
Hardware Reference

iTRACE Probe ETM9

Ordering code iTRACE Probe ETM9	IC30341
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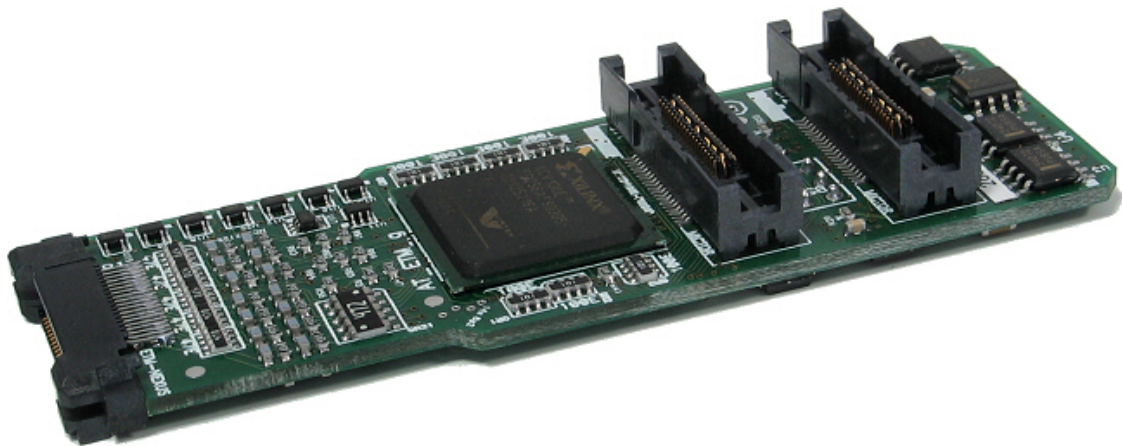
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iTRACE Probe ETM9

Ordering code	IC30341
Dimensions (WxLxH, mm)	28x73x13



The iTRACE probe is used to connect the target to the Emulator.

The iTRACE Probe ETM9 can be connected in two ways:

- 1) either the iTRACE system using the iTRACE Card JTAG-ETM/NEXUS, which is connected to the Emulator;

Ordering code iTRACE Card + Flex Cable	IC30331
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- 2) or the iTRACE PRO system setup is used using the iTRACE PRO OCD Module, the iTRACE PRO Interface Card and the optional iTRACE PRO AUX Card.

Ordering code iTRACE PRO Interface Card	IC30230
Ordering code iTRACE PRO OCD Module	IC30336
Ordering code iTRACE PRO AUX Card (optional)	IC30338

The iTRACE PRO system features a number of advantages to the iTRACE system. The advantages include 16 AUX signals, Trigger Input/Output, Time Unlimited Execution Coverage, Hardware Based Execution Profiler and an Increased Trace Buffer from 128k frames to up to 2M frames.

Target pinout

The iTRACE probe is connected to the target with a Mictor connector.

The only difference between the standard ETM connector and the ETM connector on the iTRACE Probe are pins 1 to 4, to which auxiliary inputs are connected, whereas on the standard connector they are described as not connected. For the description of other signals, please refer to ETM specifications.

The following pinout is valid on the target side:

Signal	Pin	Pin	Signal
AUX[0]	1	2	AUX[1]
AUX[2]	3	4	AUX[3]
GND	5	6	TRACECLK
DBGGRQ	7	8	DBGACK
nSRST	9	10	EXTTRIG
TDO	11	12	VTref
RTCK	13	14	VSupply
TCK	15	16	TRACEPKT[7]
TMS	17	18	TRACEPKT[6]
TDI	19	20	TRACEPKT[5]
nTRST	21	22	TRACEPKT[4]
TRACEPKT[15]	23	24	TRACEPKT[3]
TRACEPKT[14]	25	26	TRACEPKT[2]
TRACEPKT[13]	27	28	TRACEPKT[1]
TRACEPKT[12]	29	30	TRACEPKT[0]
TRACEPKT[11]	31	32	TRACESYNC
TRACEPKT[10]	33	34	PIPESTAT[2]
TRACEPKT[9]	35	36	PIPESTAT[1]
TRACEPKT[8]	37	38	PIPESTAT[0]

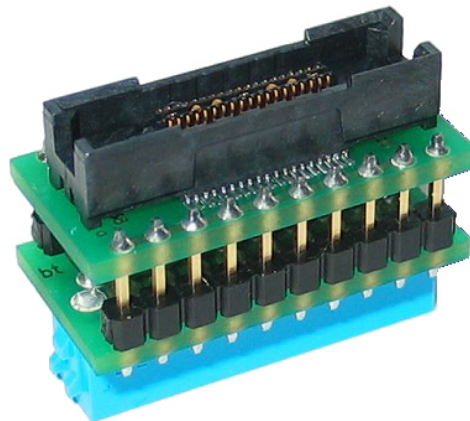
ETM 38-pin Mictor target connector

Transforming the probe into an JTAG Debugger

Ordering code

IAMIC38ARMPIN20

The iTRACE Probe can be transformed into an ARM JTAG debugger using the shipped adapter, called IAMIC38ARMPIN20.



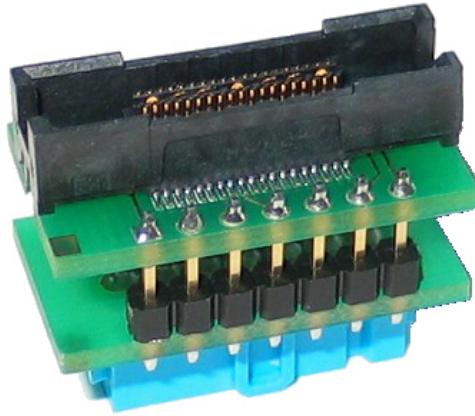
The following pinout is valid on the target side in this case:

2	4	6	8	10	12	14	16	18	20
Vcc	GND	GND	GND	GND	GND	GND	GND	GND	GND
VTref	TRST#	TDI	TMS#	TCK	RTCK	TDO	nSRST	DBGGRQ	DBACK
1	3	5	7	9	11	13	15	17	19

ARM 20-pin target connector

Ordering code	IAMIC38ARMPIN14
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A separate adapter can be purchased to connect the Probe to the 14-pin target.



With this adapter, the following pinout is valid on the target side:

2	4	6	8	10	12	14
GND	GND	GND	GND	GND	ICERST#	GND
SPU	TRST#	TDI		TCK	TDO	SPU
1	3	5	7	9	11	13

ARM 14-pin target connector

Input, Output Signals

The input signals PIPESTAT [2:0], TRACESYNC, TRACEPKT [15:0], TRACECLK, EXTTRIG, DBGACK, RTCK, TDO and AUX [3:0] have 10Kohm impedance. The voltage must be between 1.8 and 5V.

The output signals TDI, TMS, TCK, DBGRQ and nTRST are push-pull outputs, the output voltage is equal to 3.3V or equal to VTRef, if VTRef is lower than 3.3V.

The input/output signal nSRST is an open drain signal with a 1Kohm pull-up to the VTRef level.

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

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.