

Exostiv Maestro

User's Guide

Rev. 1.0.0 – September 28th, 2026



Table of Contents

Exostiv Maestro – User’s guide	3
What is Maestro and what is it useful for?	3
How Exostiv tools capture data	3
Limitations of this approach	3
Maestro hides the capture layer and lets users observe the system as a whole.....	4
How do I enable Maestro?	4
Maestro principles and requirements	4
Reference time counter	5
Trigger.....	5
Single IP vs. multiple IP mode.....	6
How to use Exostiv Core Inserter to enable Maestro features in Exostiv IP?	6
Step-by-step setup.....	6
Use Maestro in 'multiple IPs' mode.....	8
Multiple IPs mode: overview	8
Setup in the Exostiv Core Inserter	8
Connecting each IP 'cross-triggering' port	9
Maestro project setup	10
Opening Maestro: the Welcome Screen.....	10
System Configuration	11
Signal Selection	14
Run captures with Maestro	14
The Run Captures tab	14
Connect to the Exostiv Probe or Exostiv Blade	15
Set up the trigger condition.....	16
Set up the capture length and trigger position.....	18
Run the capture	19
Analyze the results in the waveform viewer	19

Revision History

Revision	Modifications
1.0.0	Initial revision

Exostiv Maestro – User's guide

What is Maestro and what is it useful for?

Maestro is optional software that runs on top of the Exostiv Blade and Exostiv Probe software suites.

Maestro uses advanced Exostiv IP features to capture data from multiple sources and display it in a single waveform viewer.

How Exostiv tools capture data

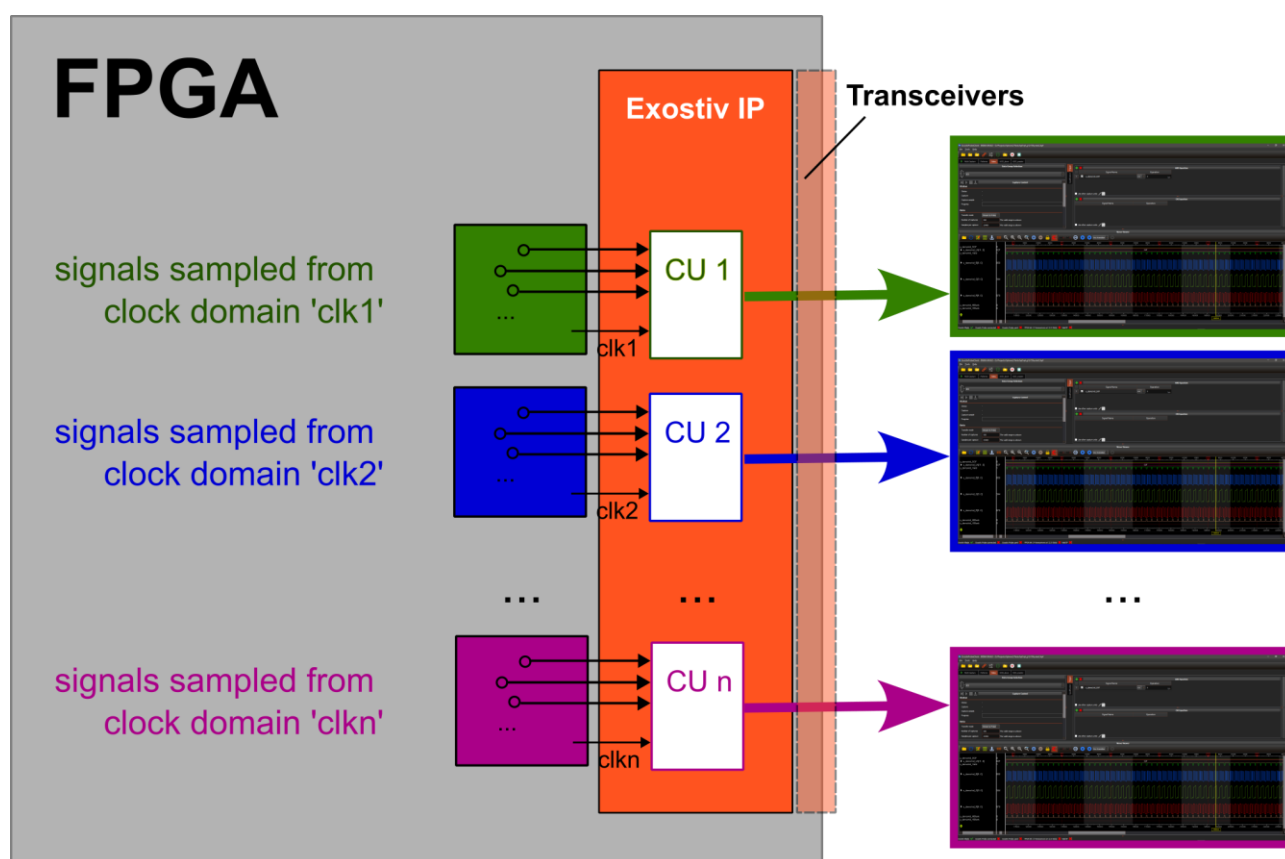
Using Exostiv Probe or Exostiv Blade involves inserting one or more Exostiv IP instances into one or more FPGAs.

Each Exostiv IP instance contains capture units: FPGA logic that samples and captures data. Capture units are controlled from the Exostiv Probe or Exostiv Blade software, where the user defines the capture settings (for example, capture length, trigger condition and number of repeated captures). Each capture unit uses one clock from the design under test as the sampling clock for its clock domain. The sampling clock is selected at IP insertion.

As a result, captures can come from one or more capture units in different clock domains, and therefore at different sampling rates. This applies whether the capture units belong to the same IP instance or to different ones.

The captured data is transferred to the Exostiv Probe or Exostiv Blade hardware through the transceiver interfaces attached to each IP instance, and is then displayed as waveforms. The data captured by each capture unit is displayed in a separate waveform window.

Note that Exostiv tools make no assumption about the relationship between clocks. Data is sampled according to the capture settings, as in state analysis. Apart from the sampling clock frequency entered by the user at IP insertion, captured data sets contain no timing information. Samples are referenced by sample number instead.



Limitations of this approach

When multiple data sets come from the same FPGA or the same system of FPGAs, viewing captures from different clock domains separately leaves out important information:

- the relative position in time of each data set is unknown;
- each data set is displayed on its own timescale.

This approach works well for analyzing each clock domain on its own. **It does not allow users to analyze all data sets as parts of a single system.**

The Exostiv Fusion tool can synchronize and rescale data sets into a merged waveform view, based on shared trigger events and sampling frequencies. This step must be performed manually after each capture, or scripted in Python. In both cases, the user must set up the synchronization explicitly.

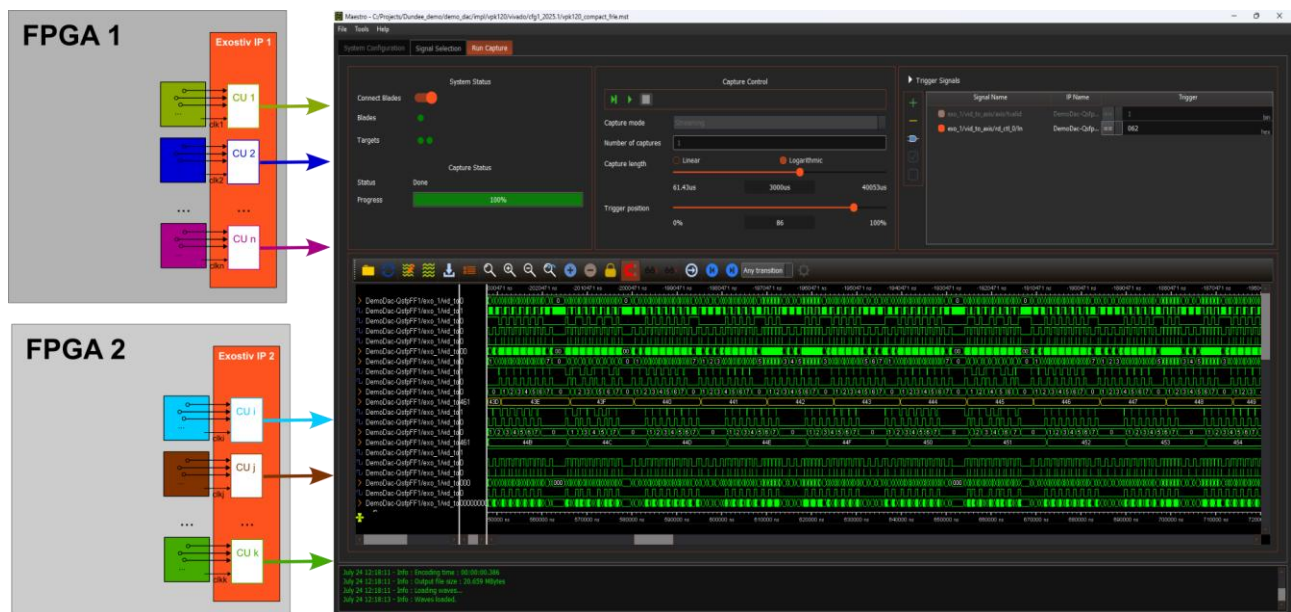
Synchronizing data from multiple IP instances and capture units also requires detailed knowledge of how each IP instance is structured. This becomes difficult in large systems and in teams where the person analyzing the data did not insert the IP.

Users are generally interested in observing their system, not in how it was instrumented. Ideally, the capture layer should be transparent: users should be able to view synchronized data without knowing the details of how the Exostiv IP instances were inserted.

