iC6000 Debugger & On-Chip Analyzer V1.6

User Manual

![iSYSTEM logo]
i SYSTEM
Enabling Safer Embedded Systems

Contents

Introduction

The iC6000 BlueBox On-Chip Analyzer is a hardware and software platform for debugging and testing the embedded microcontroller platforms which are based on the microcontroller architectures featuring the Aurora trace interface.

Functionality can be further extended with the addition of the I/O Module, enabling the synchronous capture of analog and digital signals in parallel to trace information. Such capability is used for advanced debugging of complex applications together with our winIDEA Integrated Development Environment (IDE), as well as for thorough testing in conjunction with our testing environment testIDEA.

Complementing the hardware is a range of software which target three key areas of embedded development: debugging, timing-analysis and testing.

winIDEA – The winIDEA Integration Development Environment (IDE) delivers the visual insights required to debug your embedded application. At the simplest level, winIDEA provides all the usual functionality of an IDE, such as breakpoints, stepping and device programming. When supported by a target microcontroller, winIDEA can also visualize the timing and code coverage of the application via the trace interface, as well as combine data captured by the IOM6 accessories. Various third-parties also provide software tools to perform advanced worst-time-execution analysis based upon the data winIDEA can export. When a Real-Time Operating System (RTOS) is in use, the state of the RTOS and its tasks can also be visualized.

testIDEA – The testIDEA environment simplifies the development of unit tests for embedded applications. By making use of the winIDEA environment, this application makes it easy to locate source code functions and generate test cases for them. Tests are then executed using the Original Binary Code (OBC) method, testing the object code running on the target microcontroller. The tests, which are stored as YAML files, can easily be added to a project, maintained in a repository, and then automatically executed together with Continuous Integration (CI) tools such as Jenkins.

isystem.connect – There are times when it is more efficient to write a script to execute a task that requires many clicks within a visual development environment. This is where our Software Development Kit (SDK) isystem.connect comes in. The well-documented interface provides access to Python, Java, C++ and other languages so that any action available within winIDEA and testIDEA can be scripted. Scripts can also be executed directly from within winIDEA, thereby allowing the developer to extend its functionality.

iSYSTEM BlueBox solutions best run under iSYSTEM winIDEATM IDE or within the Eclipse IDE environment through a plug-in. winIDEATM is a native Microsoft® Windows® application and as such best performs on Windows 7 and Windows 10 platforms. It also runs on Linux operating system with help of Wine. All our software can be downloaded from the Downloads page at http://www.isystem.com.

Important safety notice

General safety instructions

Please read the following safety precautions carefully before putting this device to use to avoid any personal injuries, damage to the instrument, or to the target system.
Use this instrument only for its intended purpose as specified by this manual to prevent potential hazards.

Use included power cord and power supply

The enclosed power supply has been approved for use by iSYSTEM. Please contact iSYSTEM if you need to consider an alternative power.

Use grounding wire

Prior to applying power to either the BlueBox or the target, connect the device and the target system together with the included grounding wire. This is to avoid potential damage caused by any voltage difference between the device and the target system.

Use proper overvoltage protection

Please ensure proper protection to avoid exposing the BlueBox device or the operator to overvoltage surges (e.g. caused by thunderstorm, mains power).

Do not operate without cover

Do not operate the device with cover removed.

Avoid circuit and wire exposure

Do not touch exposed components or wires when the device is powered.

Do not operate with suspected damage

If you suspect damage may have occurred, the BlueBox device must be inspected by qualified service personnel before further operation.

Do not operate the device outside its rated supply voltage or environmental range

Consult iSYSTEM before using equipment outside of the parameters provided in this manual.

⚠ This symbol is used within the manual to highlight further safety notices.

Package content

The standard iC6000 order is delivered with the following components:

iC6000 Base Unit including the preassembled Aurora DTM and Aurora Cable	Power supply	Grounding wire
Ordering code: IC60000-1 + IC6002x-1 + IC6004x-1	Ordering code: IC30000-PS	Ordering code: BB-WIRE

USB 3.0 cable	Ethernet cable	winIDEA installation DVD
Ordering code: BB-USB30-180	Ordering code: BB-ETHCAT5-200	

User manual	License request instructions
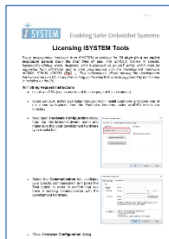
Specifications

