

HARDWARE HACKING CHEATSHEET

@marunmagesh

Commands

UART

```
screen /dev/ttyUSB# <baudrate>  
9600, 115200, 57600, 38400 - baudrate  
ctrl +a -> k -> y to close screen
```

FLASH MEMORY - SPI

```
flashrom -p ft2232_spi:type=<HW>  
FT232H or FT2232H - HW
```

Debuggers

```
openocd -f interface/<dev.cfg>  
-f target/<target.cfg>  
cfg files are located inside /usr/local
```

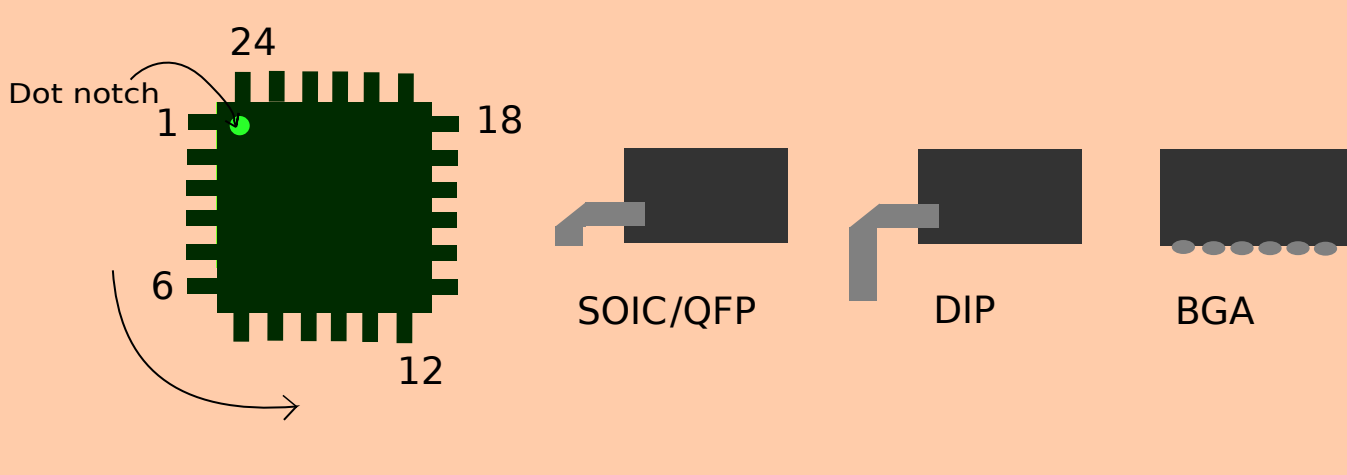
OpenOCD

```
telnet localhost:4444  
halt - To halt the CPU  
reset - To reset the CPU  
flash info bank <bankid>  
flash dump_image <file>  
                  <addr> <size>  
flash write_image erase  
                  <file> <addr>
```

GDB

```
gdb-multiarch  
set arch <arch - arm/mips>  
target remote localhost:3333
```

VCC - Voltage Supply
VSS/GND - Ground
Voltage level - 1.7v/3.3v/5v
5V All the device
3.3V should have the
GND/0V common ground
-3.3V for same V reference
Metal parts are usually GND



UART

Usually 3/4 pin combination

USB-TTL

TX

RX

GND

RX

TX

GND

TARGET

Baudrate and voltage level is important

FTDI	UART	SPI	I2C	JTAG	SWD
AD0	TX	SCK	SCK	TCK	SCK
AD1	RX	MOSI	SDA	TDI	SDIO
AD2	RTS	MISO	SDA	TDO	SDIO
AD3	CTS	CS		TMS	
AD4	DTR				

20-pin JTAG

VCC	VCC
TRST	GND
TDI	GND
SWD/TMS	GND
SCK/TCK	GND
RTCK	GND
SWO/TDO	GND
RESET	GND
NC	GND
NC	GND

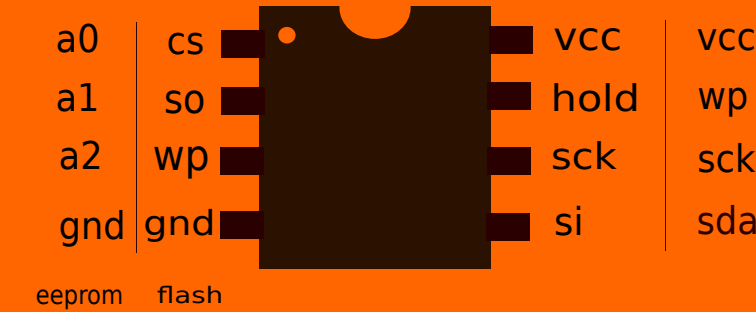
10-pin ST-Link

RST	SCK
SWIM	SWD
GND	GND
3.3V	3.3V
5V	5V

10-pin JTAG

VCC	SWD/TMS
GND	SCK/TCK
GND	SWO/TDO
KEY	TDI
GND	nRESET

Memory



WP,VCC,HOLD -> 3.3v

A0-2,WP,GND -> GND

Tips

Always TIN your soldering iron tip
Temperature: 250C - 350C
Don't overheat electrolytic capacitor
Check the operating voltage of the device
Don't touch your PCB in bare hand.
Don't overheat the solder pads

RESERVED FOR FUTURE