Maestro hides the capture layer and lets users observe the system as a whole

Maestro:

- collects the information from the project files of multiple Exostiv IP capture units and instances;
- lists the observable signals, as a tree or a list, following the hierarchy of the target system across all included IP instances;
- extracts the capture and trigger capabilities of each Exostiv IP instance, and manages a master/slave trigger scheme across all data sources;
- uses a common time base across multiple capture units and IP instances;
- synchronizes and controls capture execution across multiple capture units and IP instances;
- merges all data sources into a single synchronized waveform view on a common timescale.



How do I enable Maestro?

Maestro is available from Exostiv software v2 release 2.5.x. The software executable is included in the installation package.

Maestro is optional software that requires a specific user license. [Please contact Exostiv Labs or your preferred representative to discuss the conditions.](#)

Maestro principles and requirements

Maestro uses specific features and resources available in Exostiv IP. As optional add-on software aimed at making the capture layer of Exostiv Labs products transparent to the user, Maestro intentionally does not offer the modes of operation that require a deeper understanding of the underlying IP structures. Depending on the usage, either Maestro or the traditional Exostiv Blade Client or Exostiv Probe Client can be the best fit.

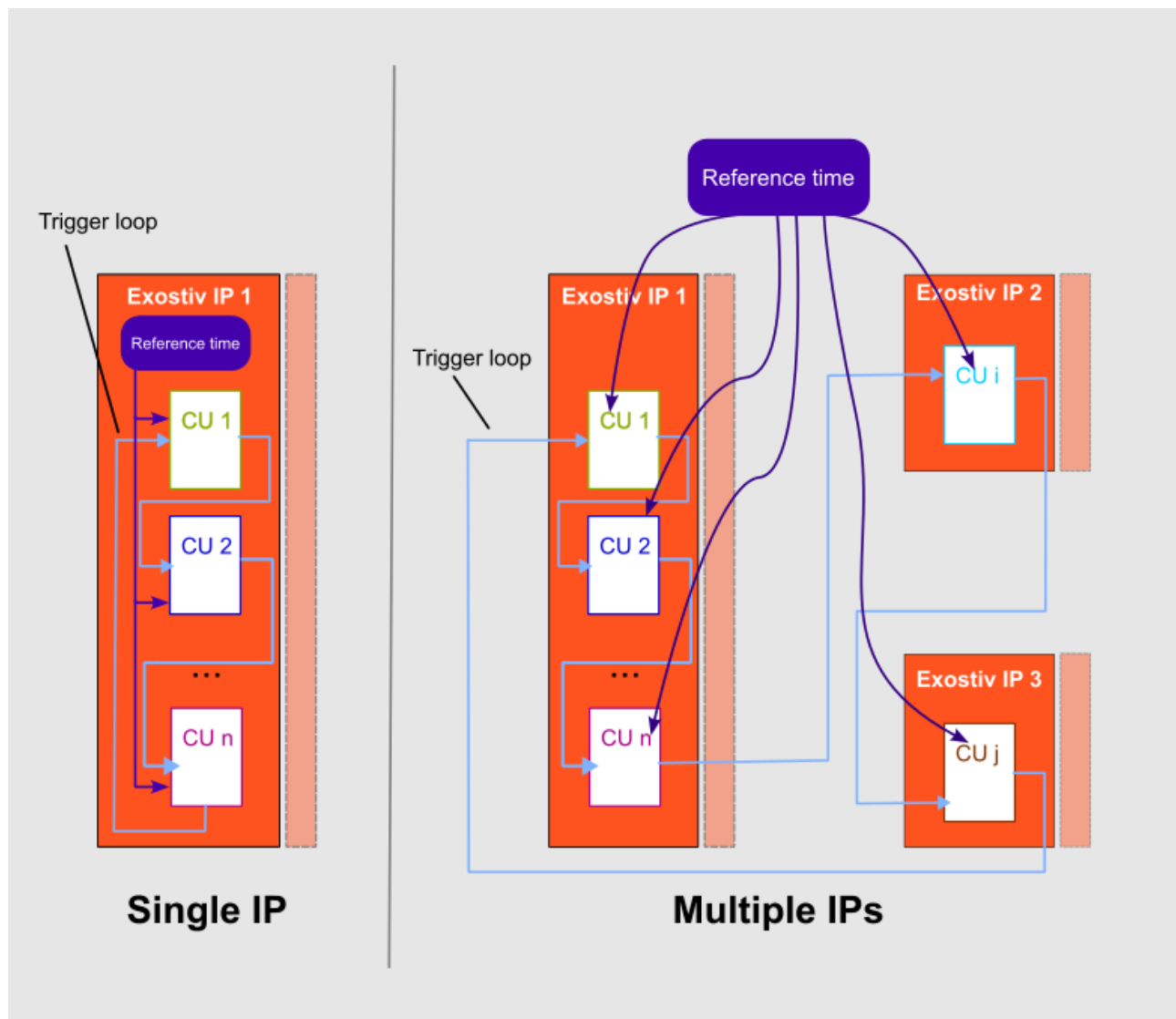
Reference time counter

To enable and synchronize captures from capture units in different clock domains, all capture units must share a common time reference. The capture units use this time reference to measure and compensate for the delays between capture units and between IP instances.

With a single IP instance (always the case with Exostiv Probe), the time reference is enabled with an option in the Exostiv Core Inserter. It is set up automatically at core generation as part of the Exostiv IP. The counter uses a reference clock that is selected from the clocks connected to the IP instance, or derived from them.

With multiple IP instances (possible only with Exostiv Blade), the user must manually create and connect the reference time counter to all IP instances in the RTL design. In that case, specific inputs are created to connect the counter and specify the clock frequency used with the counter.

The time reference is also used, together with the frequency of each sampling clock, to display the data from all capture units on a common timescale.



Trigger

Trigger loop

A capture starts when a trigger event occurs. This event is defined in one capture unit – called the **master capture unit** – using that capture unit's local trigger logic. It is then sent to the other capture units through a daisy chain of trigger signals.

- Inside each Exostiv IP instance, the Exostiv Core Inserter implements this chain automatically between the capture units.

- When multiple IP are used, the Exostiv IPs feature specific trigger out and trigger in I/Os that must be connected to form the trigger loop.

When multiple IP instances are used, the chain must extend beyond each IP instance. To do this, the IP instances must be connected in a trigger loop: the trigger out output of each IP instance is wired to the trigger in input of the next one.

Trigger limitations

Triggering uses a master/slave scheme. One capture unit is selected as the master, and its trigger logic defines the master trigger condition. This condition can only use signals available locally in the master capture unit. Conditions from multiple capture units or multiple IP instances cannot be combined.

The capture units selected for capture receive the master trigger event one after the other. Each capture unit resynchronizes the event into its own clock domain and triggers its own capture logic. The time reference compensates for the delays between capture units (see Time reference counter).

Current limitation: Maestro uses all capture units in streaming mode, and only a single trigger event is supported per capture.

Single IP vs. multiple IP mode

The number of IP instances that can be used depends mainly on the Exostiv hardware. Each Exostiv IP instance requires its own transceiver port to communicate with the Exostiv hardware. This port is defined when the IP instance is created in the Exostiv Core Inserter. It uses up to one full transceiver quad (four transceivers), with its own clock and data rate settings.

Exostiv Probe (EP16000 and EP28000) has a single transceiver quad connection, on a single QSFP28 connector. Exostiv Probe can therefore only be used in single IP mode. In this mode, Maestro synchronizes data from the capture units of a single IP instance.

Exostiv Blade can have multiple transceiver quad connections, on multiple QSFP28 connectors. Exostiv Blade can therefore be used in single IP mode or multiple IP mode. Maestro synchronizes data from the capture units of one IP instance or of multiple IP instances.

Multiple IP mode requires IP instances created in RTL mode, because the trigger loop and the time reference clock must be connected between IP instances.

Single IP mode can use IP instances created in either netlist mode or RTL mode, since no connections between IP instances are needed.

How to use Exostiv Core Inserter to enable Maestro features in Exostiv IP?

Step-by-step setup

Step 1: Start Exostiv Core Inserter and load your .bpf project file.

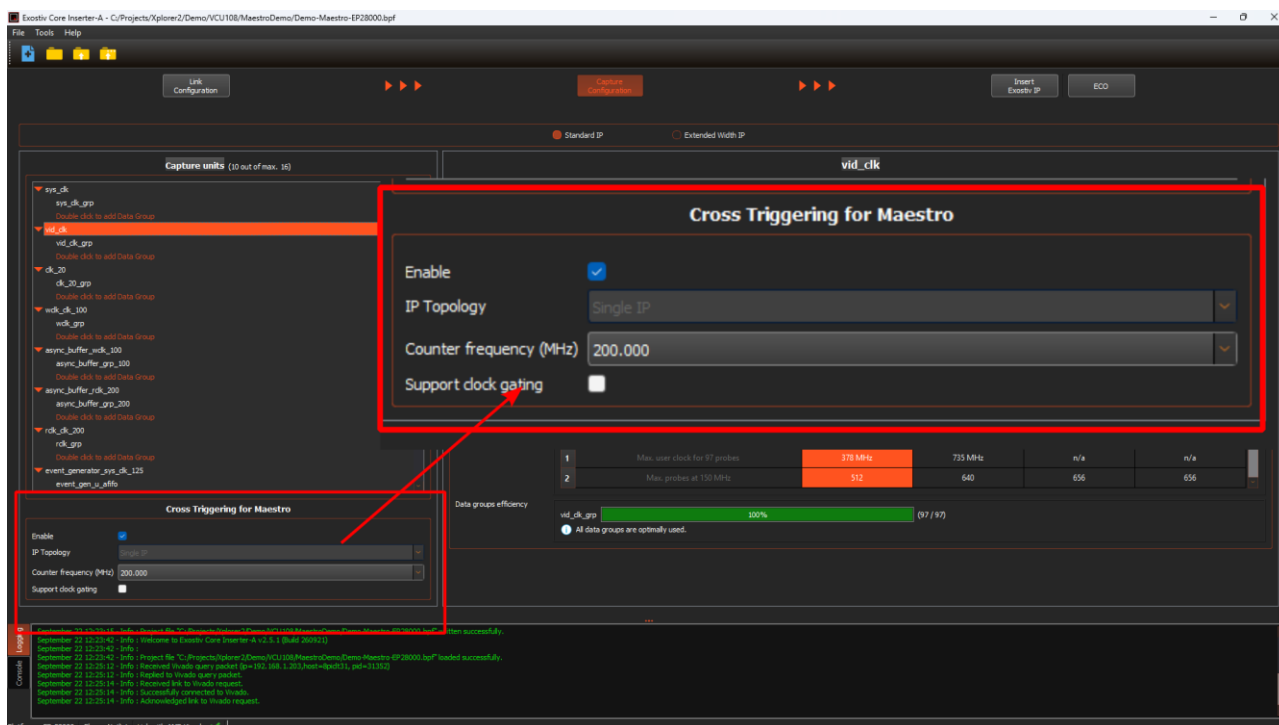
This article only covers the settings specific to Maestro. For the general configuration of an Exostiv IP core, refer to the Exostiv Core Inserter user guide.

