_TEST

Interrupt Test Register

- Offset: 0x28
- Reset default: 0x0
- Reset mask: 0x3

## Fields

```
{"reg": [{"name": "wkup_timer_expired", "bits": 1, "attr": ["wo"], "rotate": -90}, {"name": "wdog_timer_bark", "bits": 1, "attr": ["wo"], "rotate": -90}]}
```

| Bits | Type | Reset | Name               | Description                                   |
|------|------|-------|--------------------|---|
| 31:2 |      |       |                    | Reserved                                      |
| 1    | wo   | x     | wdog_timer_bark    | Write 1 to force wdog_timer_bark interrupt    |
| 0    | wo   | x     | wkup_timer_expired | Write 1 to force wkup_timer_expired interrupt |

## WKUP\_CAUSE

Wakeup request status

- Offset: 0x2c
- Reset default: 0x0
- Reset mask: 0x1

## Fields

```
{"reg": [{"name": "cause", "bits": 1, "attr": ["rw"], "rotate": -90}, {"bits": 31}], "config": {"lanes": 1, "fontsize": 10, "vspace": 10}}
```

| Bits | Type | Reset | Name  | Description                                  |
|------|------|-------|-------|--|
| 31:1 |      |       |       | Reserved                                     |
| 0    | rw   | 0c    | cause | AON timer requested wakeup, write 0 to clear |