openocd -- 目前在ubuntu 16.04系统上测试成功

openocd使用

```
jtag_rest 1 0                -- 复位tck和TMS组合而成，如果有trstn的话，则产生trstn
irscan zynq.dap 0x5              -- 往tap寄存器写IR指令为0x5，   TAP在target.cfg文件中进行定义jtag newtap
drscan zynq.dap 16 0x4321    -- 向指定TAP输入DR数据，长度为16，数据为0x4321
```

--- 注意，一定要先指定TAP IR, 然后才可以向 DR进行输入数据，不然openocd会报错退出 --- openocd使用tcl语法进行配置，可以使用telnet进行连接

ft2232h.cfg

```
interface ftdi
ftdi_vid_pid 0x0403 0x6010
ftdi_channel 0
ftdi_layout_init 0x08 0x0b
```

target.cfg

```
set _CHIPNAME zynq
jtag newtap $_CHIPNAME dap -irlen 8 -ircapture 0x01 -irmask 0x03

adapter_khz 5000
```

启动openocd服务 sudo openocd -f ft2232h.cfg -f target.cfg

1. RPC server

```
OpenOCD provides a simple RPC server that allows to run arbitrary Tcl
commands and
receive the results.
To access it, your application needs to connect to a configured TCP port
(see tcl_port).
Then it can pass any string to the interpreter terminating it with 0x1a and
wait for the
return value (it will be terminated with 0x1a as well). This can be repeated
as many times
as desired without reopening the connection.
Remember that most of the OpenOCD commands need to be prefixed with ocd_ to
get the
results back. Sometimes you might also need the capture command.
See contrib/rpc_examples/ for specific client implementations.
```

可以参考openocd包目录contrib/rpc_examples/下的例子。