

*****Draft*****
openocd build & install
08/15/21
*****Draft*****

The information for this document was found at “<https://www.electronicshub.org/programming-raspberry-pi-pico-with-swd/>”

Testing a new installation method using a prefix in the configure and creating a squashfs img that can install bin & share in “**/home/devel/local/openocd**”. Using this method it can be installed on my other RPi4 without having to rebuild from source. A 2nd “**openocd081421-71510a.img**” is the source compiled to installed at “**/home/devel/local/openocd**”

“export PATH=/home/devel/local/openocd/bin:\$PATH”

The build was done on PI400 and the with the “**installed-openocd081421-71510a.img**” it was installed on a RPi4B 4Gb.

```
sudo apt install gdb-multiarch
```

```
dpkg -l | grep gdb-multiarch
gdb-multiarch                8.2.1-2                armhf      GNU Debugger (with
support for multiple architectures)
```

```
git clone https://github.com/raspberrypi/openocd.git --recursive --branch rp2040 --depth=1
```

```
commit 71510a77a61c6eb2b1266e00010f8f258785a54b (grafted, HEAD -> rp2040, origin/rp2040, origin/HEAD)
```

```
Author: Peter Lawrence <12226419+majbthrd@users.noreply.github.com>
```

```
Date: Thu Jun 3 14:06:09 2021 -0500
```

```
tcl/boards: add pico-debug.cfg
```

```
cd openocd/
```

```
./bootstrap
+ aclocal --warnings=all
+ libtoolize --automake --copy
+ autoconf --warnings=all
+ autoheader --warnings=all
+ automake --warnings=all --gnu --add-missing --copy
configure.ac:26: installing './compile'
configure.ac:37: installing './config.guess'
configure.ac:37: installing './config.sub'
configure.ac:16: installing './install-sh'
configure.ac:16: installing './missing'
Makefile.am:46: warning: wildcard $(srcdir: non-POSIX variable name
Makefile.am:46: (probably a GNU make extension)
Makefile.am: installing './INSTALL'
```

```

Makefile.am: installing './depcomp'
Makefile.am:23: installing './mdate-sh'
Makefile.am:23: installing './texinfo.tex'
Setting up submodules
Generating build system...
libtoolize: putting auxiliary files in AC_CONFIG_AUX_DIR, 'build-aux'.
libtoolize: copying file 'build-aux/config.guess'
libtoolize: copying file 'build-aux/config.sub'
libtoolize: copying file 'build-aux/install-sh'
libtoolize: copying file 'build-aux/ltmain.sh'
libtoolize: putting macros in AC_CONFIG_MACRO_DIRS, 'm4'.
libtoolize: copying file 'm4/libtool.m4'
libtoolize: copying file 'm4/ltoptions.m4'
libtoolize: copying file 'm4/ltugar.m4'
libtoolize: copying file 'm4/ltversion.m4'
libtoolize: copying file 'm4/lt~obsolete.m4'
configure.ac:43: installing 'build-aux/ar-lib'
configure.ac:37: installing 'build-aux/compile'
configure.ac:30: installing 'build-aux/missing'
libjaylink/Makefile.am: installing 'build-aux/depcomp'
Bootstrap complete. Quick build instructions:

```

Use the `--help` to see what the options provide.

`./configure --help`

```

--enable-sysfsgpio    Enable building support for programming driven via
                      sysfs gpios.
--enable-bcm2835gpio  Enable building support for bitbanging on BCM2835

```

The folder where

```
sudo mkdir /media/devel/03ba8473-3445-4a49-8e7b-1876b5d543d2/installed-openocd
```

```
./configure --enable-sysfsgpio --enable-bcm2835gpio --prefix=/media/devel/03ba8473-3445-4a49-8e7b-1876b5d543d2/installed-openocd
```

```
make -j4
```

```
sudo make install
```

```

top
swclk          grd          swdio
x              x              x

```

```

GPIO24    pin 18    swdio
GRD       pin 20    GRD
GPIO25    pin 22    swclk

