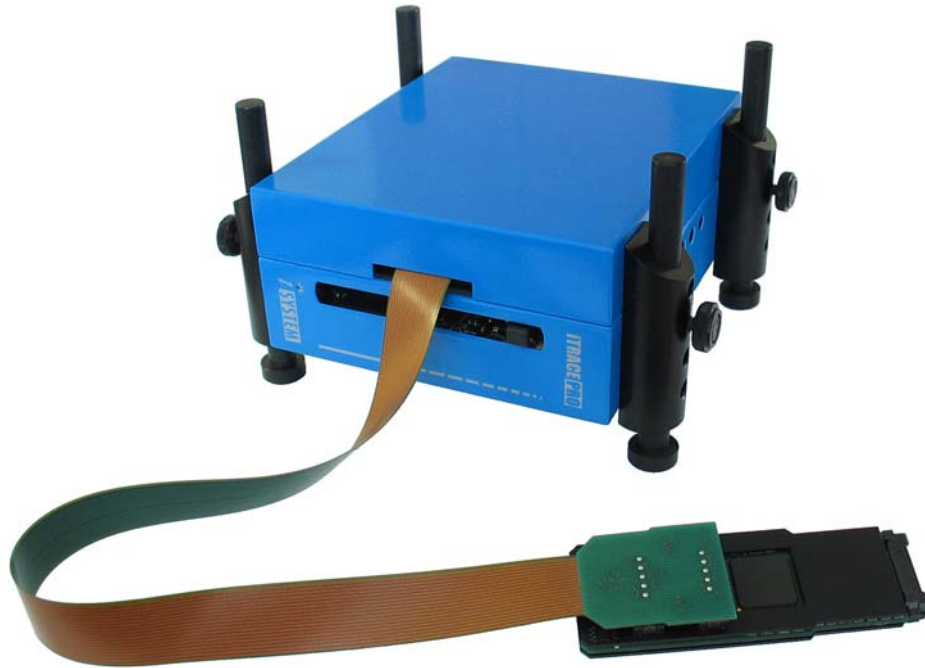

Hardware Reference

iTRACE Probe CRX

Ordering code iTRACE Probe CRX	IC30366
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CRX iTRACE Probe

Ordering code	IC30366
Dimensions (WxLxH, mm)	28x73x13



The iTRACE probe is used to connect the target to the development system. The probe is connected to the iTRACE PRO Unit.

Emulation Notes

Hot attach is not supported. The probe must not be inserted into the target if the target is turned on or damage to the probe or iTRACE Card can occur.

It is advised to first turn on the Emulator and then the target.

Target Pinout

The following pinout is valid on the target side:

