

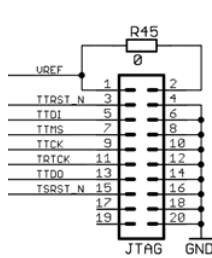


ARM-USB-OCD is unique device which combine **JTAG debugging** hardware, **RS232 virtual port** and **power supply adapter** in one single compact form. Many of the new laptop computers have no parallel nor serial ports but only USB, with ARM-USB-OCD you can debug your ARM boards, have full featured virtual RS232 port with all modem signals on it and the power jack can provide three fixed value voltages **5V – 9V – 12V DC** via jumper selection.

The base features are:

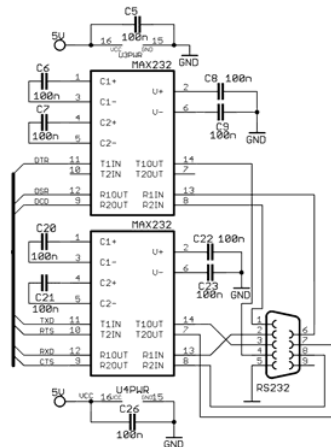
- based on **FT2232L** IC from Future Technology Devices International Ltd.
- fast speed **USB 2.0 JTAG** dongle interface, can be used with any ARM devices for programming and debugging (which are currently supported by openOCD).
- the JTAG cable uses ARM's standard 2x10 pin JTAG connector
- supports ARM targets working in voltage range **2.0 – 5.0 V DC**
- software supported by **OpenOCD** (open source) debugger
- adds virtual **RS232** port to your computer with all modem signals like: DTR, DSR, DCD, RTS, CTS, Rx, Tx
- can be used as **power supply** to your target board with three jumper selectable power supplies: 5V 9V and 12VDC, USB source current is limited with resetable fuse at 300mA, at the different output voltage the maximum current is different: 5V/200mA, 9V/100mA, 12V/70mA, note that this also depend on your USB host current capabilities, if other USB devices are attached to your computer or if the laptop is running on batteries these figures may be different and depend on your computer USB host.
- **CD with Windows installer** for full featured and open source tools as alternative to the commercial ARM development packages: **GCC C compiler**, **openOCD debugger** and **Eclipse IDE**.

FT2232 signal assignments:



JTAG signals

- VREF** – voltage follower input for the output buffers adjust JTAG signals as per your target board voltage levels
- | | |
|--|---------------------------------------|
| ADBUS0 -> TCK; | ADBUS1 -> TDI; |
| ADBUS2 -> TDO; | ADBUS3 -> TMS; |
| ADBUS4 -> 0 to enable JTAG buffers; | ADBUS5 -> 0 if target present; |
| ADBUS6 -> TSRST in; | ADBUS7 -> RTCK; |
| ACBUS0 -> TRST; | ACBUS1 -> TSRST; |
| ACBUS2 -> TRST buffer enable | ACBUS3 -> RED LED; |



RS232 signals

- BDBUS0** -> RS232 Tx
- BDBUS1** -> RS232 Rx
- BDBUS2** -> RS232 RTS
- BDBUS3** -> RS232 CTS
- BDBUS4** -> RS232 DTR
- BDBUS5** -> RS232 DSR
- BDBUS6** -> RS232 DCD

Power supply jumpers:



the power supply jumpers are on right side of the 2x10 pin JTAG connector.

- If both jumpers are open the output voltage is **12VDC**
- If **right** jumper is closed the output voltage is **9VDC**
- If **left** jumper is closed the output voltage is **5VDC** (this is the default setting)