```

Raspberry Pi2 GPIO Header					
Pin#	NAME		NAME	Pin#	
01	3.3v DC Power		DC Power 5v	02	
03	GPIO02 (SDA1, PC)		DC Power 5v	04	
05	GPIO03 (SCL1, PC)		Ground	06	
07	GPIO04 (GPIO_GCLK)		(TXD0) GPIO14	08	
09	Ground		(RXD0) GPIO15	10	
11	GPIO17 (GPIO_GEN0)		(GPIO_GEN1) GPIO18	12	
13	GPIO27 (GPIO_GEN2)		Ground	14	
15	GPIO22 (GPIO_GEN3)		(GPIO_GEN4) GPIO23	16	
17	3.3v DC Power		(GPIO_GEN5) GPIO24	18	
19	GPIO10 (SPI_MOSI)		Ground	20	
21	GPIO09 (SPI_MISO)		(GPIO_GEN6) GPIO25	22	
23	GPIO11 (SPI_CLK)		(SPI_CE0_N) GPIO18	24	
25	Ground		(SPI_CE1_N) GPIO17	26	
27	ID_SD (PC ID EEPROM)		(PC ID EEPROM) ID_SC	28	
29	GPIO05		Ground	30	
31	GPIO06		GPIO12	32	
33	GPIO13		Ground	34	
35	GPIO19		GPIO16	36	
37	GPIO26		GPIO20	38	
39	Ground		GPIO21	40	

Early Models
Late Models

Rev 1
28/01/2014

<http://www.element14.com>

```
~/local/openocd/bin/openocd --version
Open On-Chip Debugger 0.10.0+dev-g71510a7-dirty (2021-08-15-17:08)
Licensed under GNU GPL v2
For bug reports, read
    http://openocd.org/doc/doxygen/bugs.html
local/openocd/bin/openocd: invalid option -- 'e'
```

```
local/openocd/bin/openocd --help
Open On-Chip Debugger 0.10.0+dev-g71510a7-dirty (2021-08-15-17:08)
Licensed under GNU GPL v2
For bug reports, read
    http://openocd.org/doc/doxygen/bugs.html
```

```
Open On-Chip Debugger
Licensed under GNU GPL v2
--help      | -h  display this help
--version   | -v  display OpenOCD version
--file      | -f  use configuration file <name>
--search    | -s  dir to search for config files and scripts
--debug     | -d  set debug level to 3
              | -d<n> set debug level to <level>
--log_output | -l  redirect log output to file <name>
--command   | -c  run <command>
```

```
cd /opt/pico-examples/build/
```

```
sudo ~/local/openocd/bin/openocd -f interface/raspberrypi-swd.cfg -f target/rp2040.cfg -c "program  
blink/blink.elf verify reset exit"
```

```
[sudo] password for devel:
```

```
Open On-Chip Debugger 0.10.0+dev-g71510a7-dirty (2021-08-15-17:08)
```

```
Licensed under GNU GPL v2
```

```
For bug reports, read
```

```
http://openocd.org/doc/doxygen/bugs.html
```

```
adapter speed: 1000 kHz
```

```
Info : Hardware thread awareness created
```

```
Info : Hardware thread awareness created
```

```
Info : RP2040 Flash Bank Command
```

```
Info : BCM2835 GPIO JTAG/SWD bitbang driver
```

```
Info : clock speed 1001 kHz
```

```
Info : Read incorrect DLIPDR 00000000 (possibly CTRL/STAT value) when selecting coreid 0
```

```
Info : DAP init failed
```

```
in procedure 'program'
```

```
** OpenOCD init failed **
```

```
shutdown command invoked
```

```
Info : Read incorrect DLIPDR 00000000 (possibly CTRL/STAT value) when selecting coreid 0
```

```
local/openocd/
```

```
├── bin
│   └── openocd
├── share
│   ├── info
│   │   ├── dir
│   │   ├── openocd.info
│   │   ├── openocd.info-1
│   │   └── openocd.info-2
│   ├── man
│   │   ├── man1
│   │   └── openocd.1
│   └── openocd
│       ├── contrib
│       │   ├── 60-openocd.rules
│       │   ├── libdcc
│       │   ├── dcc_stdio.c
│       │   ├── dcc_stdio.h
│       │   ├── example.c
│       │   └── README
│       ├── OpenULINK
│       │   └── ulink_firmware.hex
│       └── scripts
│           ├── bitsbytes.tcl
│           ├── board
│           │   ├── 8devices-lima.cfg
│           │   ├── actux3.cfg
│           │   └── adapteva_parallel11.cfg
```

