

EXOSTIV

Data Sheet

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Revision History

Revision	Modifications
1.0.1	<ul style="list-style-type: none">Initial revision

EXOSTIV Data Sheet

Scope

This is the general data sheet of Exostiv FPGA debug and test solution (see product page: <https://www.exostivlabs.com/exostiv>).

Exostiv hardware and software are bundled – the following product codes apply:

EXO<SPEED><FPGA VENDOR><CHANNELS><LIC TYPE><LIC OPTIONS>

Code	Possible values	Description
<SPEED>	6000 or 12000	Max. data rate of the Exostiv Probe transceiver channels for the probe included in the bundle: 6000 : max. data rate 6.6 Gbps (EP6000 probe) 12000 : max. data rate 12.5 Gbps (EP12000 probe)
<FPGA VENDOR>	X, I or XI	Support FPGA vendor(s): X : Xilinx I : Intel XI : Xilinx and Intel
<CHANNELS>	1 to 4	Number of transceiver channel in the Exostiv Probe
<LIC TYPE>	N or F	License type included in the bundle: N : node-locked F : floating
<LIC OPTIONS>	'-3YP'	Additional license options: (empty): subscription license type -3YP: 3 years full service license with perpetual option.

Example: EXO12000X4N : Exostiv for Xilinx bundle with EP12000 probe (4 channels at 12.5 Gbps each) and a yearly subscription node-locked license.

Bundles

Each Exostiv bundle is composed of:

- Exostiv Probe (1x);
- Standard accessories: power supply (1x), USB 3.0 cable (1x), connectivity cable (HDMI type) (1x);
- Exostiv Dashboard software license (1x);

Optionally, the following items can be used with the bundle (purchased separately):

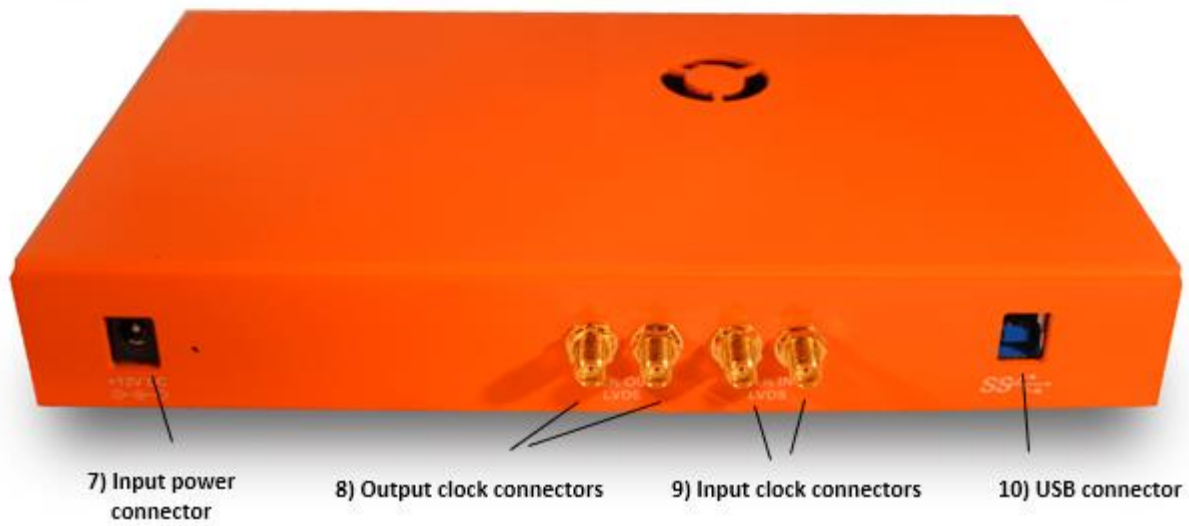
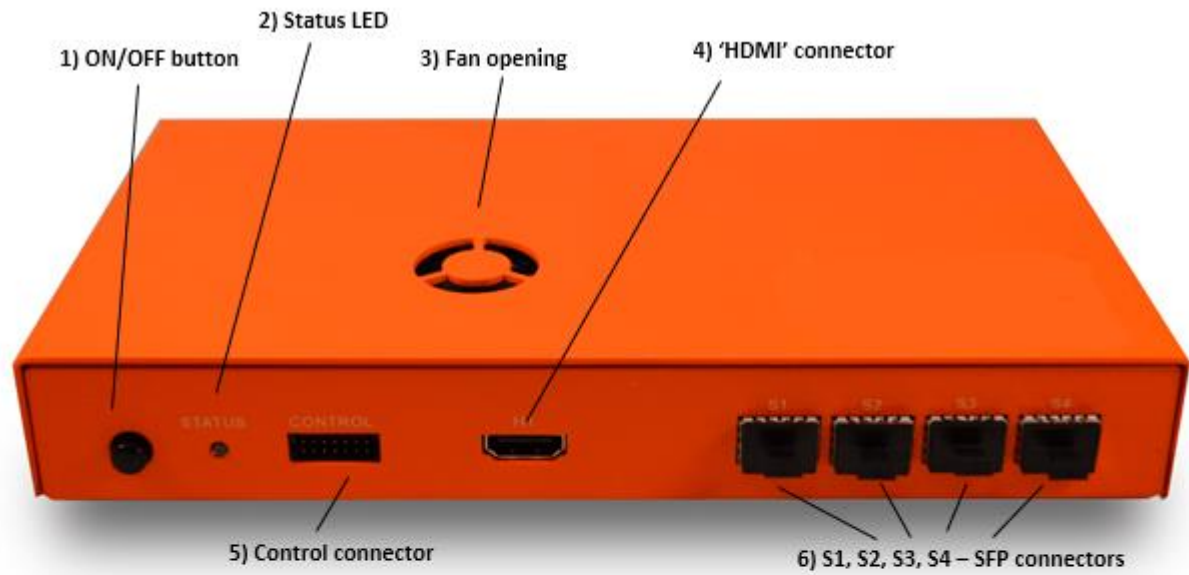
- Cables: SFP+, QSFP+, SMA, additional HDMI, ...
- FMC plug-in adapters