GENERAL	
Operating temperature	10°C to 40°C
Storage temperature	-10°C to 60°C
Humidity	5% to 80% RH
MECHANICAL	
Size	155 x 155 x 65 mm
Weight	approx. 800g
OPERATION	
Communication interfaces to PC	USB 2.0, USB 3.0, 10/100 Ethernet
Supply voltage	10V to 24V DC
Power consumption	< 15W
ELECTRICAL	
Debug signal valid input voltage range	1.8V to 5V DC
Debug signals	47Ω series termination/protection resistors, ESD protection devices, 100mA resettable fuses
All inputs except the TDO	10kΩ pull-up resistor
TDO input	10kΩ pull-down resistor
TMS and TDI debug signals	10kΩ pull-up resistor
RESET	1kΩ pull-up resistor, buffer-driven to prevent current flow into an unpowered iC6000 from a powered target board
TAR_VREF (target reference voltage) pin	100kΩ input impedance

Operation

Device overview
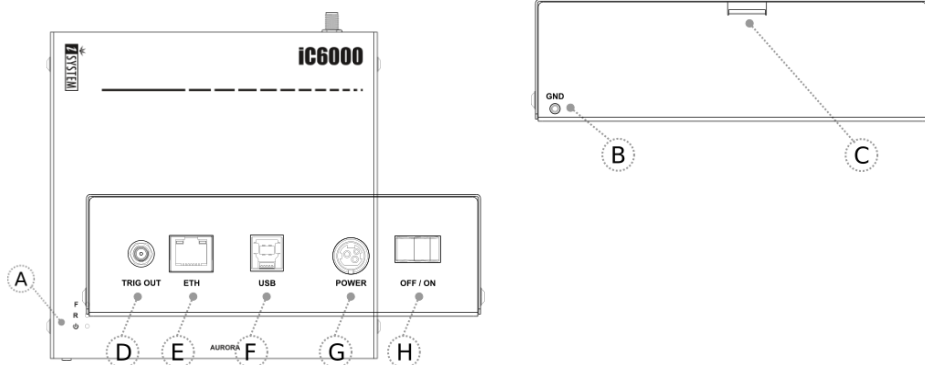
Device description

The top face of the iC6000 features:

- **A** – The indicator lights provide the status of the iC6000 hardware as follows:

  - ⏻ - Power Indicator – Green

    - On – powered on
    - Off – powered off

  - **R** - Running Indicator – Red

    - On – target microcontroller is executing code
    - Off – target microcontroller is halted

  - **F** - Free Indicator – Yellow

    - On – iC6000 is available for a connection from a host PC
    - Off – an active connection to the iC6000 from a host PC exists

The front face of the iC6000 features:

- **B** – The grounding socket (marked GND) should be used, together with the supplied Grounding Wire to create an electrical connection between the iC6000 and the target circuitry. The socket is suitable for a 2 mm Multi Contact Plug (also known as a Banana Plug) if building a longer or a replacement cable on your own.

- **C** – The location where the Aurora cable exits the iC6000 BlueBox after the assembly.

The rear face of the iC6000 features the remaining connectors as follows:

- **D** – Trig Out Socket

  BlueBox trace trigger event can optionally stimulate Trig Out signal, on which an external hardware (e.g. oscilloscope or logic analyzer) connected to this socket, can trigger concurrently.
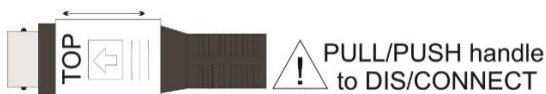
  E – 10/100 Ethernet Socket

- **F** – USB 3.0 Socket
  It is **highly recommended** to use the supplied USB 3.0 cable delivered with your iC6000 as it has been confirmed to fulfil the maximum USB 3.0 transfer rate (5Gbit/s). Use of alternate cables must be undertaken at your own risk.

- **G** – Power Supply Socket
  The socket and the plug are latching to stop the plug from being accidentally pulled out of the socket. To remove the power plug from the socket, **always** pull gently of the sleeve of the plug and **never** on the wire.

- **H** – Power Switch

Both the 10/100 Ethernet Socket and the USB 3.0 Socket can be connected to a network/PC simultaneously. The active interface will be determined by whichever interface winIDEA connects to first.

The USB 3.0 interface provides the highest possible data transfer rate of the two available interfaces. It is highly recommended to use the USB 3.0 when using the trace feature due to the quantity of data to be uploaded to the PC.