- adsp-sc584-ezbrd.cfg
- alphascale_asm9260_ek.cfg
- altera_sockit.cfg
- am3517evm.cfg
- ampere_emag8180.cfg
- arm_evaluator7t.cfg
- arm_musca_a.cfg
- arty_s7.cfg
- asus-rt-n16.cfg
- asus-rt-n66u.cfg
- at91cap7a-stk-sdram.cfg
- at91eb40a.cfg
- at91rm9200-dk.cfg
- at91rm9200-ek.cfg
- at91sam9261-ek.cfg
- at91sam9263-ek.cfg
- at91sam9g20-ek.cfg
- atmel_at91sam7s-ek.cfg
- atmel_at91sam9260-ek.cfg
- atmel_at91sam9rl-ek.cfg
- atmel_sam3n_ek.cfg
- atmel_sam3s_ek.cfg
- atmel_sam3u_ek.cfg
- atmel_sam3x_ek.cfg
- atmel_sam4e_ek.cfg
- atmel_sam4l8_xplained_pro.cfg
- atmel_sam4s_ek.cfg
- atmel_sam4s_xplained_pro.cfg
- atmel_samc20_xplained_pro.cfg
- atmel_samc21_xplained_pro.cfg
- atmel_samd10_xplained_mini.cfg
- atmel_samd11_xplained_pro.cfg
- atmel_samd20_xplained_pro.cfg
- atmel_samd21_xplained_pro.cfg
- atmel_same70_xplained.cfg
- atmel_samg53_xplained_pro.cfg
- atmel_samg55_xplained_pro.cfg
- atmel_saml21_xplained_pro.cfg
- atmel_samr21_xplained_pro.cfg
- atmel_samv71_xplained_ultra.cfg
- avnet_ultrazed-eg.cfg
- balloon3-cpu.cfg
- bcm28155_ap.cfg
- bluefield.cfg
- bt-homehubv1.cfg
- colibri.cfg
- crossbow_tech_imote2.cfg
- csb337.cfg
- csb732.cfg
- da850evm.cfg
- digi_connectcore_wi-9c.cfg
- diligent_analog_discovery.cfg

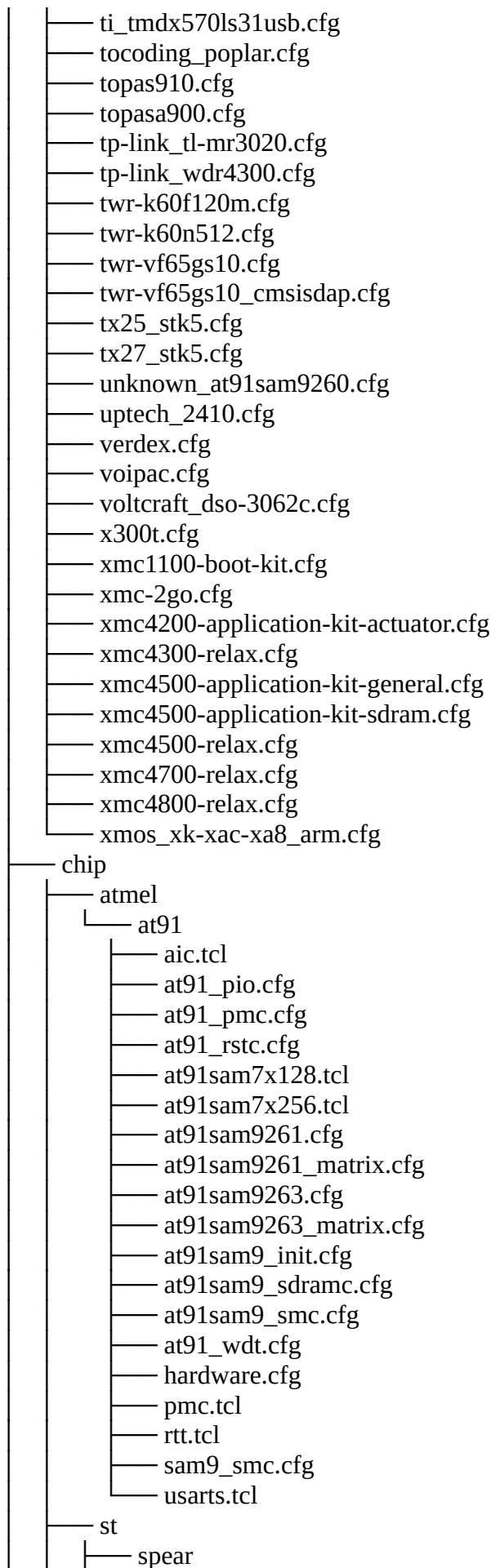
- diligent_atlys.cfg
- diligent_nexys_video.cfg
- diligent_zedboard.cfg
- diolan_lpc4350-db1.cfg
- diolan_lpc4357-db1.cfg
- dk-tm4c129.cfg
- dm355evm.cfg
- dm365evm.cfg
- dm6446evm.cfg
- dp_busblaster_v3.cfg
- dp_busblaster_v4.cfg
- dptechnics_dpt-board-v1.cfg
- efikamx.cfg
- efm32.cfg
- eir.cfg
- ek-lm3s1968.cfg
- ek-lm3s3748.cfg
- ek-lm3s6965.cfg
- ek-lm3s811.cfg
- ek-lm3s811-revb.cfg
- ek-lm3s8962.cfg
- ek-lm3s9b9x.cfg
- ek-lm3s9d92.cfg
- ek-lm4f120xl.cfg
- ek-lm4f232.cfg
- ek-tm4c123gxl.cfg
- ek-tm4c1294xl.cfg
- embedded-artists_lpc2478-32.cfg
- emcraft_imx8m-som-bsb.cfg
- emcraft_twr-vf6-som-bsb.cfg
- emcraft_vf6-som.cfg
- ethernut3.cfg
- frdm-kl25z.cfg
- frdm-kl46z.cfg
- fsl_imx6q_sabresd.cfg
- glyn_tonga2.cfg
- gti
 - espressobin.cfg
- gumstix-aerocore.cfg
- hammer.cfg
- hilscher_nxdb500sys.cfg
- hilscher_nxeb500hmi.cfg
- hilscher_nxhx10.cfg
- hilscher_nxhx500.cfg
- hilscher_nxhx50.cfg
- hilscher_nxsb100.cfg
- hitex_lpc1768stick.cfg
- hitex_lpc2929.cfg
- hitex_stm32-performancestick.cfg
- hitex_str9-comstick.cfg
- iar_lpc1768.cfg
- iar_str912_sk.cfg

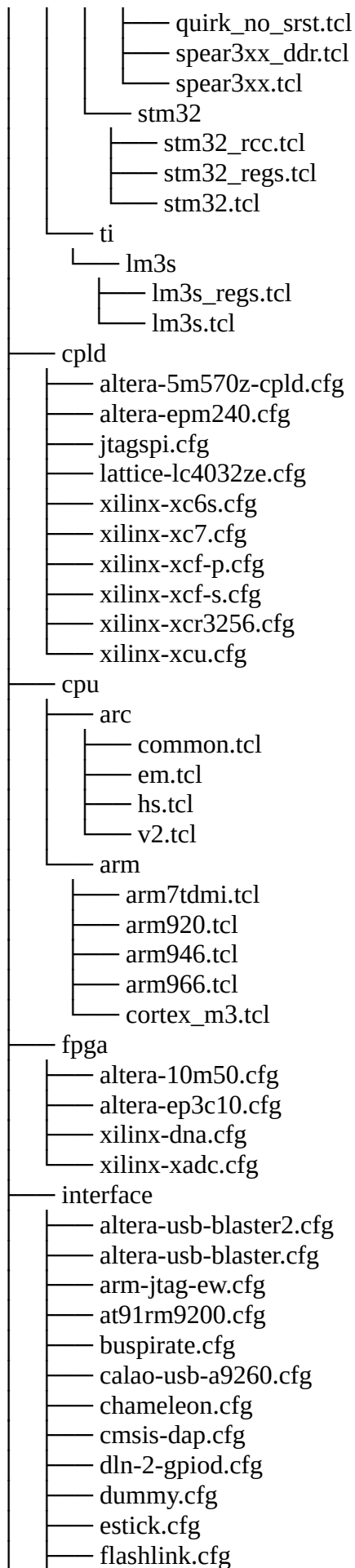
- icnova_imx53_sodimm.cfg
- icnova_sam9g45_sodimm.cfg
- imx27ads.cfg
- imx27lnst.cfg
- imx28evk.cfg
- imx31pdk.cfg
- imx35pdk.cfg
- imx53loco.cfg
- imx53-m53evk.cfg
- imx8mp-evk.cfg
- insignal_arndale.cfg
- kasli.cfg
- kc100.cfg
- kc705.cfg
- kcu105.cfg
- keil_mcb1700.cfg
- keil_mcb2140.cfg
- kindle2.cfg
- kwikstik.cfg
- la_fonera-fon2200.cfg
- lemaker_hikey.cfg
- linksys_nslu2.cfg
- linksys-wag200g.cfg
- linksys-wrt54gl.cfg
- lisa-l.cfg
- logicpd_imx27.cfg
- lpc1850_spifi_generic.cfg
- lpc4350_spifi_generic.cfg
- lubbock.cfg
- marsohod2.cfg
- marsohod3.cfg
- marsohod.cfg
- mbed-lpc11u24.cfg
- mbed-lpc1768.cfg
- mcb1700.cfg
- microchip_explorer16.cfg
- microchip_sama5d27_som1_kit1.cfg
- microchip_sama54_xplained_pro.cfg
- microchip_saml11_xplained_pro.cfg
- mini2440.cfg
- mini6410.cfg
- minispartan6.cfg
- nds32_corvettef1.cfg
- nds32_xc5.cfg
- nds32_xc7.cfg
- netgear-dg834v3.cfg
- netgear-wg102.cfg
- nordic_nrf51822_mkit.cfg
- nordic_nrf51_dk.cfg
- nordic_nrf52_dk.cfg
- nordic_nrf52_ftx232.cfg
- novena-internal-fpga.cfg