Step 2: Enable cross-triggering for Maestro.

In the 'Capture Configuration' tab, locate the 'Cross-triggering for Maestro' controls.

Select the 'Enable' check box. This enables the IP features used by Maestro: the time reference counter and the trigger chain between capture units.

Leave 'Clock gating' unselected. This advanced feature is described in a separate article.



Step 3: Select the IP topology.

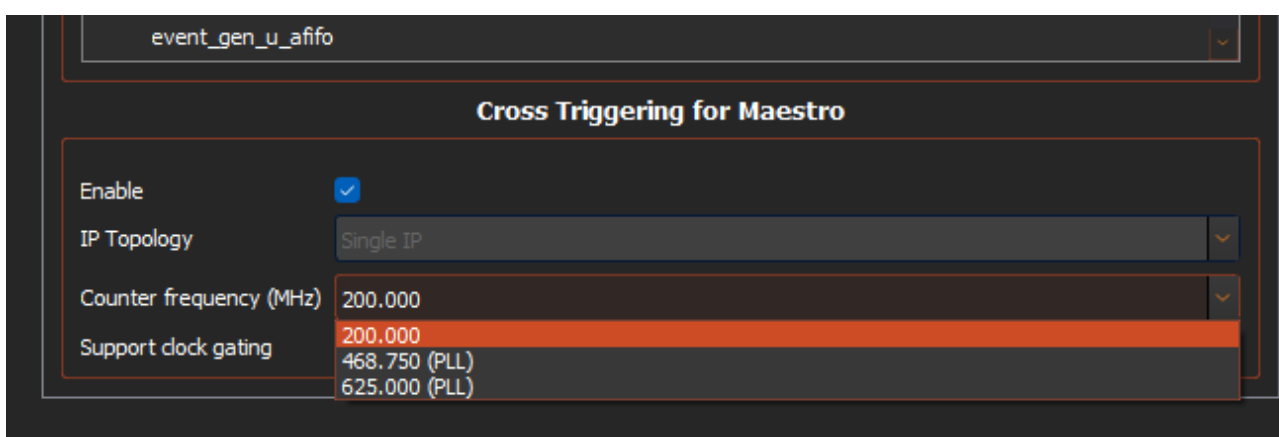
In the 'IP topology' drop-down list, select 'Single IP' or 'Multiple IPs'. The available options depend on your hardware and insertion mode:

- Exostiv Probe (EP16000 and EP28000) supports only the Single IP topology. Only one Exostiv IP instance can be connected to an Exostiv Probe.
- Exostiv Blade models with multiple connectors support both the Single IP and Multiple IPs topologies:
 - o Multiple IPs is only available in RTL mode.
 - o Single IP is available in both RTL mode and netlist mode.

Step 4: Select the time reference counter frequency.

In the drop-down list, select a frequency (in MHz). The list contains:

- the highest frequency among the clocks available as capture unit sampling clocks;
- several frequencies that the IP can generate using an additional FPGA PLL. These options use additional PLL and clock resources in the target FPGA.



A higher frequency:

- detects the trigger event forwarded between capture units more precisely;
- gives a finer time resolution on the common timescale when the waveforms are reconstructed.

It also has costs:

- a clock generated with a PLL uses more FPGA resources and can make placement and routing more difficult;
- a higher frequency adds timing constraints to the design and can make timing closure more difficult.

Choose the frequency by balancing the alignment precision you need against the additional FPGA resources and the impact on timing closure.

Important: Maestro does not resample data from one clock domain into a faster common clock domain. With or without Maestro, Exostiv tools sample each signal synchronously, using the clock of its own clock domain. Only the trigger chain crosses clock domains.

Step 5: Insert or generate the IP.

Go to the 'Insert Exostiv IP' tab (netlist mode) or the 'Generate Exostiv IP' tab (RTL mode), and run the insertion or generation.

Step 6 (Exostiv Blade, Multiple IPs topology only): Repeat for each IP instance.

Repeat steps 1 to 5 for each IP instance you want to generate. Then instantiate all IP instances in your RTL code, and connect them with the trigger loop and the time reference clock. See [Use Maestro in 'multiple IPs' mode](#) for details.

Use Maestro in 'multiple IPs' mode

Multiple IPs mode: overview

Using Maestro with multiple IP instances requires a 32-bit time reference counter, running continuously at a sufficiently high clock frequency. Maestro uses this counter as a common time reference to align the captures from all IP instances and to compensate for the trigger delays between them.

The Exostiv IP instances must also be connected to each other through the trigger loop. This connection is made outside the IP instances, by chaining them: the trigger output of each IP instance is connected to the trigger input of the next one.

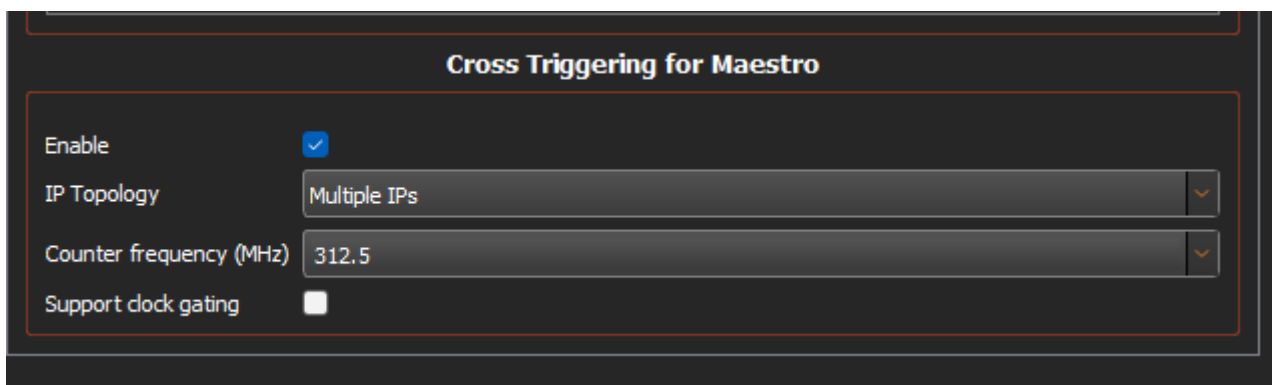
Multiple IPs mode is only available with Exostiv Blade, and only with IP instances created in RTL mode in Exostiv Core Inserter:

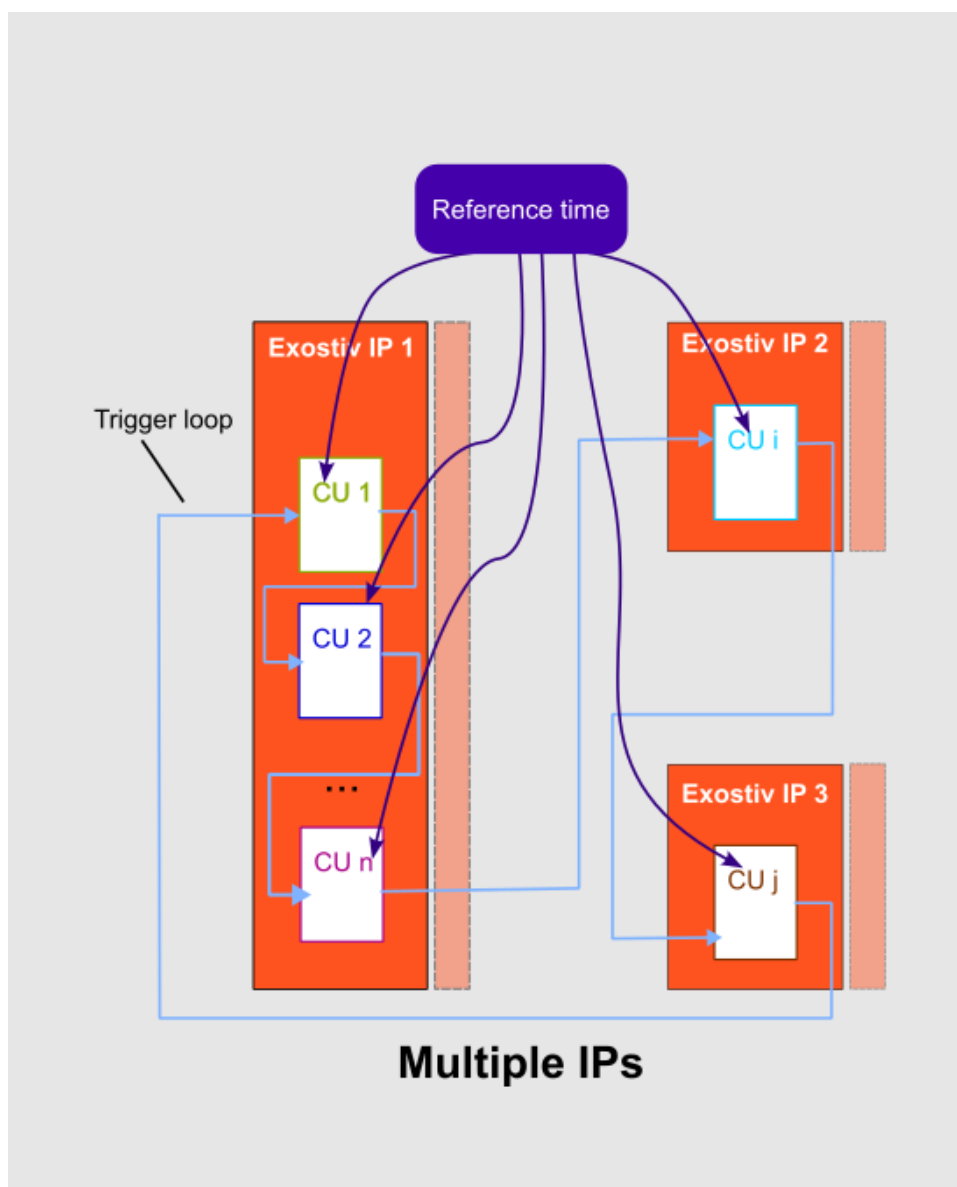
- each IP instance requires its own transceiver connection, and Exostiv Blade has multiple physical connectors;
- in RTL mode, unlike netlist mode, each IP instance is generated separately. You then instantiate the IP instances in the target design, together with the time reference counter and the trigger loop.

Setup in the Exostiv Core Inserter

For each Exostiv IP instance, in Exostiv Core Inserter:

1. select the 'Enable' check box;
2. in the 'IP topology' drop-down list, select 'Multiple IPs';
3. enter the frequency of the external time reference counter, in MHz;
4. leave 'Support clock gating' unchecked.





Connecting each IP 'cross-triggering' port

Once generated, the Exostiv IPs have an additional 'cross-triggering' port:

VHDL:

```
-- Cross-triggering
timeClk_in      : in      std_logic := '0';
timeValue_in    : in      std_logic_vector(31 downto 0) := (others => '0');
crossTrig_in    : in      std_logic := '0';
crossTrig_out   : out     std_logic;
```

Verilog:

```
// Cross-triggering
input          timeClk_in;
input [31:0]   timeValue_in;
input          crossTrig_in;
output         crossTrig_out;
```

In Multiple IPs mode, each Exostiv IP instance has the following ports, which must be connected in the target design:

- `timeClk_in`: the clock of the external time reference counter. Its frequency must match the value entered in the 'Counter frequency (MHz)' setting in Exostiv Core Inserter.
- `timeValue_in`: the 32-bit output of the external time reference counter.
- `crossTrig_in`: the `crossTrig_out` output of the previous Exostiv IP instance in the trigger loop.
- `crossTrig_out`: the `crossTrig_in` input of the next Exostiv IP instance in the trigger loop.

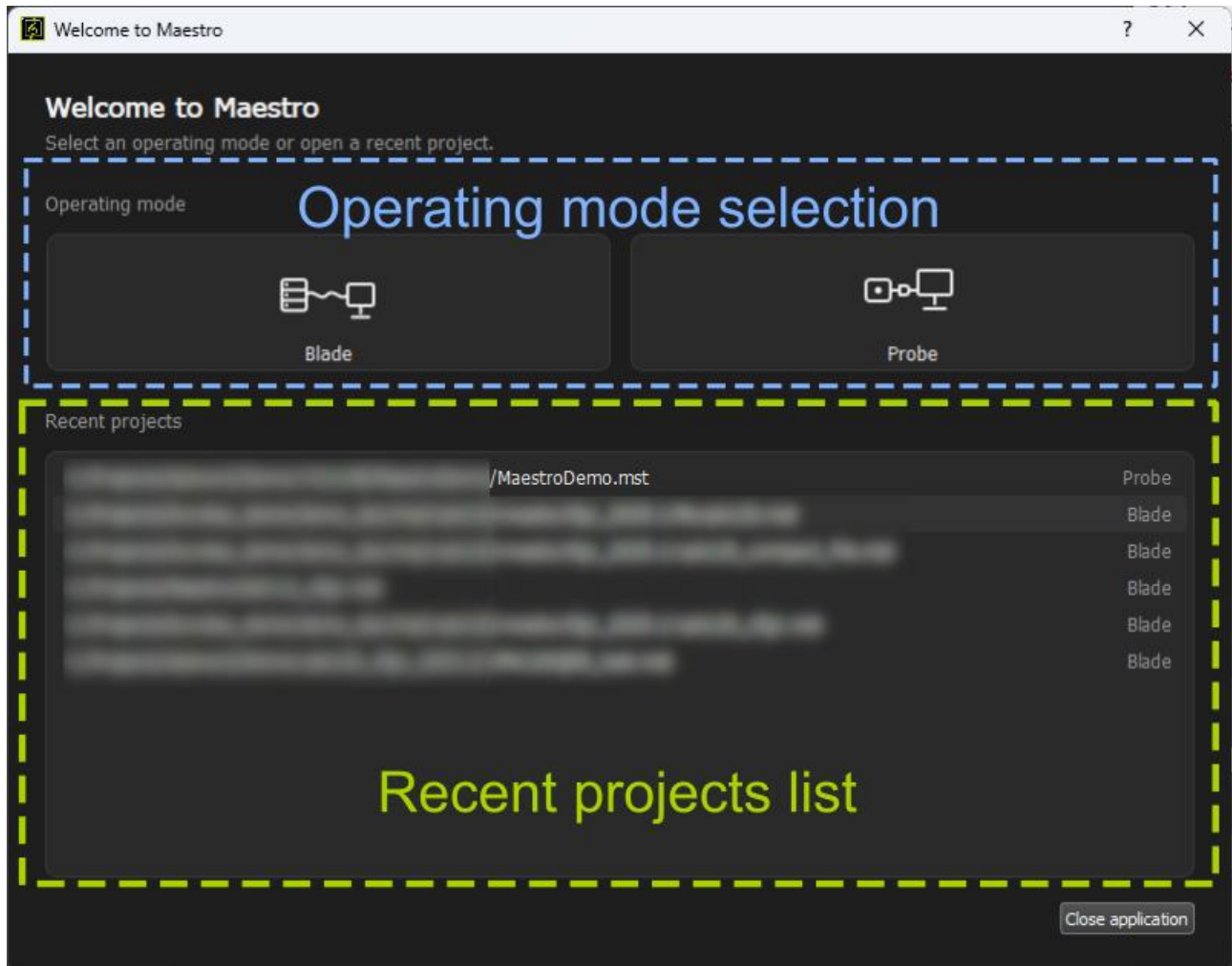
Finally, connect the `crossTrig_out` output of the last IP instance to the `crossTrig_in` input of the first one, to close the loop.

Maestro project setup

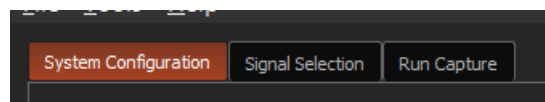
Opening Maestro: the Welcome Screen

When Maestro starts, the Welcome Screen appears. From this screen, you can:

- create a new project (.mst file) by selecting an operating mode: 'Exostiv Probe' or 'Exostiv Blade'. Select the mode that matches your Exostiv hardware;
- open a recent project by double-clicking it in the list.



Once a project is created or opened, the main Maestro window opens. It has three tabs:

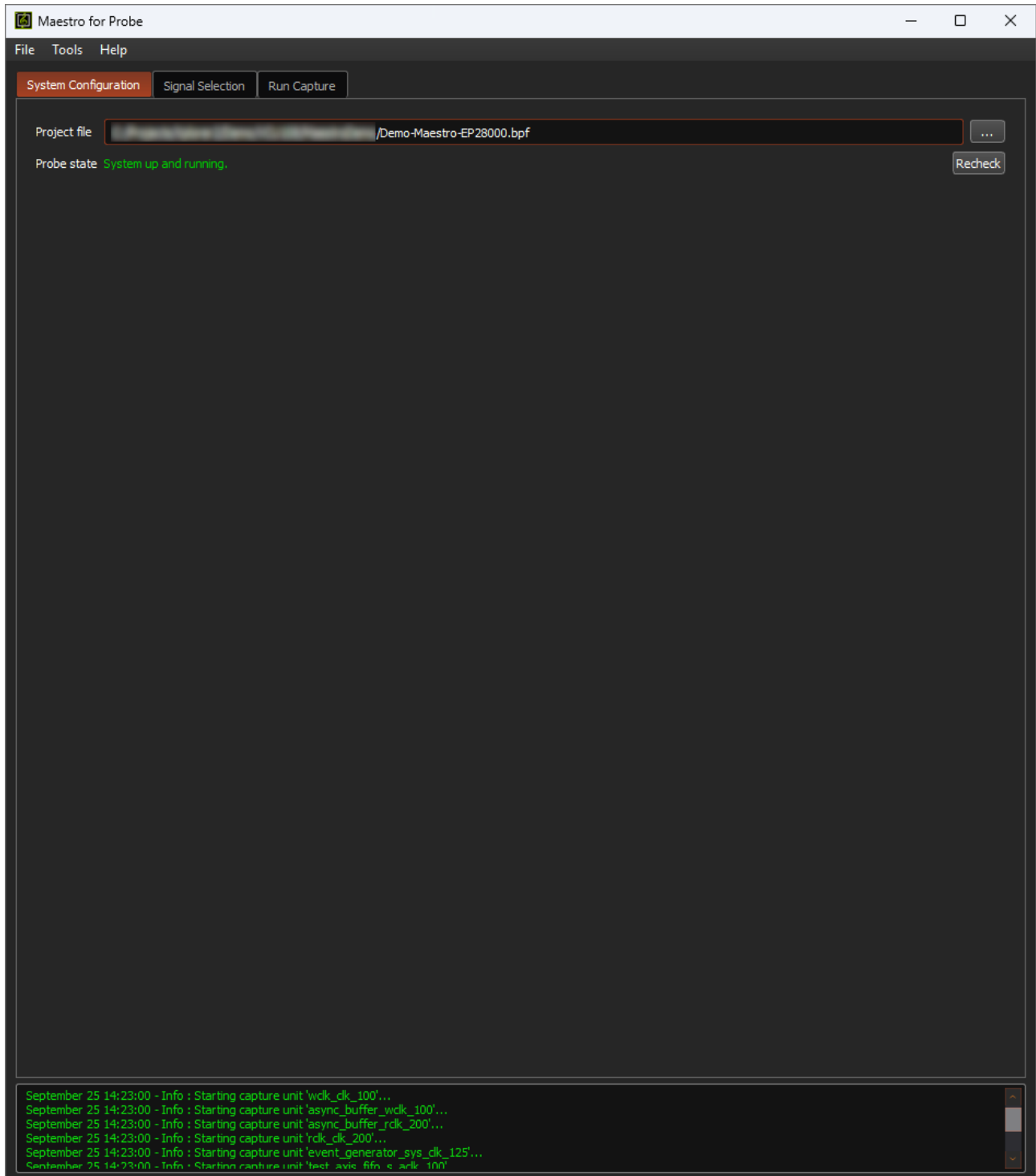


- **System Configuration:** specify the Exostiv hardware used in the Maestro session (Exostiv Probe or Exostiv Blade), check that it is available, and load the project files of the Exostiv IP instances to be controlled.
- **Signal Selection:** browse the signals connected to all Exostiv IP instances and capture units, and select the signals to capture. You can also preselect the signals to use in the trigger condition.
- **Run Captures:** main capture controls, including connection to the target IP instances, capture size and trigger position, trigger condition, capture start, and the waveform viewer.

System Configuration

Maestro for Exostiv Probe

For **Exostiv Probe** (EP16000 and EP28000), the System Configuration tab is used to specify the .bpf project file. This file contains the settings of the Exostiv IP instance to be controlled. Exostiv Probe is connected directly to the workstation over USB and is detected automatically when it is switched on.

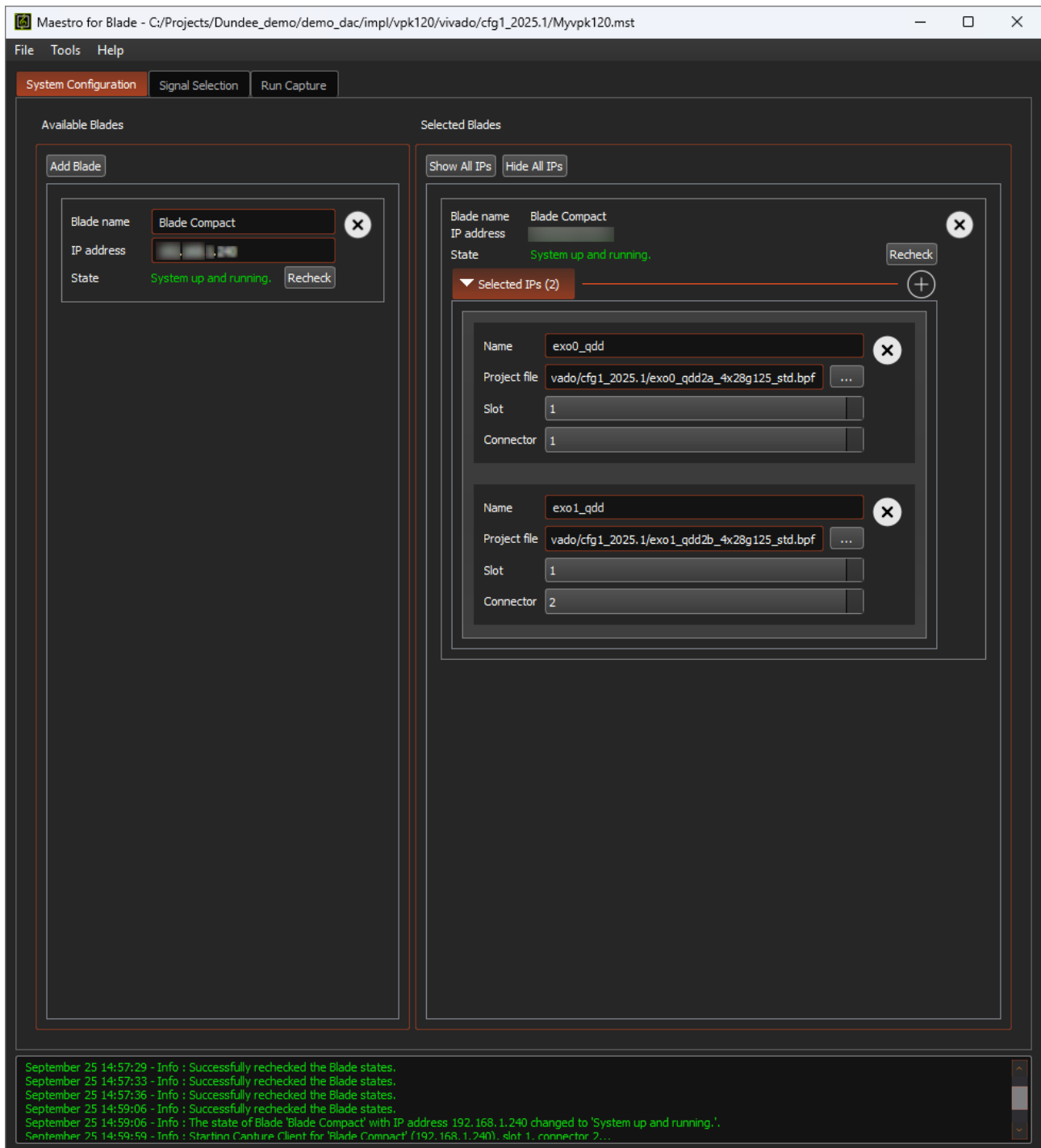


Enter the path of the .bpf project file in the 'Project File' field, or click the browse button.

Click 'Recheck' to refresh the status of the Exostiv Probe and check that it is connected to the workstation and running.

Maestro for Exostiv Blade

For **Exostiv Blade**, the System Configuration tab is used to select the Exostiv Blade unit, then the resources of that unit used for the capture (sessions and connectors), and the corresponding .bpf project files. It is also used to check that the Exostiv Blade unit is running and that the selected resources are available.



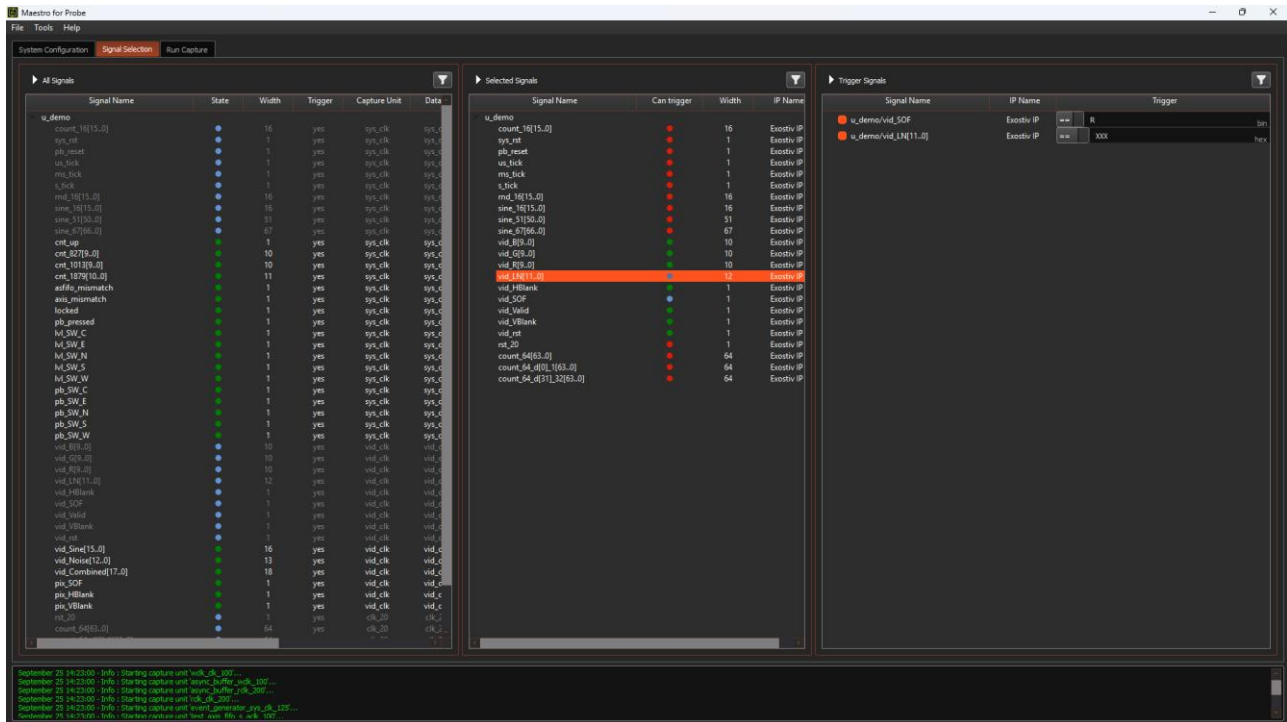
If the Exostiv Blade unit is not listed, click 'Add Blade' and enter its name and IP address. The unit is added to the 'Available Blades' list. To assign the unit to the Maestro project, drag it from the list on the left to the 'Selected Blade' column.