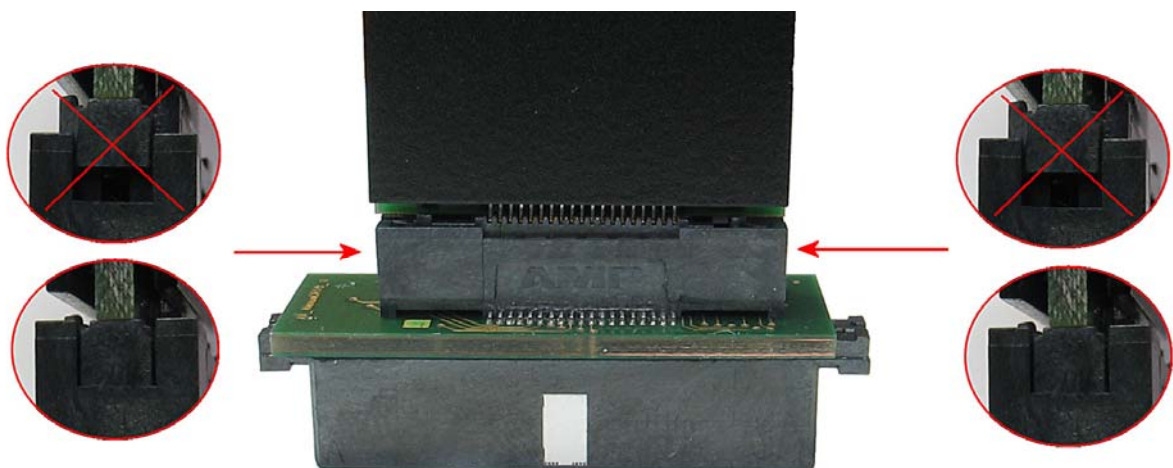
Signal direction	Signal	Pin	Pin	Signal	Signal direction
Input/Output	VENDOR_IO0	1	2	VENDOR_IO1	Input/Output
	Not used	3	4	Not used	
	Not used	5	6	MCKO	Input
Input	EVTO	7	8	EVTI	Output
Output	~RESET	9	10	RDY	Input
Input	TDO	11	12	Vref	Input
	GND	13	14	Not used	
Output	TCK	15	16	MDO7	Input
Output	TMS	17	18	MDO6	Input
Output	TDI	19	20	MDO5	Input
Output	TRST	21	22	MDO4	Input
	Not used	23	24	MDO3	Input
	Not used	25	26	MDO2	Input
	Not used	27	28	MDO1	Input
	Not used	29	30	MDO0	Input
	Not used	31	32	Not used	
	Not used	33	34	Not used	
	Not used	35	36	~MSEO1	Input
	Not used	37	38	~MSEO0	Input

Nexus 38-pin Mictor target connector

CRX iTRACE Probe can be connected to the target with standardized 50-pin (AMP) or 38-pin Mictor debug connector. When connecting to the 50-pin connector, keep the small converter, which is mounted in the production, on the Probe. When the target provides 38-pin Mictor debug connector, remove the small converter, which is attached at the end of the Probe and then connect the Probe to the target.

Make sure that the target debug connector pinout matches with the one on the CRX iTRACE Probe otherwise the damage to the target and development system may occur.

Whenever attaching the converter back to the Probe, double check the connection. Considerable force is necessary for a good connection.



Signal direction	Signal	Pin	Pin	Signal	Signal direction
	n.c.	1	2	n.c.	
	n.c.	3	4	n.c.	
Input	TDO	5	6	RDY	Input
Output	~RESET	7	8	VREF	Input
Output	~EVTI	9	10	GND	
Output	TRST	11	12	GND	
Output	TMS	13	14	GND	
Output	TDI	15	16	GND	
Output	TCK	17	18	GND	
Input	MDO0	19	20	GND	
Input	MCKO	21	22	GND	
Input	~EVTO	23	24	GND	
Input	~MSEO0	25	26	VENDOR_IO0	Input/Output
Input	MDO1	27	28	GND	
Input	MDO2	29	30	GND	
Input	MDO3	31	32	GND	
	n.c.	33	34	GND	
Input	~MSEO1	35	36	GND	
Input	MDO4	37	38	GND	
Input	MDO5	39	40	GND	
Input	MDO6	41	42	GND	
Input	MDO7	43	44	GND	
	n.c.	45	46	GND	
	n.c.	47	48	GND	
Input/Output	VENDOR_IO1	49	50	GND	

Nexus 50-pin AMPMODU target pinout

Input/Output Signals

The input signals ~EVTO, ~MSEO0..1, RDY, TDO, MCKO and MDO0..7 have 10Kohm impedance. The voltage must be between 1.8 and 5V.

The output signals ~RESET, ~EVTI, TRST, TMS, TDI, TCK, MCKI and MDIO..1 are push-pull outputs, the output voltage is equal to 3.3V or equal to VRef, if VRef is lower than 3.3V. If Vref is higher, then it is limited to 3.3V.

The input/output signals VENDOR_IO0 and 1 are open drain signals with a 1Kohm pull-up to the VRef level.