- numato_mimas_a7.cfg
- numato_opsis.cfg
- nxp_frdm-ls1012a.cfg
- nxp_imx7sabre.cfg
- nxp_lpc-link2.cfg
- nxp_mcimx8m-evk.cfg
- olimex_LPC2378STK.cfg
- olimex_lpc_h2148.cfg
- olimex_sam7_ex256.cfg
- olimex_sam7_la2.cfg
- olimex_sam9_l9260.cfg
- olimex_stm32_h103.cfg
- olimex_stm32_h107.cfg
- olimex_stm32_h405.cfg
- olimex_stm32_p107.cfg
- omap2420_h4.cfg
- openrd.cfg
- or1k_generic.cfg
- osk5912.cfg
- phone_se_j100i.cfg
- phytec_lpc3250.cfg
- pico-debug.cfg
- pic-p32mx.cfg
- pipistrello.cfg
- propox_mmnet1001.cfg
- pxa255_sst.cfg
- quark_d2000_refboard.cfg
- quark_x10xx_board.cfg
- quicklogic_quickfeather.cfg
- redbee.cfg
- reflexces_achilles_i-dev_kit_arria10.cfg
- renesas_dk-s7g2.cfg
- renesas_falcon.cfg
- renesas_gr_peach.cfg
- renesas_porter.cfg
- renesas_salvator-xs.cfg
- renesas_silk.cfg
- renesas_stout.cfg
- rigado_bmd300_ek.cfg
- rpi3.cfg
- rpi4b.cfg
- rsc-w910.cfg
- sayma_amc.cfg
- sheevaplug.cfg
- sifive-e31arty.cfg
- sifive-e51arty.cfg
- sifive-hifive1.cfg
- sifive-hifive1-revb.cfg
- smdk6410.cfg
- snps_em_sk.cfg
- snps_em_sk_v1.cfg
- snps_em_sk_v2.1.cfg

- snps_em_sk_v2.2.cfg
- snps_hsdk.cfg
- spansion_sk-fm4-176l-s6e2cc.cfg
- spansion_sk-fm4-u120-9b560.cfg
- spear300evb.cfg
- spear300evb_mod.cfg
- spear310evb20.cfg
- spear310evb20_mod.cfg
- spear320cpu.cfg
- spear320cpu_mod.cfg
- st_b-l475e-iot01a.cfg
- steval-idb007v1.cfg
- steval-idb008v1.cfg
- steval-idb011v1.cfg
- steval_pcc010.cfg
- stm320518_eval.cfg
- stm320518_eval_stlink.cfg
- stm32100b_eval.cfg
- stm3210b_eval.cfg
- stm3210c_eval.cfg
- stm3210e_eval.cfg
- stm3220g_eval.cfg
- stm3220g_eval_stlink.cfg
- stm3241g_eval.cfg
- stm3241g_eval_stlink.cfg
- stm32429i_eval.cfg
- stm32429i_eval_stlink.cfg
- stm32439i_eval.cfg
- stm32439i_eval_stlink.cfg
- stm327x6g_eval.cfg
- stm32f0discovery.cfg
- stm32f103c8_blue_pill.cfg
- stm32f334discovery.cfg
- stm32f3discovery.cfg
- stm32f412g-disco.cfg
- stm32f413h-disco.cfg
- stm32f429disc1.cfg
- stm32f429discovery.cfg
- stm32f469discovery.cfg
- stm32f469i-disco.cfg
- stm32f4discovery.cfg
- stm32f723e-disco.cfg
- stm32f746g-disco.cfg
- stm32f769i-disco.cfg
- stm32f7discovery.cfg
- stm32h735g-disco.cfg
- stm32h745i-disco.cfg
- stm32h747i-disco.cfg
- stm32h750b-disco.cfg
- stm32h7b3i-disco.cfg
- stm32h7x3i_eval.cfg
- stm32h7x_dual_qspi.cfg