Information label with the MAC address and the serial number is placed on the bottom of your device.


When powering on the system, switch the iC6000 on before powering on the target system. When powering down the system, power off the target before powering off the iC6000!
Use only original iSYSTEM accessories for powering and connecting with the iC6000. Consult with iSYSTEM before attempting to use any other accessory.

Connecting the iC6000 to the target hardware

Grounding wire

Always start by connecting the iC6000 to the target hardware with the enclosed grounding wire.
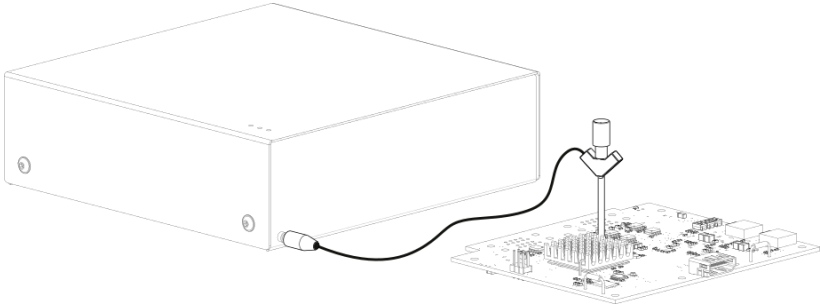
⚠️ If the grounding wire is not connected, the ground potential difference between the BlueBox hardware and the target can exceed well over 1000V even before any of the devices are powered up. This voltage difference is discharged over the BlueBox hardware and the target system, leading to the possible destruction of electronic components within the BlueBox hardware, the target or both.

Power Supply

The iC6000 unit accepts a wide input voltage range from 10V to 24V DC, thus enabling the BlueBox hardware to work also with a 12V or 24V vehicle battery.

The necessary power supply (Part No. IC30000-PS) is delivered with the iC5700 unit. The power supply comes with the EU (type F power plug), USA (type B power plug), India (type D power plug) or China (type I power plug) power cord depending on the delivery address.
Refer to the *Accessories* chapter for a spare power cord when required.

An optional 12V power supply adapter suitable for use in a vehicle can be ordered using the ordering code IC30000-PS-CAR12V.

Aurora DTM module

The iC6000 comes preassembled with one of the available Aurora DTM modules supporting different debug interfaces.

The target microcontroller architecture and the debug interface type must be specified when ordering the iC6000. Based on this information, the corresponding Aurora DTM module and High-Speed Aurora cable are mounted and delivered with the iC6000 order.
If a later Aurora DTM module exchange is required, for example to connect the iC6000 to the microcontroller architecture supported by different Aurora DTM module, the exchange has to be carried out by iSYSTEM.

Next table shows which Aurora DTM module is required for the specific debug interface and which High-Speed Aurora cable is required for the specific microcontroller architecture:

Architecture	Debug Interface	Trace Interface	iC6000 Aurora DTM Ordering Code	iC6000 Aurora Cable Ordering Code
Freescale MPC57xx	JTAG		iC60022-1	iC60041-1
ST SPC57	JTAG		iC60022-1	iC60041-1
Infineon Aurix	JTAG	Aurora	iC60022-1	iC60040-1
Infineon Aurix	DAP		iC60023-1	iC60040-1
Renesas RH850	LPD		iC60024-1	iC60042-1

The iC6000 Hardware Configuration

Infineon Aurix microcontrollers can provide two debug interfaces, the JTAG and the DAP interface. The user has to have this in mind during the target design by connecting accordingly the JTAG or the DAP debug interface signals to the target debug connector.
The DAP interface has better throughput performance and features less physical signals comparing to the JTAG interface. Therefore, the DAP is the recommended debug interface for the Aurix family.

The Aurora DTM module features protection and minimal electronic logic adjusting the iC6000 to the specific target microcontroller debug interface. Refer to the Specifications chapter for more details.

⚠️ Make sure that the matching High-Speed Aurora cable is used together with the specific DTM Aurora module.

The following Aurora DTM modules are available:

- **iC6000 DTM Aurora/JTAG (MPC57xx, SPC57, Aurix)**

Ordering code	IC60022-1

- **iC6000 DTM Aurora/DAP (Aurix)**

Ordering code	IC60023-1

Both, 2-pin and 3-pin (Wide Mode) DAP debug interfaces are supported. The DAP interface width is configurable in winIDEA™ IDE.

