Vector Table Offset Register (VTOR)

The VTOR is optional on Cortex-M0+ and Cortex-M23 processors.

The vector table starting address can be changed by programming VTOR. This is a useful feature for:

- Relocating vector table to SRAM to allow dynamically changing exception handler entrance points
- Relocating vector table to SRAM for faster vector fetch (if flash memory is slow)
- Relocating vector table to a different one in ROM (or flash), so that different stage of program execution can have different exception handlers.

| Reserved TBLOFF[29:16] TW | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | |
|---|----|------|--------|--|--|--|---|---|---|---------------|----------------|--|---------------------|------------|----------------------|-----|
| Bits 31:30 Reserved, must be kept cleared Bits 29:9 TBLOFF: Vector table base offset field. It contains bits [29:9] of the offset of the table base from memory address 0x00000000. V setting TBLOFF, you must align the offset to the number of exception entries in the vector table. The minimum alignment is 128 words. Table alignment requirements mean that bits of the table offset are always zero. Bit 29 determines whether the vector table is in the code or SRAM memory region. 0: Code 1: SRAM Note: Bit 29 is sometimes called the TBLBASE bit. | | | | | | | | | | | | | | | | |
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| Bits 8:0 Reserved, must be kept cleared | | | | TBLO It contra setting table. | FF: Ved ains bit TBLO The mir | ctor tables [29:9] FF, you nimum | of the of the alignment | offset fi offset of lign the ent is 12 | the tab | the nu | ımber o | f excep | tion ent | ries in t | he vec | tor |
| | | Bits | s 29:9 | TBLO It continues setting table. of the Bit 29 0: C 1: S Note: | FF: Vec ains bit TBLO The min table of determ ode RAM Bit 29 | etor table s [29:9] FF, you nimum ifset are ines wh | le base of the of must a alignme e always nether the | offset fi offset of dign the ent is 12 s zero. he vector | offset to offset to 8 words or table | the nu. Table | alignm code | of exception of ex | tion ent uiremen | tries in t | the vect n that b | tor |

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