- stm32l0discovery.cfg
- stm32l476g-disco.cfg
- stm32l496g-disco.cfg
- stm32l4discovery.cfg
- stm32l4p5g-disco.cfg
- stm32l4r9i-disco.cfg
- stm32ldiscovery.cfg
- stm32mp15x_dk2.cfg
- stm32vldiscovery.cfg
- st_nucleo_8l152r8.cfg
- st_nucleo_8s208rb.cfg
- st_nucleo_f0.cfg
- st_nucleo_f103rb.cfg
- st_nucleo_f3.cfg
- st_nucleo_f4.cfg
- st_nucleo_f7.cfg
- st_nucleo_h743zi.cfg
- st_nucleo_h745zi.cfg
- st_nucleo_l073rz.cfg
- st_nucleo_l1.cfg
- st_nucleo_l4.cfg
- st_nucleo_l5.cfg
- st_nucleo_wb55.cfg
- str910-eval.cfg
- telo.cfg
- ti_am335xevm.cfg
- ti_am437x_idk.cfg
- ti_am43xx_evm.cfg
- ti_am642evm.cfg
- ti_am654evm.cfg
- ti_beagleboard.cfg
- ti_beagleboard_xm.cfg
- ti_beaglebone-base.cfg
- ti_beaglebone_black.cfg
- ti_beaglebone.cfg
- ti_blaze.cfg
- ti_cc13x0_launchpad.cfg
- ti_cc13x2_launchpad.cfg
- ti_cc26x0_launchpad.cfg
- ti_cc26x2_launchpad.cfg
- ti_cc3200_launchxl.cfg
- ti_cc3220sf_launchpad.cfg
- ti_cc32xx_launchpad.cfg
- ti_dk-tm4c129.cfg
- ti_ek-tm4c123gxl.cfg
- ti_ek-tm4c1294xl.cfg
- ti_j7200evm.cfg
- ti_j721evm.cfg
- ti_msp432_launchpad.cfg
- ti_pandaboard.cfg
- ti_pandaboard_es.cfg
- ti_tmdx570ls20usb.cfg





- ft232r.cfg
- ftdi
 - 100ask-openjtag.cfg
 - ashling-opella-ld-jtag.cfg
 - ashling-opella-ld-swd.cfg
 - axm0432.cfg
 - c232hm.cfg
 - calao-usb-a9260-c01.cfg
 - calao-usb-a9260-c02.cfg
 - cortino.cfg
 - diligent-hs1.cfg
 - diligent-hs2.cfg
 - diligent_jtag_hs3.cfg
 - diligent_jtag_smt2.cfg
 - diligent_jtag_smt2_nc.cfg
 - dlp-usb1232h.cfg
 - dp_busblaster.cfg
 - dp_busblaster_kt-link.cfg
 - flossjtag.cfg
 - flossjtag-noeeprom.cfg
 - flyswatter2.cfg
 - flyswatter.cfg
 - ft232h-module-swd.cfg
 - gw16042.cfg
 - hie-jtag.cfg
 - hilscher_nxhx10_etm.cfg
 - hilscher_nxhx500_etm.cfg
 - hilscher_nxhx500_re.cfg
 - hilscher_nxhx50_etm.cfg
 - hilscher_nxhx50_re.cfg
 - hitex_lpc1768stick.cfg
 - hitex_str9-comstick.cfg
 - icebear.cfg
 - imx8mp-evk.cfg
 - incircuit-icprog.cfg
 - iotlab-usb.cfg
 - isodebug.cfg
 - jtagkey2.cfg
 - jtagkey2p.cfg
 - jtagkey.cfg
 - jtag-lock-pick_tiny_2.cfg
 - kt-link.cfg
 - lisa-l.cfg
 - luminary.cfg
 - luminary-icdi.cfg
 - luminary-lm3s811.cfg
 - m53evk.cfg
 - mbftdi.cfg
 - minimodule.cfg
 - minimodule-swd.cfg
 - minispartan6.cfg
 - miniwiggler.cfg

- neodb.cfg
- ngxtech.cfg
- olimex-arm-jtag-swd.cfg
- olimex-arm-usb-ocd.cfg
- olimex-arm-usb-ocd-h.cfg
- olimex-arm-usb-tiny-h.cfg
- olimex-jtag-tiny.cfg
- oocdlink.cfg
- opendous_ftdi.cfg
- openocd-usb.cfg
- openocd-usb-hs.cfg
- openrd.cfg
- pipistrello.cfg
- pls_spc5.cfg
- redbee-econotag.cfg
- redbee-usb.cfg
- rowley-cc-arm-swd.cfg
- sheevaplug.cfg
- signalizer.cfg
- signalizer-lite.cfg
- snps_sdp.cfg
- steppenprobe.cfg
- stm32-stick.cfg
- swd-resistor-hack.cfg
- ti-icdi.cfg
- tumpa.cfg
- tumpa-lite.cfg
- turtelizer2-revB.cfg
- turtelizer2-revC.cfg
- um232h.cfg
- vpaclink.cfg
- xds100v2.cfg
- xds100v3.cfg
- imx-native.cfg
- jlink.cfg
- jtag_dpi.cfg
- jtag_hat_rpi2.cfg
- jtag_vpi.cfg
- kitprog.cfg
- nds32-aice.cfg
- nulink.cfg
- opendous.cfg
- openjtag.cfg
- osbdm.cfg
- parport.cfg
- parport_dlc5.cfg
- raspberrypi2-native.cfg
- raspberrypi-native.cfg
- rlink.cfg
- rshim.cfg
- stlink.cfg
- stlink-dap.cfg