Exostiv Probe

Model #	Description
EP6000,	EXOSTIV Probe with 1 to 4 channels – speed per channel up to 6.6 Gbps. Other equivalent model numbers: EP6000X, EP6000I
EP12000	EXOSTIV Probe with 1 to 4 channels – speed per channel up to 12.5 Gbps

EP6000 and EP12000 can be generically referred to as 'EXOSTIV Probe'.

The model type can be found on the label at the back of the device – see 'Overview below'.





13) Model & Serial number label



SFP/SFP+ cable



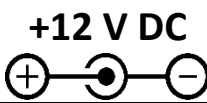
QSFP+ to 4x SFP+ cable with splitter



SMA cable



HDMI cable


Item	Usage	Remark
1) ON/OFF button	Push to power probe on and off	Lights up when probe is ON.
2) Status LED	Should be ON and Green when probe operates	Check Knowledge Base and/or contact Exostiv Labs if blinks or not green when power is ON.
3) Fan opening	The fan underneath functions when probe is ON.	Do not block. Do not insert object or fingers.
4) 'HDMI' connector	Used to connect to board under test. Should be used with the HDMI cable provided with the probe.	Cannot / should not be used with a standard HDMI (video) interface. Please refer to UG### for connection with target board. Because many HDMI cable on the market provide an insufficient bandwidth, Exostiv Labs does not warrant proper operation with <i>any</i> HDMI cable.
5) Control connector	Unused. Do not connect.	
6) SFP Connectors (labeled S1, S2, S3, S4)	Used to connect to board under test. Should be used with copper SFP/SFP+ cables providing sufficient bandwidth.	
7) Input power connector	Use the provided power supply adapter. Respect the connector polarity and max. voltage. 	Use the power adapter provided with the Probe: AC/DC switching 100-240V AC, 50 – 60 Hz, output 12V / 2A
8) Output clock connectors	Optionally use to generate transceiver clock for target board. To be used with a pair of SMA cables.	LVDS 2.5 V signaling.
9) Input clock connectors	Unused. Do not connect.	
10) USB connector	To be used with USB 3.0 type B to A cable and the proper USB host port (workstation side).	Compatible with USB 2.0 and USB 3.0 ports.
11) Side fan openings	Airflow exits.	Do not block. Do not insert object or fingers.
12) Screws		Do not attempt to dismantle or open the device. Doing so would void the warranty.
13) Model & Serial number label	Label with the Probe model and its serial number.	

