

---

---

## Hardware Reference

### iTRACE Probe MPC56x rev. G

Ordering code iTRACE Probe MPC56x
-----------------------------------

IC30350
---------



Thank you for purchasing this product from iSYSTEM. This product has been carefully crafted to satisfy your needs. Should any questions arise, do not hesitate to contact your local distributor or iSYSTEM directly. Our technical support personnel will be happy to answer all your technical support questions.

All information, including contact information, is available on our web site [www.isystem.com](http://www.isystem.com). Feel free also to explore our alternative products.

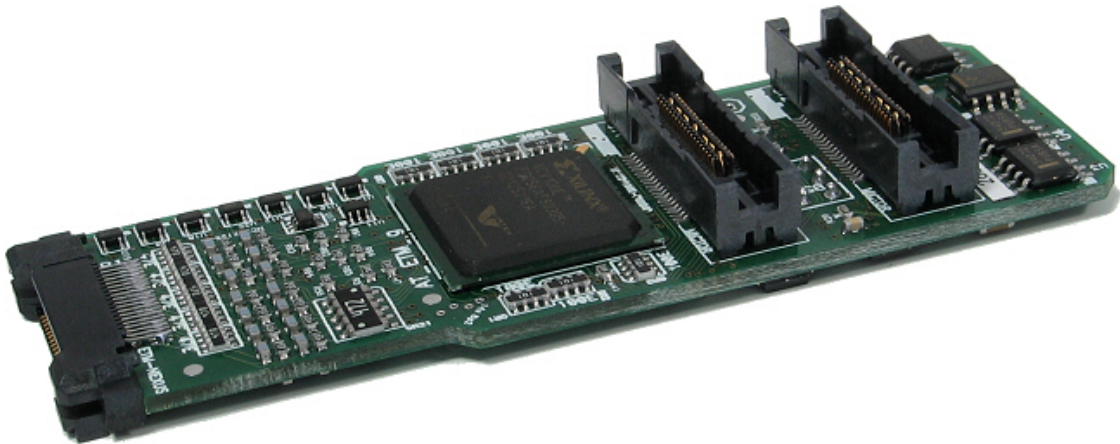
iSystem constantly yields for development and therefore certain pictures in this documentation may vary slightly from the actual product you received. The differences should be minor, but should you find more serious inconsistencies of the product with the documentation, please contact your local distributor for more information.

This document and all documents accompanying it are copyrighted by iSYSTEM and all rights are reserved. Duplication of these documents is allowed for personal use. For every other case a written consent from iSYSTEM is required.

Copyright © 2005 iSYSTEM, GmbH.  
All rights reserved.  
All trademarks are property of their respective owners.

## iTRACE Probe MPC56x rev. G

<b>Ordering code</b>	<b>IC30350</b>
<b>Dimensions (WxLxH, mm)</b>	<b>28x73x13</b>



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

The iTRACE probe MPC56x can be connected in two ways:

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

<b>Ordering code iTRACE Card + Flex Cable</b>	<b>IC30331</b>
---	----------------

- 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.

<b>Ordering code iTRACE PRO Interface Card</b>	<b>IC30230</b>
<b>Ordering code iTRACE PRO OCD Module</b>	<b>IC30336</b>
<b>Ordering code iTRACE PRO AUX Card (optional)</b>	<b>IC30338</b>

The iTRACE PRO system features a number of advantages to the iTRACE system. The advantages include 16 AUX signals, trigger input/output and an increased Trace Buffer from 128k frames to 2M.

### 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.

## Input, Output Signals

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

The output signals ~RESET, ~EVTI, ~RSTI, ~MSEI, MCKI and MDI0..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\_IO1 and 2 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 Vref from the MPC56x target is 2.6V.

## Target Pinouts

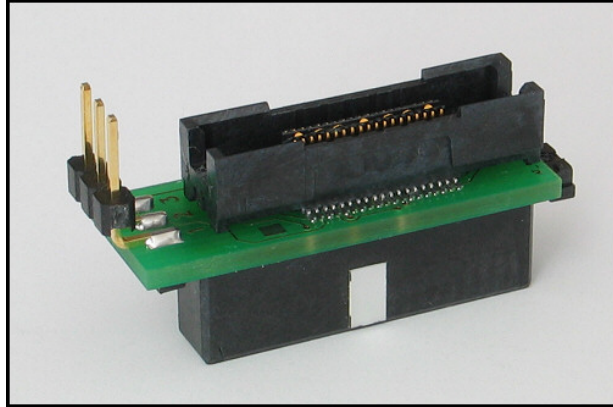
The iTRACE probe has a Mictor connector. Two adapters are included to connect to the target connector, the standard AMPMODU System 50 40-pin connector or AMPMODU 50-pin connector. The adapter for the Glenair51 is also available under the ordering code IA38MIC51GLEN.

### The Mictor Connector

Signal	Pin	Pin	Signal
~EVTI	1	2	VENDOR_IO2
MAUX2	3	4	MAUX3
Not used	5	6	MCKO
MDI1	7	8	VENDOR_IO1
~RESET	9	10	~EVTO
Not used	11	12	VREF
Not used	13	14	Not used
MCKI	15	16	Not used
~MSEI	17	18	Not used
MDI0	19	20	Not used
~RSTI	21	22	Not used
MDO0	23	24	Not used
MDO1	25	26	Not used
MDO2	27	28	Not used
MDO3	29	30	Not used
MDO4	31	32	Not used
MDO5	33	34	Not used
MDO6	35	36	Not used
MDO7	37	38	~MSEO