- stlink-v1.cfg
- stlink-v2-1.cfg
- stlink-v2.cfg
- sysfsgpio-raspberrypi.cfg
- ti-icdi.cfg
- ulink.cfg
- usb-jtag.cfg
- usbprog.cfg
- vsllink.cfg
- xds110.cfg
- mem_helper.tcl
- memory.tcl
- mmr_helpers.tcl
- target
 - 1986be1t.cfg
 - adsp-sc58x.cfg
 - aduc702x.cfg
 - aducm360.cfg
 - allwinner_v3s.cfg
 - alphascale_asm9260t.cfg
 - altera_fpgasoc_arria10.cfg
 - altera_fpgasoc.cfg
 - am335x.cfg
 - am437x.cfg
 - amdm37x.cfg
 - ampere_emag.cfg
 - ar71xx.cfg
 - armada370.cfg
 - arm_corelink_sse200.cfg
 - at32ap7000.cfg
 - at91r40008.cfg
 - at91rm9200.cfg
 - at91sam3ax_4x.cfg
 - at91sam3ax_8x.cfg
 - at91sam3ax_xx.cfg
 - at91sam3nXX.cfg
 - at91sam3sXX.cfg
 - at91sam3u1c.cfg
 - at91sam3u1e.cfg
 - at91sam3u2c.cfg
 - at91sam3u2e.cfg
 - at91sam3u4c.cfg
 - at91sam3u4e.cfg
 - at91sam3uxx.cfg
 - at91sam3XXX.cfg
 - at91sam4c32x.cfg
 - at91sam4cXXX.cfg
 - at91sam4lXX.cfg
 - at91sam4sd32x.cfg
 - at91sam4sXX.cfg
 - at91sam4XXX.cfg
 - at91sam7a2.cfg

- at91sam7se512.cfg
- at91sam7sx.cfg
- at91sam7x256.cfg
- at91sam7x512.cfg
- at91sam9260.cfg
- at91sam9260_ext_RAM_ext_flash.cfg
- at91sam9261.cfg
- at91sam9263.cfg
- at91sam9.cfg
- at91sam9g10.cfg
- at91sam9g20.cfg
- at91sam9g45.cfg
- at91sam9rl.cfg
- at91sama5d2.cfg
- at91samdXX.cfg
- at91samg5x.cfg
- atheros_ar2313.cfg
- atheros_ar2315.cfg
- atheros_ar9331.cfg
- atheros_ar9344.cfg
- atmega128.cfg
- atmega128rfa1.cfg
- atsame5x.cfg
- atsaml1x.cfg
- atsamv.cfg
- avr32.cfg
- bcm2711.cfg
- bcm281xx.cfg
- bcm2835.cfg
- bcm2836.cfg
- bcm2837.cfg
- bcm4706.cfg
- bcm4718.cfg
- bcm47xx.cfg
- bcm5352e.cfg
- bcm6348.cfg
- bluefield.cfg
- bluenrg-x.cfg
- c100.cfg
- c100config.tcl
- c100helper.tcl
- c100regs.tcl
- cc2538.cfg
- cs351x.cfg
- davinci.cfg
- dragonite.cfg
- dsp56321.cfg
- dsp568013.cfg
- dsp568037.cfg
- efm32.cfg
- em357.cfg
- em358.cfg

- eos_s3.cfg
- epc9301.cfg
- esi32xx.cfg
- exynos5250.cfg
- faux.cfg
- feroceon.cfg
- fm3.cfg
- fm4.cfg
- fm4_mb9bf.cfg
- fm4_s6e2cc.cfg
- gd32vf103.cfg
- gp326xxxa.cfg
- hi3798.cfg
- hi6220.cfg
- hilscher_netx10.cfg
- hilscher_netx500.cfg
- hilscher_netx50.cfg
- icepick.cfg
- imx21.cfg
- imx25.cfg
- imx27.cfg
- imx28.cfg
- imx31.cfg
- imx35.cfg
- imx51.cfg
- imx53.cfg
- imx6.cfg
- imx6sx.cfg
- imx6ul.cfg
- imx7.cfg
- imx7ulp.cfg
- imx8m.cfg
- imx8qm.cfg
- imx.cfg
- infineon
 - └— tle987x.cfg
- is5114.cfg
- ixp42x.cfg
- k1921vk01t.cfg
- k40.cfg
- k60.cfg
- ke0x.cfg
- ke1xf.cfg
- ke1xz.cfg
- kl25.cfg
- kl46.cfg
- klx.cfg
- ks869x.cfg
- kx.cfg
- lpc11xx.cfg
- lpc12xx.cfg
- lpc13xx.cfg