Then specify the Exostiv IP instances to include in the Maestro project. For each IP instance, click '+', enter a name and specify its .bpf project file. Then select the Exostiv Blade connector connected to this IP instance, by specifying the capture board slot and the connector reference.

Click 'Redcheck' to check that an Exostiv Blade unit is reachable on the network and running.

<i>Ref</i>	<i>Item</i>	<i>Description</i>
1	System Configuration tab	Click on this tab to display the <i>System Configuration</i> . From this view, all system resources can be configured.
2	Available Blades	This section gives the possibility to list all the <i>Blade</i> systems available on the network.
3	Selected Blades	In this section, the user selects the <i>Blade</i> system(s) that will be used during the capture. To select a <i>Blade</i> , simply drag a <i>Blade</i> from the list in the left pane and drop it to the right pane.
4	Logging window	This window logs all the event and messages received during the system configuration and usage.
5	'Add Blade' button	Clicking on this button adds a <i>Blade</i> identification card to current system. The user must then manually edit the card parameters to define the blade. To remove a <i>Blade</i> from the system, click on cross-mark on the top-right corner of the identification card.
6	Blade identification card	Each <i>Blade</i> added to the system is defined by its card. The user must provide an identification name. This name can freely be chosen by the user. It is used to identify the <i>Blade</i> device in the application and in the log files. The user must then provide the <i>Blade</i> 's IP address. The <i>Maestro</i> application then automatically tries to detect the <i>Blade</i> on the network to update its status. While trying to detect a <i>Blade</i> , a question mark (?) is displayed as status. If the <i>Blade</i> is not found (incorrect IP address, <i>Blade</i> powered down, not accessible through firewall, etc.), the status is changed to <i>TimeOut</i> . If the <i>Blade</i> is found and is ready to be used, the status indicates <i>System up and running</i> .
7	Add IP button ('+' sign)	When a <i>Blade</i> has been selected (drag and drop from the list of available <i>Blades</i>), <i>Exostiv</i> IPs can be associated to the different <i>Blade</i> connectors. Click on the '+' sign to associate an IP to a connector. An IP configuration card is then added. The card must be filled by the user to configure it and associate it to a connector. To remove/dissociate an IP from the <i>Blade</i> , click on the cross-mark in the top-right corner of the IP card.
8	IP configuration	The user must provide an IP name to identify the IP across the application and the log files. This logical name is used to ease IP identification in complex systems. The IP is then defined by the <i>BPF</i> project file used to generate it. Click on the '...' button to browse and select the file. The user must associate the <i>BPF</i> project file to the <i>Blade</i> connector to which the target system containing the IP, is connected. This connector is defined by the <i>slot</i> index of the <i>Blade</i> acquisition board and the connector index on that board.
9	Expand/Collapse buttons	The <i>Show All IPs</i> and <i>Hide All IPs</i> gives the possibility to easily toggle between full and compact view. This can be quite helpful for large systems.

Signal Selection



The Signal Selection tab has three columns, from left to right.

'All Signals' list: contains all signals connected to the Exostiv IP instances included in the Maestro project. Signals are displayed as a tree or as a list. The tree hierarchy is derived from the signal names. The list can be searched, and sorted by column.

The 'State' column shows a colored bullet:

- **Green:** the signal is available and can be added to the 'Selected Signals' list;
- **Blue:** the signal is already in the 'Selected Signals' list;
- **Red:** the signal cannot be added to the 'Selected Signals' list.

To select a signal for capture, double-click it in the 'All Signals' list, or drag it to the 'Selected Signals' list.

'Selected Signals' list: contains the signals selected for capture. Maestro captures data from these signals only, so users can limit the capture to the part of the system they want to observe. The 'Can Trigger' column shows a colored bullet:

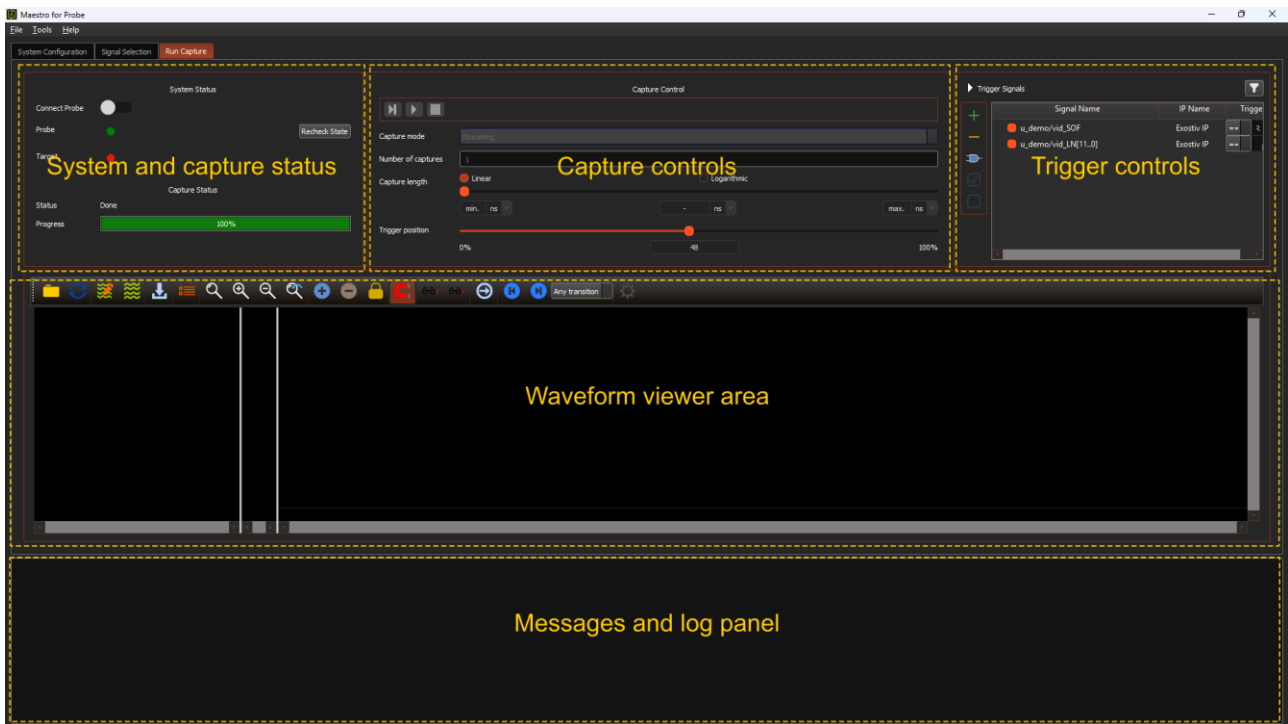
- **Green:** the signal can be added to the 'Trigger Signals' list;
- **Blue:** the signal is already in the 'Trigger Signals' list;
- **Red:** the signal cannot be added to the 'Trigger Signals' list.

'Trigger Signals' list: contains the signals used in the trigger condition. Click the bullet next to a signal to include it in, or exclude it from, the trigger condition. The trigger signals and the trigger condition can also be modified in the Run Captures tab, so this list does not need to be filled in at this stage.

Run captures with Maestro

The Run Captures tab

When you first open the Run Captures tab, the window is empty:

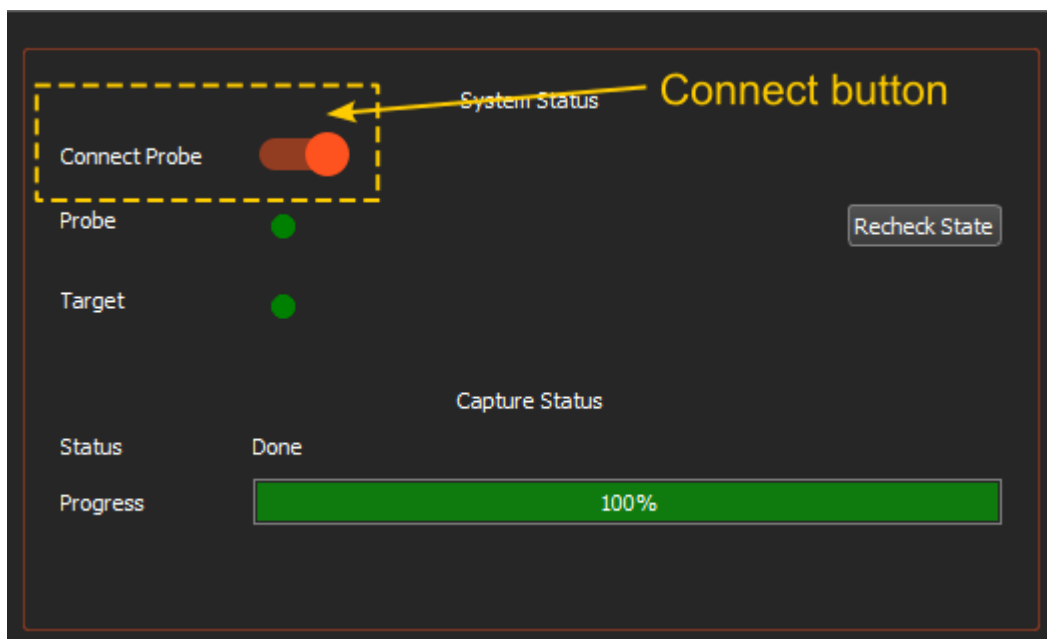


To run a capture with Maestro:

1. Connect to the Exostiv Probe or Exostiv Blade.
2. Set up the trigger condition.
3. Set up the capture length and trigger position.
4. Run the capture.
5. Analyze the results in the waveform viewer.