Exostiv Probe - Instructions of use

- Connect probe to power adapter and plug the power adapter. (7))
- Connect the probe to a PC with the USB cable (10))
- Choose the connection with the target board and use the corresponding HDMI or 1 to 4 SFP/SFP+ cables.(4) or 6)).
- Optionally connect the probe output clock with SMA cables (8))
- Use ON/OFF button to turn Probe ON (7)).

EXOSTIV Probe can only be used and controlled with software provided by Exostiv Labs. Any other usage is strictly forbidden. Please check EXOSTIV Dashboard installation guide and user's guide.

Exostiv Probe - Interfaces voltages and specifications

Connector reference	I/O standard – voltage – specification	Remark
4) 'HDMI' connector	Check UG102 – Interfacing EP Series – User's guide.	
5) Control connector	Not applicable	Not used – do not connect
6) SFP connector	Check UG102 – Interfacing EP Series – User's guide.	
7) Input power connector	12 V DC Power supply	Respect voltage and polarity as follows: +12 V DC  Use the provided power supply.
8) Output clock connectors	2.5V LVDS	Use SMA cables with sufficient bandwidth
9) Input clock connectors	Not used.	Do not use or connect.
10) USB connector	Not applicable	Use with standard USB type B to A cable, USB 3.0 and USB2.0 or USB 3.0 port at the host.

Exostiv Probe - General precautions and safety recommendations.

- Handle the probe and insert, extract cables gently.
- Do not throw, keep dry.
- Recommended ambient temperature range: commercial (0°C to 70°C)
- Fan openings (3 and 11) should not be blocked. Do not insert fingers or objects.
- Do not try to dismantle or open the device. Doing so would void the warranty.
- This is a low voltage device.
- No inspection or control required.

Exostiv Probe - Troubleshooting

During normal operation, the ON/OFF button (1)) should be light up, the Status LED (2)) should be green and still and the fan should be functioning.

Go to <https://www.exostivlabs.com/support> for more technical support resources.

Exostiv Dashboard software

Exostiv Dashboard software is used to instrument the target FPGA with an EXOSTIV IP and control the EXOSTIV Probe to capture data.



Please refer to the following pages and user's guide Exostiv Dashboard user's guide:

- **Exostiv Dashboard user's guide:** <https://www.exostivlabs.com/files/documents/UG601%20-%20EXOSTIV%20Dashboard.pdf>
- **Exostiv IP page and user's guide:**
<https://www.exostivlabs.com/exostiv/exostiv-ip/>
<https://www.exostivlabs.com/files/documents/UG401%20-%20EXOSTIV%20IP.pdf>

- **MYRIAD Waveform viewer page:**
<https://www.exostivlabs.com/myriad-waveform-viewer/>

Additional resources and documentation

- **Exostiv for Xilinx – online technical specifications:**
<https://www.exostivlabs.com/exostiv/exostiv-technical-specifications>
- **Exostiv for Intel – online technical specifications:**
<https://www.exostivlabs.com/exostiv/exostiv-for-intel-fpga-technical-specifications>
- **Exostiv – Knowledge base: searchable database of FAQs:** <https://www.exostivlabs.com/knowledgebase>
- **Exostiv Labs – General documentation page:** <https://www.exostivlabs.com/support/documentation>
- **Connecting Exostiv :** <https://www.exostivlabs.com/exostiv/connecting-exostiv/>

Regulatory compliance



This equipment complies with the following European Regulations:
2006/42/CE, 2014/35/EU, 2014/30/EU.
Full declaration of Conformity is available on request.

FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation

Caution

Any changes or modifications of the device, not expressly approved by Exostiv Labs sprl, that could modify the FCC compliance of the device, could void the user's authority to operate the equipment.

Information to the user

Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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