- lpc17xx.cfg
- lpc1850.cfg
- lpc1xxx.cfg
- lpc2103.cfg
- lpc2124.cfg
- lpc2129.cfg
- lpc2148.cfg
- lpc2294.cfg
- lpc2378.cfg
- lpc2460.cfg
- lpc2478.cfg
- lpc2900.cfg
- lpc2xxx.cfg
- lpc3131.cfg
- lpc3250.cfg
- lpc40xx.cfg
- lpc4350.cfg
- lpc4357.cfg
- lpc4370.cfg
- lpc84x.cfg
- lpc8nxx.cfg
- lpc8xx.cfg
- ls1012a.cfg
- marvell
 - 88f3710.cfg
 - 88f3720.cfg
 - 88f37x0.cfg
- max32620.cfg
- max32625.cfg
- max3263x.cfg
- mc13224v.cfg
- mdr32f9q2i.cfg
- nds32v2.cfg
- nds32v3.cfg
- nds32v3m.cfg
- nds32v5.cfg
- nhs31xx.cfg
- nrf51.cfg
- nrf52.cfg
- nuc910.cfg
- numicro.cfg
- omap2420.cfg
- omap3530.cfg
- omap4430.cfg
- omap4460.cfg
- omap5912.cfg
- omapl138.cfg
- or1k.cfg
- pic32mx.cfg
- psoc4.cfg
- psoc5lp.cfg
- psoc6.cfg

- pxa255.cfg
- pxa270.cfg
- pxa3xx.cfg
- qualcomm_qca4531.cfg
- quark_d20xx.cfg
- quark_x10xx.cfg
- readme.txt
- renesas_r7s72100.cfg
- renesas_rcar_gen2.cfg
- renesas_rcar_gen3.cfg
- renesas_rcar_reset_common.cfg
- renesas_rz_g2.cfg
- renesas_s7g2.cfg
- rk3308.cfg
- rk3399.cfg
- rp2040-core0.cfg
- samsung_s3c2410.cfg
- samsung_s3c2440.cfg
- samsung_s3c2450.cfg
- samsung_s3c4510.cfg
- samsung_s3c6410.cfg
- sharp_lh79532.cfg
- sim3x.cfg
- smp8634.cfg
- snps_em_sk_fpga.cfg
- snps_hsdk.cfg
- spear3xx.cfg
- stellaris.cfg
- stm32f0x.cfg
- stm32f1x.cfg
- stm32f2x.cfg
- stm32f3x.cfg
- stm32f4x.cfg
- stm32f7x.cfg
- stm32g0x.cfg
- stm32g4x.cfg
- stm32h7x.cfg
- stm32h7x_dual_bank.cfg
- stm32l0.cfg
- stm32l0_dual_bank.cfg
- stm32l1.cfg
- stm32l1x_dual_bank.cfg
- stm32l4x.cfg
- stm32l5x.cfg
- stm32mp15x.cfg
- stm32w108xx.cfg
- stm32wbx.cfg
- stm32wlx.cfg
- stm32xl.cfg
- stm8l152.cfg
- stm8l.cfg
- stm8s003.cfg

- stm8s103.cfg
- stm8s105.cfg
- stm8s.cfg
- str710.cfg
- str730.cfg
- str750.cfg
- str912.cfg
- swj-dp.tcl
- swm050.cfg
- test_reset_syntax_error.cfg
- test_syntax_error.cfg
- ti-ar7.cfg
- ti_calypso.cfg
- ti_cc13x0.cfg
- ti_cc13x2.cfg
- ti_cc26x0.cfg
- ti_cc26x2.cfg
- ti_cc3220sf.cfg
- ti_cc32xx.cfg
- ti-cjtag.cfg
- ti_dm355.cfg
- ti_dm365.cfg
- ti_dm6446.cfg
- ti_k3.cfg
- ti_msp432.cfg
- ti_rm4x.cfg
- ti_tms570.cfg
- ti_tms570ls20xxx.cfg
- ti_tms570ls3137.cfg
- tmpa900.cfg
- tmpa910.cfg
- tnetc4401.cfg
- u8500.cfg
- vybrid_vf6xx.cfg
- xilinx_zynqmp.cfg
- xmc1xxx.cfg
- xmc4xxx.cfg
- xmos_xs1-xau8a-10_arm.cfg
- zynq_7000.cfg
- к1879х61я.cfg
- test
 - selftest.cfg
 - syntax1.cfg
- tools
 - firmware-recovery.tcl
 - memtest.tcl

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