Connect to the Exostiv Probe or Exostiv Blade

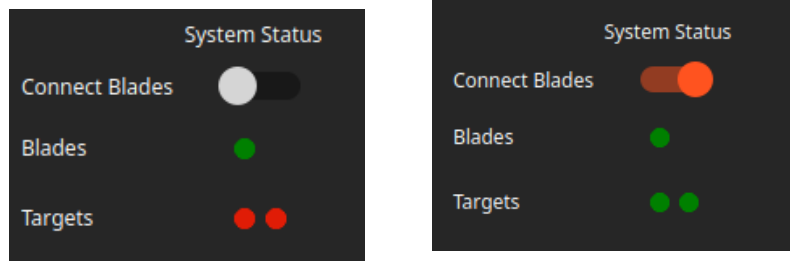
In the system and capture status area, click the large round 'Connect Probe' or 'Connect Blade' button.



This area shows two status indicators:

- **Probe Status** or **Blade Status**: green when the hardware is ready; red when it is not ready.
- **Target**: green when the Exostiv Probe or Exostiv Blade is connected to the Exostiv IP instances; red when the connection is not established.

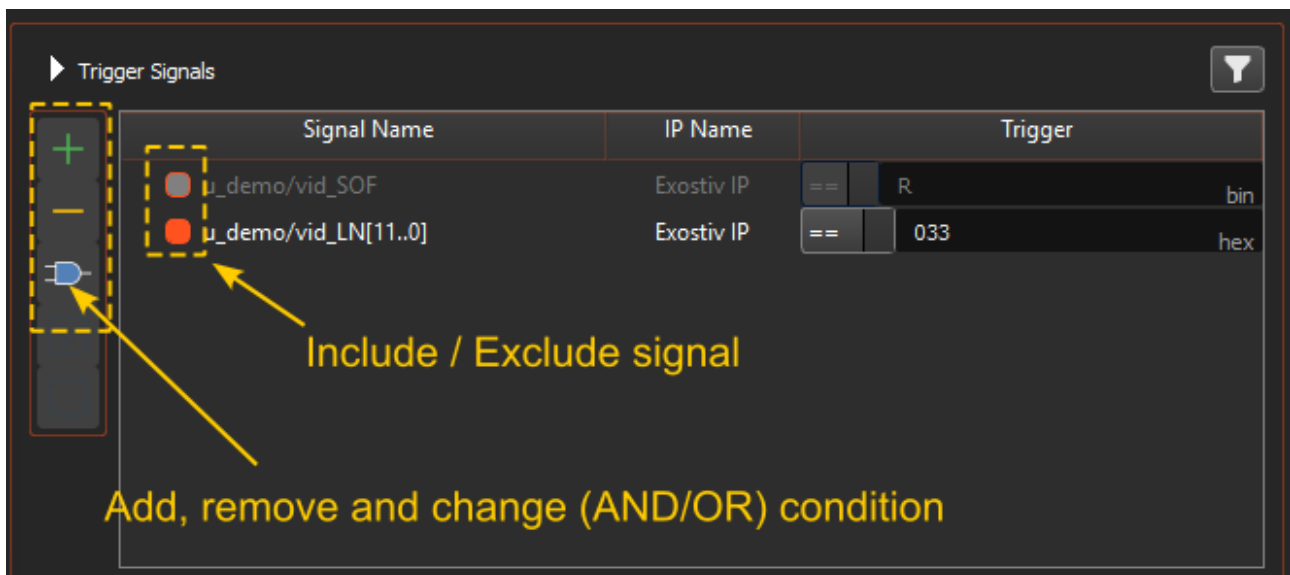
Click 'Recheck State' to check the hardware status and the connection to the IP instances again.



Ref	Item	Description
1	Connect Blades / Connect Probe	This button switches the connection with the Blade or Probe hardware on and off.
2	Blade / Probe	Displays the status of all <i>Blade</i> devices selected in the system configuration. A red bullet indicates the device has not been detected on the network or is not ready to be used. A green bullet indicates a <i>Blade</i> up and running. All dots must be green to enable the <i>Connect Blades</i> button.
3	Targets	Displays the status of all targets. Each target corresponds to an <i>Exostiv</i> IP (refer to the <i>System Configuration</i> description). One coloured bullet is displayed per target. A green bullet indicates a valid link established between the <i>Blade</i> and the target.

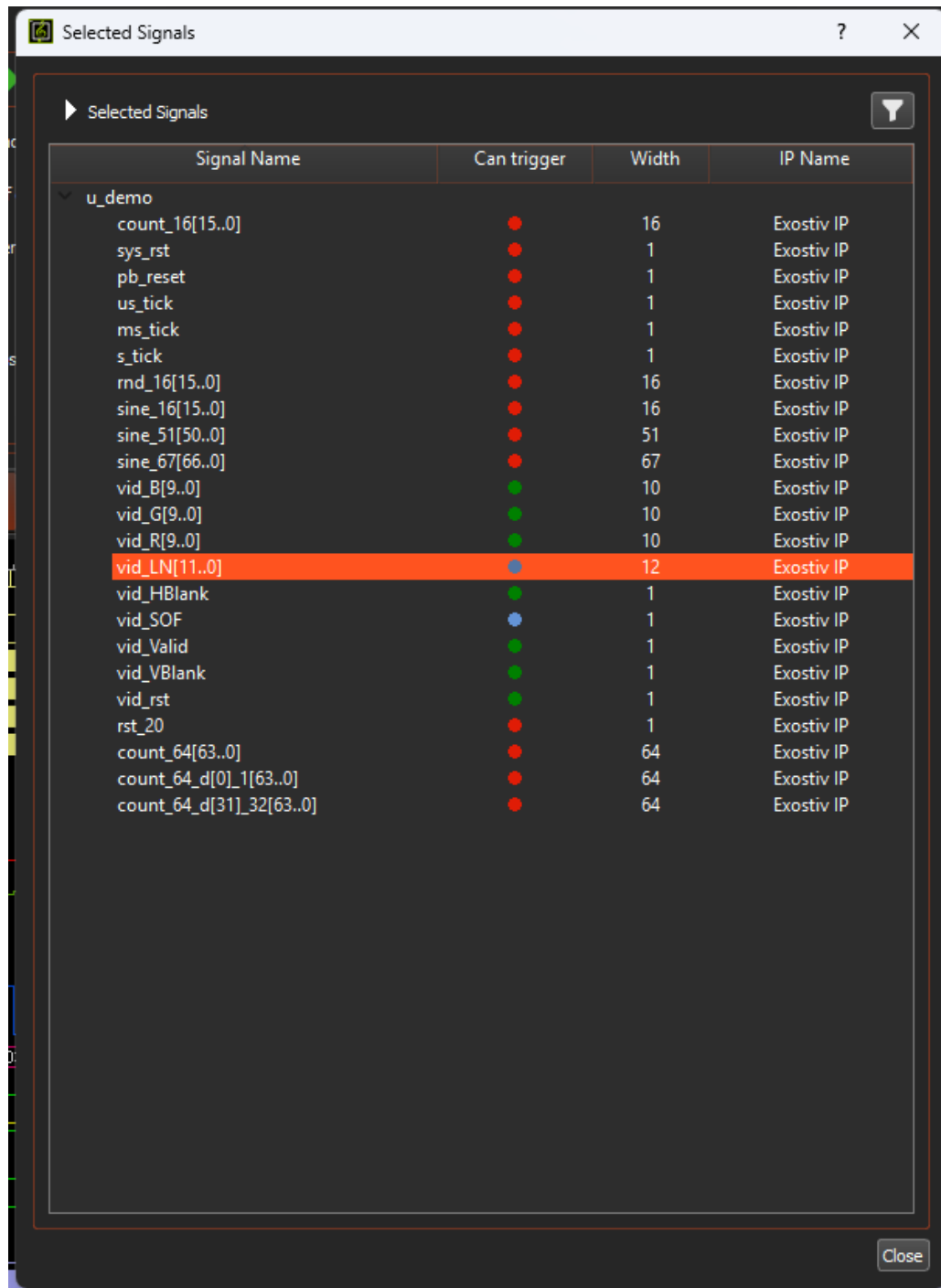
Set up the trigger condition

The trigger condition is defined in the trigger controls area, using the signals in the trigger list.