*Nexus 38-pin Mictor target connector*

## The Nexus 40-pin AMPMODU System 50 target connector



*The Nexus 40-pin AMPMODU System 50 adapter*

Signal	Pin	Pin	Signal
~RESET	1	2	VREF
~EVTI	3	4	VALTREF
~RSTI	5	6	VENDOR_IO1
~MSEI	7	8	GND
MCKI	9	10	GND
MDI0	11	12	GND
reserved	13	14	GND
Reserved	15	16	VENDOR_IO2
~EVTO	17	18	GND
~MSEO	19	20	GND
MCK0	21	22	GND
MDO0	23	24	GND
MDO1	25	26	GND
MDO2	27	28	GND
MDO3	29	30	GND
MDO4	31	32	GND
MDO5	33	34	GND
MDO6	35	36	GND
MDO7	37	38	GND
MDI1	39	40	GND

*Nexus 40-pin AMPMODU System 50 target connector*

---

**Note: Please make sure you do not connect the 40-pin connector to a 50-pin target. This could lead to serious hardware damage to either the iCARD, the Emulator or the Target.**

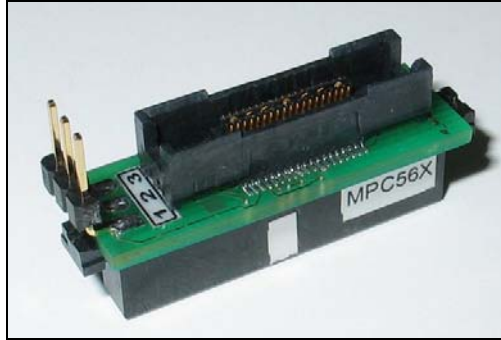
---

### *Auxilliary Input Signals*

The Auxilliary Input Signals can be connected to a special connector on the side of the adapter.

Signal	Pin
GND	1
MAUX2	2
MAUX3	3

## The Nexus 50-pin AMPMODU System 50 target connector



*The Nexus 50-pin AMPMODU System Adapter*

Signal	Pin	Pin	Signal
UBATT	1	2	UBATT
VSTBY	3	4	TOOL_IO0
TOOL_IO1	5	6	TOOL_IO1
~RESET	7	8	VREF
~EVTI	9	10	GND
~RSTI	11	12	GND
~MSEI	13	14	GND
MDI0	15	16	GND
MCKI	17	18	GND
MDO0	19	20	GND
MCKO	21	22	GND
~EVTO	23	24	GND
~MSEO0	25	26	VENDOR_IO0
MDO1	27	28	GND
MDO2	29	30	GND
MDO3	31	32	GND
MDI1	33	34	GND
~MSEO1	35	36	GND
MDO4	37	38	GND
MDO5	39	40	GND
MDO6	41	42	GND
MDO7	43	44	GND
MDI2	45	46	GND
MDI3	47	48	GND
VENDOR_IO1	49	50	GND

*Nexus 50-pin AMPMODU System 50 target connector*

---

**Note: Please make sure you do not connect the 50-pin connector to a 40-pin target. This could lead to serious hardware damage to either the iCARD, the Emulator or the Target.**

---

### *Auxilliary Input Signals*

The Auxilliary Input Signals can be connected to a special connector on the side of the adapter.

Signal	Pin
GND	1
MAUX2	2
MAUX3	3

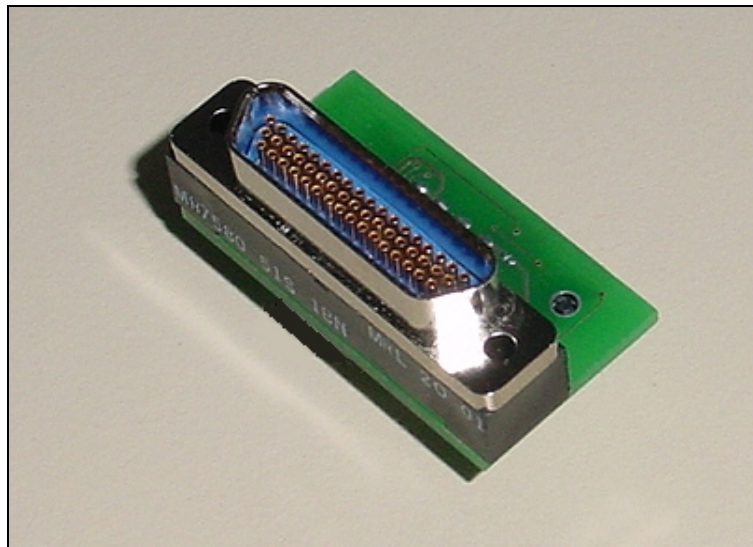
## The Glenair51 Target Connector

Ordering code	IA38MIC51GLEN
---------------	---------------

A special connector can be acquired separately to accommodate the system to the Glenair51 target.

		1
		UBATT
	19	2
36	MDO0	UBATT
GND	20	3
37	GND	VSTBY
MDO4	21	4
38	MCK0	TOOL_IO0
GND	22	5
39	GND	TOOL_IO1
MDO5	23	6
40	~EVT0	TOOL_IO2
GND	24	7
41	GND	~RESET
MDO6	25	8
42	~MSEO0	VREF
GND	26	9
43	VEN_IO	~EVTI
MDO7	27	10
44	MDO1	GND
GND	28	11
45	GND	~RSTI
MDI2	29	12
46	MDO2	GND
GND	30	13
47	GND	~MSEI
MDI3	31	14
48	MDO3	GND
GND	32	15
49	GND	MDI0
VEN_IO1	33	16
50	MDI1	GND
GND	34	17
51	GND	MCKI
PORT0	35	18
	~MSEO1	GND

*Glenair51 Target Connector*



*The Glenair51 Target Adapter*

Notes:

Notes: