

MiniPCIe/PCI/LPC Combo-Debug Card

Altera MAX 3000A CPLD

EPM3064ATC100

JTAG

6 pin header left of LCD, pull-up/down checked by unimer

- 1 3V
- 2 TMS pull-up
- 3 TDI pull-up
- 4 GND
- 5 TDO pull-down?
- 6 TCK pull-up

pull-up/down pins

pull-up: TDO TMS TDI

pull-down: TCK

urjtag

```
pi@raspberrypi ~ $ sudo dpkg -i urjtag_0.10-gpio-1_armhf.deb
```

```
pi@raspberrypi ~ $ sudo jtag
jtag> cable gpio tms=8 tdi=10 tdo=9 tck=11
Initializing GPIO JTAG Chain
jtag> detect
IR length: 10
Chain length: 1
Device Id: 00010111000001100100000011011101 (0x170640DD)
  Manufacturer: Altera (0x0DD)
  Part(0):      EPM3064A (0x7064)
  Stepping:    1
  Filename:    /usr/local/share/urjtag/altera/epm3064a/epm3064a
```

```
jtag> print chain
```

No.	Manufacturer	Part	Stepping	Instruction	Register
* 0	Altera	EPM3064A	1	BYPASS	BYPASS

```
jtag> include /usr/local/share/urjtag/altera/epm3064a/t100
```

```
jtag> instruction SAMPLE/PRELOAD
jtag> shift ir
jtag> shift dr
jtag> get signal IO2
jtag> get signal IN88
```