- **iC6000 DTM Aurora/LPD (RH850)**

Ordering code	IC60024-1

8

High-Speed Aurora cable

The iC6000 comes preassembled with one of the available High-Speed Aurora cables supporting different microcontroller architectures.

The target microcontroller architecture and the debug interface type must be specified when ordering the iC6000. Based on this information, the according [Aurora DTM module](#) and High-Speed Aurora cable are mounted and delivered with the iC6000 order.

The above table is repeated to show which High-Speed Aurora cable is required for the specific microcontroller architecture and which Aurora DTM module is required for the specific debug interface:

Architecture	Debug Interface	Trace Interface	iC6000 Aurora DTM Ordering Code	iC6000 Aurora Cable Ordering Code
Freescale MPC57xx	JTAG		iC60022-1	iC60041-1
ST SPC57	JTAG		iC60022-1	iC60041-1
Infineon Aurix	JTAG	Aurora	iC60022-1	iC60040-1
Infineon Aurix	DAP		iC60023-1	iC60040-1
Renesas RH850	LPD		iC60024-1	iC60042-1

The iC6000 Hardware Configuration

The High-Speed Aurora cable comes preassembled with the iC6000. For this reason, the target microcontroller architecture and the debug interface type must be specified when ordering the iC6000.

The following High-Speed Aurora cables are available:

- **22-pin High-Speed Aurora cable for Infineon Aurix**

This cable is delivered under the IC60040-1 ordering code and is required to connect the iC6000 to Infineon Aurix based target featuring Samtec 22-pin ERF8 debug connector.

Ordering code	IC60040-1

Target connector and the placement
The target should feature a matching part, for example, Samtec part number: ASP-137969-01 (Samtec Series ERF8, Rugged High Speed Socket).

It's recommended to position the connector in a way that even-numbered signals are located at the edge of the PCB. This way the Aurora cable connects to the target debug connector without being twisted.

Infineon Aurix microcontrollers can provide two debug interfaces, the JTAG and the DAP interface. The user has to have this in mind during the target design by connecting accordingly the JTAG or the DAP debug interface signals along the Aurora trace interface to the 22-pin ERF8 target debug connector.

⚠️ For the JTAG debug interface, this cable is used in conjunction with the Aurora/JTAG DTM (ordering code IC60022-1).
For the DAP debug interface, this cable is used in conjunction with the Aurora/DAP DTM (ordering code IC60023-1).

The following pinout is valid on the target side:

Signal direction	Signal	Pin	Pin	Signal	Signal direction
I	TX0+	1	2	VREF	I
I	TX0-	3	4	TCK / DAP0	O / O
Ground	GND	5	6	TMS / DAP1	O / IO
	Not Connected	7	8	TDI	O
	Not Connected	9	10	TDO	I
Ground	GND	11	12	~TRST	O
	Not Connected	13	14	CLK+	O
	Not Connected	15	16	CLK-	O
Ground	GND	17	18	TGO	I
	Not Connected	19	20	Not Connected	O
	Not Connected	21	22	~PORST	IO

*22-pin ERF8 Aurix target pinout*

Blue colored signals are Aurora trace interface signals.

Infineon Tricore target can also feature a standard 10-pin 1.27mm DAP or 16-pin 2.54mm JTAG target debug connector exposing only the debug interface without the Aurora trace interface.

The iC6000 unit can be used to connect to such targets through a small adapter connecting at the end of the 22-pin High-Speed Aurora cable.

10-pin 1.27 mm DAP Adapter

Ordering code	IASAM22TRICOREPIN10
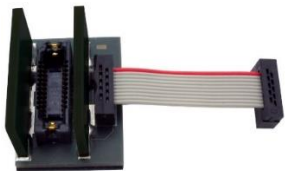
IASAM22TRICOREPIN10

The 10-pin adapter (ordering code IASAM22TRICOREPIN10) must be ordered separately in order to connect to the target featuring 10-pin 1.27mm pitch DAP target debug connector. This adapter can be used only in conjunction with the iC6000 DTM Aurora/DAP module (IC60023-1).
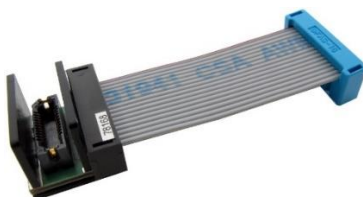The following pinout is valid on the target side:

Signal direction	Signal	Pin	Pin	Signal	Signal direction
I	VREF	1	2	TMS / DAP1	O / IO
Ground	GND	3	4	TCK / DAP0	O / O
Ground	GND	5	6	TDO	I
	Not Connected	7	8	~TRST	O
Ground	GND	9	10	~PORST	IO

10-pin 1.27mm Tricore DAP pinout

16-pin 2.54 mm JTAG Adapter

Ordering code	IASAM22TRICOREPIN16

IASAM22TRICOREPIN16

This adapter (ordering code IASAM22TRICOREPIN16) must be ordered separately in order to connect to the target featuring 16-pin 2.54mm pitch JTAG target debug connector. The adapter can be used only in conjunction with the iC6000 DTM Aurora/JTAG module (IC60022-1).

The following pinout is valid on the target side:

Signal direction	Signal	Pin	Pin	Signal	Signal direction
O / IO	TMS / DAP1	1	2	VREF	I
I	TDO	3	4	GND	Ground
	Not Connected	5	6	GND	Ground
O	TDI	7	8	~PORST	IO
O	~TRST	9	10	Not Connected	
O / O	TCK / DAP0	11	12	GND	Ground
	Not Connected	13	14	Not Connected	
	Not Connected	15	16	Not Connected	

16-pin 2.54mm Tricore JTAG pinout

- **34-pin High-Speed Aurora cable for NXP MPC57xx and ST SPC57**

This cable is delivered under the IC60041-1 ordering code and is required to connect the iC6000 to Freescale MPC57xx or ST SPC57 based target providing Samtec 34-pin ERF8 debug connector.

Ordering code	IC60041-1

Target connector and the placement

A target should feature a matching part, for example, Samtec part number: ASP-137973-01 (Samtec Series ERF8, Rugged High Speed Socket).

It's recommended to position the connector in a way that even-numbered signals are located at the edge of the PCB. This way the Aurora cable connects to the target debug connector without being twisted.

The following pinout is valid on the target side:

Signal direction	Signal	Pin	Pin	Signal	Signal direction
I	AGBT TX_P0	1	2	VREF	I
I	AGBT TX_N0	3	4	TCK	O
Ground	GND	5	6	TMS	O
	AGBT TX_P1	7	8	TDI	O
	AGBT TX_N1	9	10	TDO	I
Ground	GND	11	12	~JCOMP	O
	AGBT TX_P2	13	14	Not Connected	
	AGBT TX_N2	15	16	~EVTI0	O (not used)
Ground	GND	17	18	~EVTO0	I
	AGBT TX_P3	19	20	~PORST	O
	AGBT TX_N3	21	22	ESR0	IO
Ground	GND	23	24	GND	Ground
	Not Connected	25	26	AGBT CLK_P	O
	Not Connected	27	28	AGBT CLK_N	O
Ground	GND	29	30	GND	Ground
	Not Connected	31	32	Not Connected	
	Not Connected	33	34	Not Connected	

34-pin ERF8 MPC57xx / SPC57 target pinout

Blue colored signals are Aurora trace signals.

~JCOMP is an optional pin. Some microcontrollers don't have this pin. Internally, this is actually the JTAG TRST which resets the JTAG TAP state machine. Because the JTAG TAP

state machine can be reset also by the TMS and the TCK, this pin is optional also for the debugger. If the microcontroller has the JCOMP pin but it is not connected to the target debug connector, it must be set to the non-active state in the target via a pull-up resistor. If not, then the JTAG TAP state machine remains in reset and debugging is not possible.

NXP MPC5xxx and ST SPC5 target can also feature a standard 14-pin 2.54mm JTAG target debug connector exposing only the debug interface without the Aurora interface.

The iC6000 unit can be used to connect to these targets through a small adapter connecting at the end of the 34-pin High-speed Aurora cable.

14-pin 2.54 mm JTAG Adapter

Ordering code	IASAM34MPCPIN14
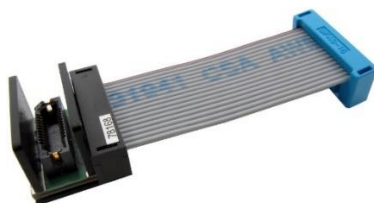
IASAM34MPCPIN14

This adapter (ordering code IASAM34MPCPIN14) must be ordered separately in order to connect to the target featuring 14-pin 2.54mm pitch JTAG target debug connector. The adapter can be used only in conjunction with the iC6000 DTM Aurora/JTAG module (IC60022-1).

The following pinout is valid on the target side:

Signal direction	Signal	Pin	Pin	Signal	Signal direction
O	TDI	1	2	GND	Ground
I	TDO	3	4	GND	Ground
O	TCK	5	6	GND	Ground
O (not used)	~EVTI0	7	8	~PORST	O
IO	ESR0	9	10	TMS	O
I	VREF	11	12	GND	Ground
	Not Connected	13	14	~JCOMP	O

14-pin 2.54mm MPC5xxx / SPC5 target pinout

Mandatory pins on the microcontroller side are GND, VDD, RESET, TMS, TDI, TDO and TCK.

The ~JCOMP is an optional pin. Some microcontrollers don't have this pin. Internally, this is actually the JTAG TRST which resets the JTAG TAP state machine. Because the JTAG TAP state machine can be reset also by the TMS and the TCK, this pin is optional also for the debugger. If the microcontroller has the JCOMP pin but it is not connected to the target debug connector, it must be set to the non-active state in the target via a pull-up resistor. If not then the JTAG TAP state machine remains in reset and debugging is not possible.

- **34-pin High-speed Aurora cable for Renesas RH850**

This cable is delivered under the IC60042-1 ordering code and is required to connect the iC6000 to Renesas RH850/P1H-C based target providing Samtec 34-pin ERF8 debug connector.

Ordering code	IC60042-1

Target connector and the placement
The target should feature a matching part, for example, Samtec part number: ASP-137973-01 (Samtec Series ERF8, Rugged High Speed Socket).
It's recommended to position the connector in a way that even-numbered signals are located at the edge of the PCB. This way the Aurora cable connects to the target debug connector without being twisted.

The following pinout is valid on the target side:

Signal direction	Signal	Pin	Pin	Signal	Signal direction
I	TX0_P	1	2	VREF	I
I	TX0_N	3	4	TCK	O
Ground	GND	5	6	TMS	O
I	TX1_P	7	8	TDI	O
I	TX1_N	9	10	TDO	I
Ground	GND	11	12	TRSTn	O
	Reserved	13	14	FLMD0	O
	Reserved	15	16	EVTIn	O
Ground	GND	17	18	EVTOn	I
	Reserved	19	20	FLMD1	
	Reserved	21	22	RESETn	IO
Ground	GND	23	24	GND	Ground
	Reserved	25	26	CLK_P	O
	Reserved	27	28	CLK_N	O
Ground	GND	29	30	GND	Ground
	Reserved	31	32	RDYn	I
	Reserved	33	34	Reserved	

34-pin ERF8 RH850 target pinout

Blue colored signals are Aurora trace signals.

Renesas RH850 target can also feature a standard 14-pin 2.54mm LPD target debug connector exposing only the debug interface without the Aurora interface.

The iC6000 unit can be used to connect to these targets through a small adapter connecting at the end of the 34-pin High-speed Aurora cable.

14-pin 2.54 mm LPD Adapter

An adapter (ordering code IASAM34RH850PIN14) must be ordered separately in order to connect to the target featuring 14-pin 2.54mm pitch LPD target debug connector. **This adapter can be used only in conjunction with the iC6000 DTM Aurora/LPD module (IC60024-1).**

Ordering code	IASAM34RH850PIN14
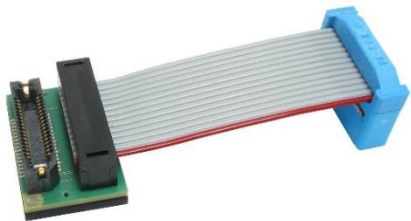
IASAM34RH850PIN14

The following pinout is valid on the target side:

Signal direction	Signal	Pin	Pin	Signal	Signal direction
O	TCK	1	2	GND	
O	TRST	3	4	FLMD0	O
I	TDO	5	6	FLMD1	
O	TDI	7	8	VTREF	I
O	TMS	9	10	NC	
I	~RDY	11	12	GND	
I/O	RESET	13	14	GND	

14-pin 2.54mm RH850 target pinout

Aurora Interface – Board Layout Guidelines

> ⚠️ Aurora interface runs at speeds up to 5Gbps, which means high-speed board layout guidelines and practice must be considered while routing Aurora physical interface from the transmitter to the receiver.

