Technical Specifications

Absolute Maximum Ratings

DC input voltage	0 V to 20 V
DC output current	(pin 1) +50 mA
Voltage on I/O pin	0 V to 6 V
	(when configured as input or powered down)
Voltage on I/O pin	0 V to V_{IO} + 0.5 V (when configured as output)
Humidity	< 95% (non-condensing)
Temperature Range	-40 °C to +85 °C
	Optional conformal coat

Recommended Operating Conditions

DC input voltage	5 V to 15 V
Voltage on I/O pin	0 V to V_{IO}

JTAG Connector Pinout

Power pin is an input for Controller variant (connected to XJLink) and an output for Target variant (connected to DUT). I/O pin direction is configurable with solder links (shown in red on the diagram). When the solder link is fitted the particular LVDS channel is transmitting. Therefore downlink (Controller to Target) signals should have the link fitted on the Controller variant but omitted on the Target variant.

Note boards are supplied with pins[1] configured as XJLink inputs (e.g. TDO) and pins[2] configured as outputs (e.g. TDI, TCK).

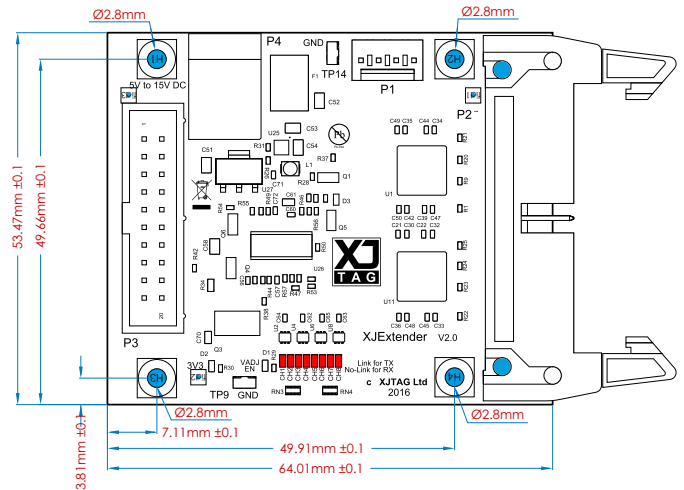|			
Power (V_{IO})	1	2	Ground
I/O CH1[1]	3	4	Ground
I/O CH2[2]	5	6	Ground
I/O CH3[2]	7	8	Ground
I/O CH4[2]	9	10	Ground
I/O CH5[2]	11	12	Ground
I/O CH6[1]	13	14	Ground
I/O CH7[2]	15	16	Ground
I/O CH8[2]	17	18	Ground
NC	19	20	Ground

DC Electrical Characteristics

Over recommended operating free-air temperature range
Output voltage set by XJLink. Variable from 1.8 V to 3.3 V
Output voltage tolerance: ±3% (plus tolerance of XJLink)

I/O Voltage	V_{IL} Max	V_{IH} Min	V_{OL} Max	V_{OH} Min	Load conditions
3.3	0.8	2.0	0.55	2.7	±24 mA
2.5	0.7	1.7	0.3	2.1	±8 mA
1.8	0.65	1.2	0.45	1.35	±4 mA

TCK Frequency

All supported XJLink TCK frequencies up to 50 MHz.
Autoskew compensates for the delay introduced by the cable and the JTAG devices by up to 3 TCK periods.

Power Supply

Maximum supply current 250 mA.
Power supply plug should have 2.1 mm inner diameter and 5.5 mm outer diameter. The pin is positive and the outer ground.
Example supplier part codes: Farnell 224923, Digikey CP3-1000-ND.

JTAG Connector

Standard 0.1" pitch 20-way connector. Example supplier parts codes for mating plug IDC plug (20-way ribbon cable will be required): Digikey 2-215882-0-ND, Farnell 1200505, RS 681-1780.

LVDS Connector

Standard 0.1" pitch 26-way connector. Example supplier parts code for mating plug IDC plug (26-way ribbon cable will be required): Farnell 1642032. Example supplier part code for twisted-pair ribbon cable: Farnell 1760506, Digikey 3M157901-100-ND. The cable connects pin 1 to pin 1, pin 2 to pin 2, etc.

* DES – Differential Enable Signal

LVDS Connector Pinout

DES*	1	2	DES
LVDS CH1 N	3	4	LVDS CH1 P
LVDS CH2 N	5	6	LVDS CH2 P
Ground	7	8	Ground
LVDS CH3 N	9	10	LVDS CH3 P
LVDS CH4 N	11	12	LVDS CH4 P
Ground	13	14	Ground
LVDS CH5 N	15	16	LVDS CH5 P
LVDS CH6 N	17	18	LVDS CH6 P
Ground	19	20	Ground
LVDS CH7 N	21	22	LVDS CH7 P
LVDS CH8 N	23	24	LVDS CH8 P
Ground	25	26	Ground

Visual Indication

LED1:	Internal supply voltage enabled
LED2:	I/Os enabled

Physical Dimensions