The VRef is an input with the resistance of 1Kohm and is used only for reference. Its value can be between 1.8 and 5V.

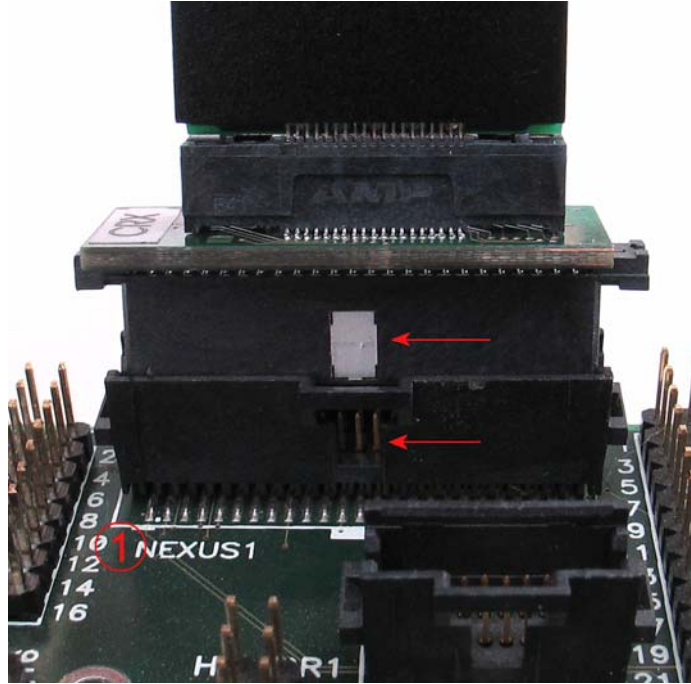
The threshold for inputs is $\frac{1}{2}$ VRef, if VRef is 3.3V or lower. If VRef is higher than 3.3V, the threshold is $\frac{1}{2}$ of 3.3V. The minimal VRef is 1.8V.

The signals marked with n.c. should not be connected.

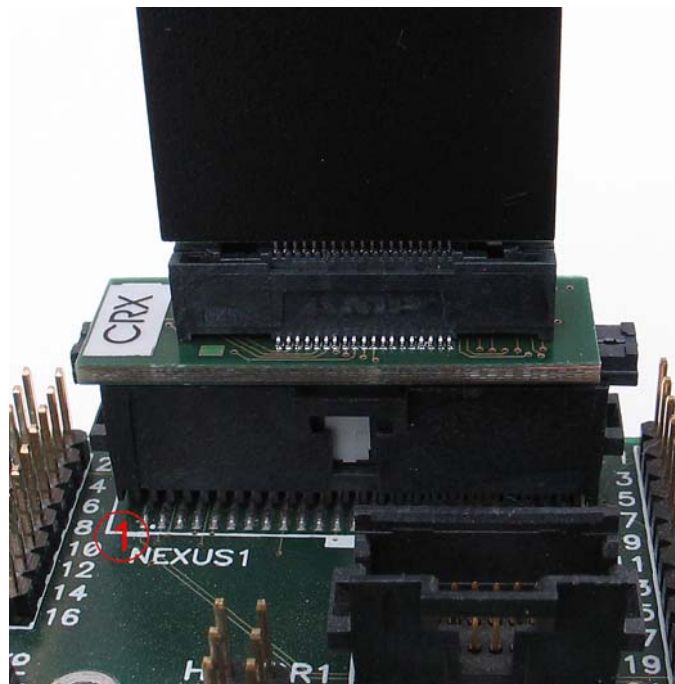
Connecting the Probe to the target

Pay special attention to locate pin 1 properly on both, the adapter and the target side.

Locate the white or silver sticker on the adapter (50-pin female connector). It should match with a notch on the target 50-pin male connector.



Make sure that the adapter is firmly connected to the 50-pin male target connector.



Connected adapter

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