On the iC6000 side the Aurora interface lines are connected directly to the FPGA implementing the physical Aurora interface. These lines exhibit the following characteristics:

- Aurora receive data lanes (AGBT_TX marked on the target side):
  To ensure interoperability between drivers and receivers of different vendors, AC coupling at the receiver input is used. 100nF AC coupling capacitors for connection to the transmitter are used at Aurora receiver input pins.

- Aurora transmit data lanes (AGBT_RX marked on the target side):
  This direction is normally not applicable for Nexus trace operation. The iC6000 has no AC coupling capacitors on these lines. They must be located on the target (receiver) side.

- Aurora clock lane (AGBT_CLK marked on the target side):
  100nF AC coupling capacitors are located on the CLK output to protect drivers from possibly getting shorted. Target side has usually its own AC coupling.

The following guidelines should be considered during the target board layout design to ensure the correct operation of the Aurora trace interface. Note that the quality (signal integrity) of the Aurora interface signals to the external Aurora capable trace tool is critical for correct and reliable trace operation.

- All Aurora trace port lines on the PCB should be as short as possible (max 2.5 cm).
- Traces should run on the same layer, or layers with the same impedance.
- Preferred layer impedance is 50 Ohm.
- Samtec ERF8 connector ground pins should be connected directly to the PCB GND plane.
- Trace clock should have only point-to-point connection. Stubs must be strictly avoided.
- It is strongly recommended for the data lines to be point-to-point only too. If any stubs are needed, they should be as short as possible. When longer are required, there should be a possibility to optionally disconnect them (e.g. by solder jumpers).

Trace port data bus inner crosstalk is not so important, but it is critical to isolate the whole bus from the other target signals, including from the Aurora trace clock.

Accessories

Aurora DTM modules

Different target debug interfaces are supported through a specific Aurora DTM module. The Aurora DTM module exchange can be carried out by iSYSTEM only.

Ordering Code	Description
IC60022-1	iC6000 DTM Aurora/JTAG (MPC57xx, SPC57, Aurix)
IC60023-1	iC6000 DTM Aurora/DAP (Aurix)
IC60024-1	iC6000 DTM Aurora/LPD (RH850)

High-Speed Aurora cables

Different High-Speed Aurora cables are available to connect the iC6000 to the specific embedded target architecture.

Ordering Code	Description
IC60040-1	22-pin High-speed Aurora cable for Infineon Aurix
IC60041-1	34-pin High-speed Aurora cable for NXP MPC57xx and ST SPC57
IC60042-1	34-pin High-speed Aurora cable for Renesas RH850

Power supplies and cables

Ensure proper operation of your iC6000 operation by using approved iSYSTEM power supplies and cables.

Ordering Code	Description
IC30000-PS	19V Power Supply
IC30000-PS-CAR12V	12V Car Power Supply
BB-USB30-180	1.8 m USB 3.0 Cable
BB-PSC-EU	Power Supply Cord - EU Plug (type F Plug)
BB-PSC-US	Power Supply Cord - USA Plug (type B Plug)
BB-PSC-IN	Power Supply Cord - India Plug (type D Plug)
BB-PSC-CN	Power Supply Cord - China Plug (type I Plug)
BB-ETHCAT5-200	2 m Cat 5 Ethernet Cable
BB-WIRE	Grounding Wire

More information can be found on our website at www.isystem.com or simply contact our sales team via sales@isystem.com

Declarations

EU Declaration of Conformity (DoC)

We
iSYSTEM AG für Informatiksysteme
Carl-Zeiss-Str. 1
85247 Schwabhausen
Germany

declare that the DoC is issued under our sole responsibility and belongs to the following product:
Blue Box - debugger and analyzer solution
Type: iC3000, iC5000, iC5500, iC5700, iC6000, iTAG.2K

Identification allowing traceability:
Object of the declaration is identified by a product type and unique serial number for each individual device.

The object of declaration described above is in conformity with the relevant Union harmonization legislation:
EMC directive 2014/30/EU and RoHS directive 2011/65/EU

The following harmonized standards and technical specifications have been applied:
- EN 55032: 2012
- EN 55024: 2010
- EN 61000 - 3 - 2: 2014
- EN 61000 - 3 - 3: 2013

Signed for and on behalf of:

Martin Gröstenberger, CFO   Werner Fischer, COO

Schwabhausen,   21. March 2017

Technical support

To reach for technical support, please visit www.isystem.com/support.