<i>Ref</i>	<i>Item</i>	<i>Description</i>
1	Signal Name	Name extracted from the BPF project file. The name is preceded by a selection radio button to enable or disable the signal from the trigger equation. If the signal is selected, the radio button is filled. This allows easily changing a trigger condition without removing the signals from the trigger list.
2	IP Name	IP name defined by the user in the <i>System Configuration</i> tab.
3	Trigger	Trigger condition defined for this signal. Depending on the capture unit capability, the comparator mode can be selected (=, !=, >, >=, <, <=, in range, out of range). The value field radix (decimal, hexadecimal or binary) can be changed: right click on the value field to select the radix. For hexadecimal radix, 'X' value can be used per nibble. For binary radix, the possible bit values are 0, 1, R (rising edge), F (falling edge), B (both edges), N (no edge)

<i>Index</i>	<i>Item</i>	<i>Description</i>
1		The plus sign opens the signal <i>selection dialog</i> to add trigger signals to the trigger equation. This list contains the signals with trigger capability selected in the <i>Signal Selection</i> tab.
2		The minus sign removes the selected trigger signals from the trigger equation.
3		The AND/OR logic gate button is used to select the logic combination of the different trigger conditions. When AND is selected, all conditions must be verified to start the capture. When the OR condition is selected, the capture is started as soon as one condition is satisfied.
4		The <i>Select/Deselect</i> buttons gives the possibility to enable or disable multiple trigger condition in the same time. First select the conditions for which the state must be modified using the mouse and optionally the <i>SHIFT</i> and <i>CTRL</i> key, then click on the <i>Select</i> or <i>Deselect</i> button.

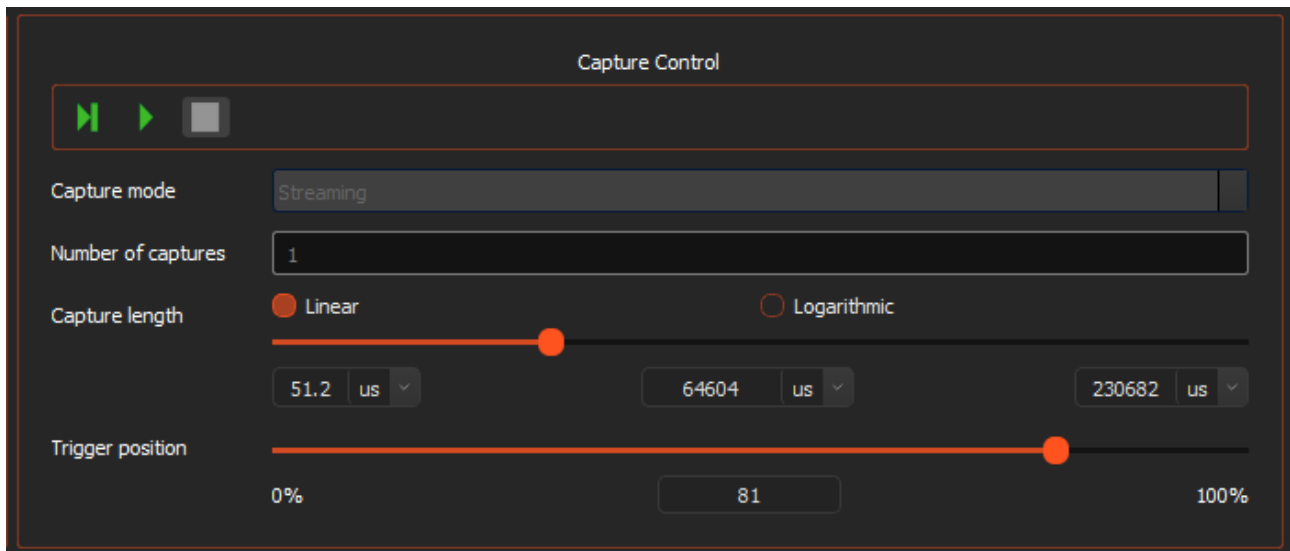


Set up the capture length and trigger position

The capture mode is currently fixed to streaming, and the number of captures to 1.

The capture controls area has two sliders:

- **Capture length:** sets the total length of the capture, in time units. Select the time unit in the drop-down list. The scale can be linear or logarithmic; the logarithmic scale is useful for short captures.
- **Trigger position:** sets the position of the trigger within the capture, as a percentage of the capture length.

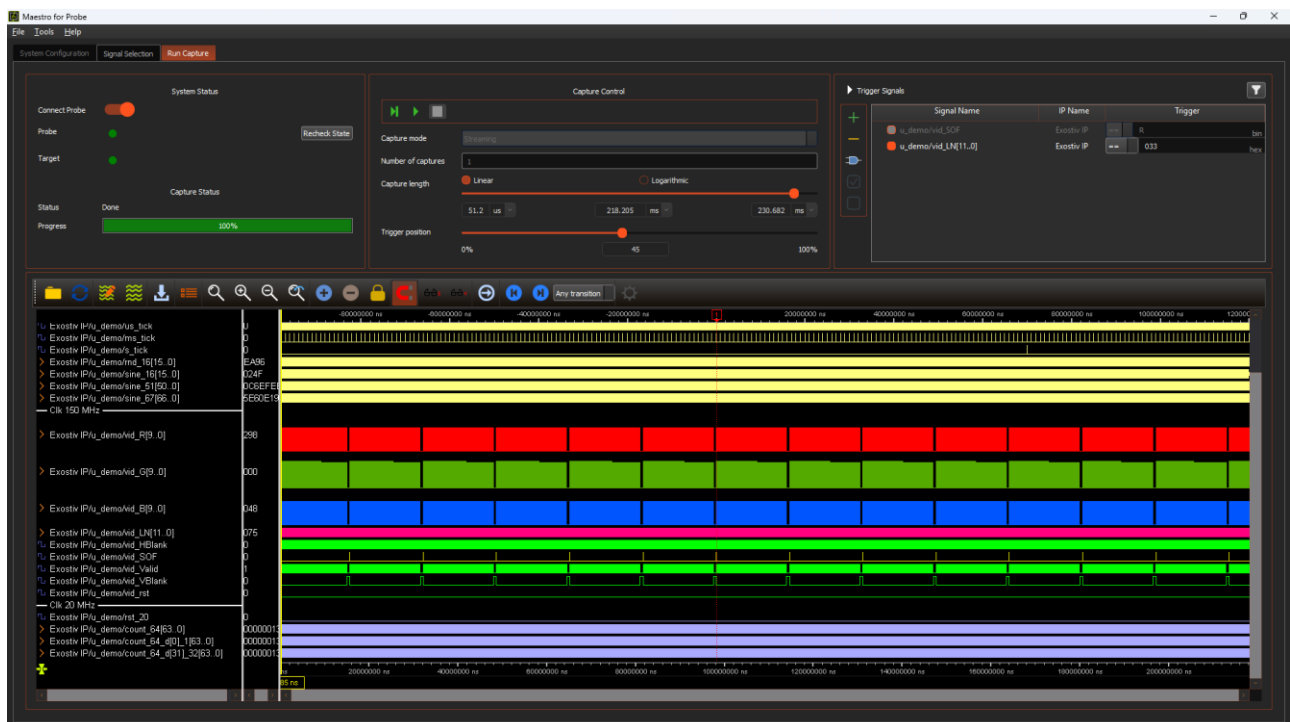


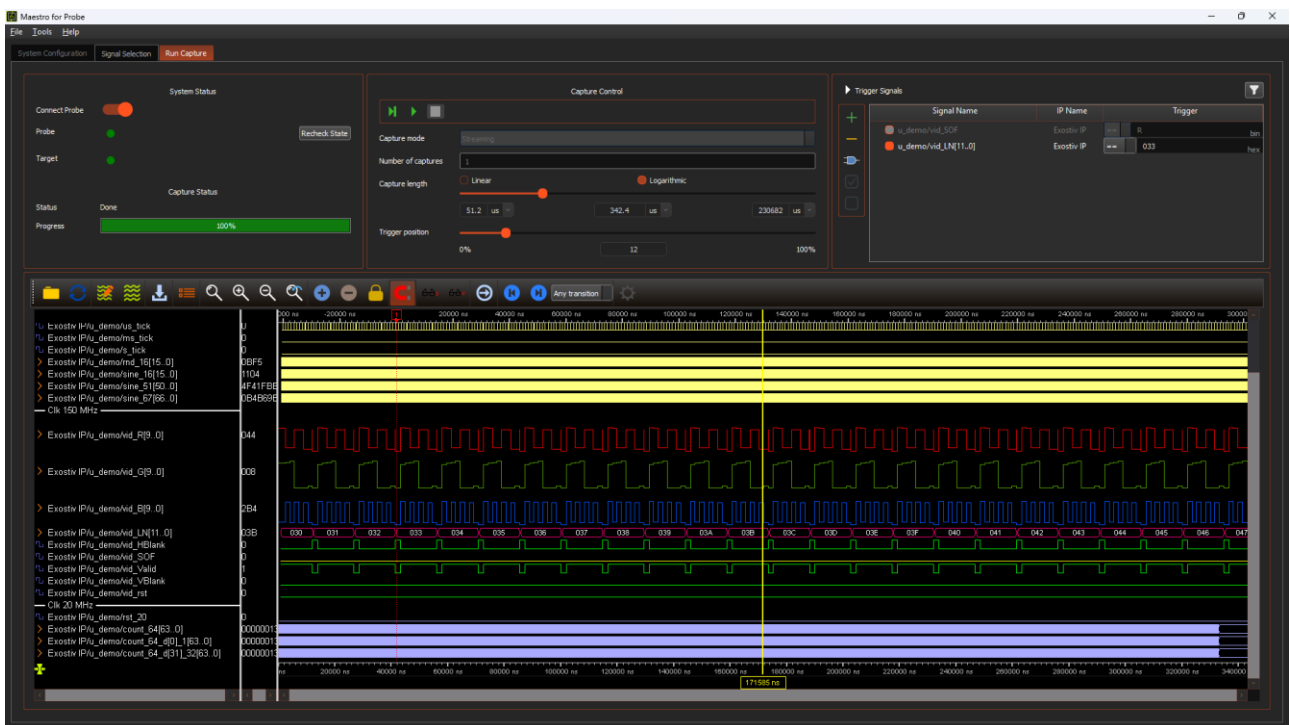
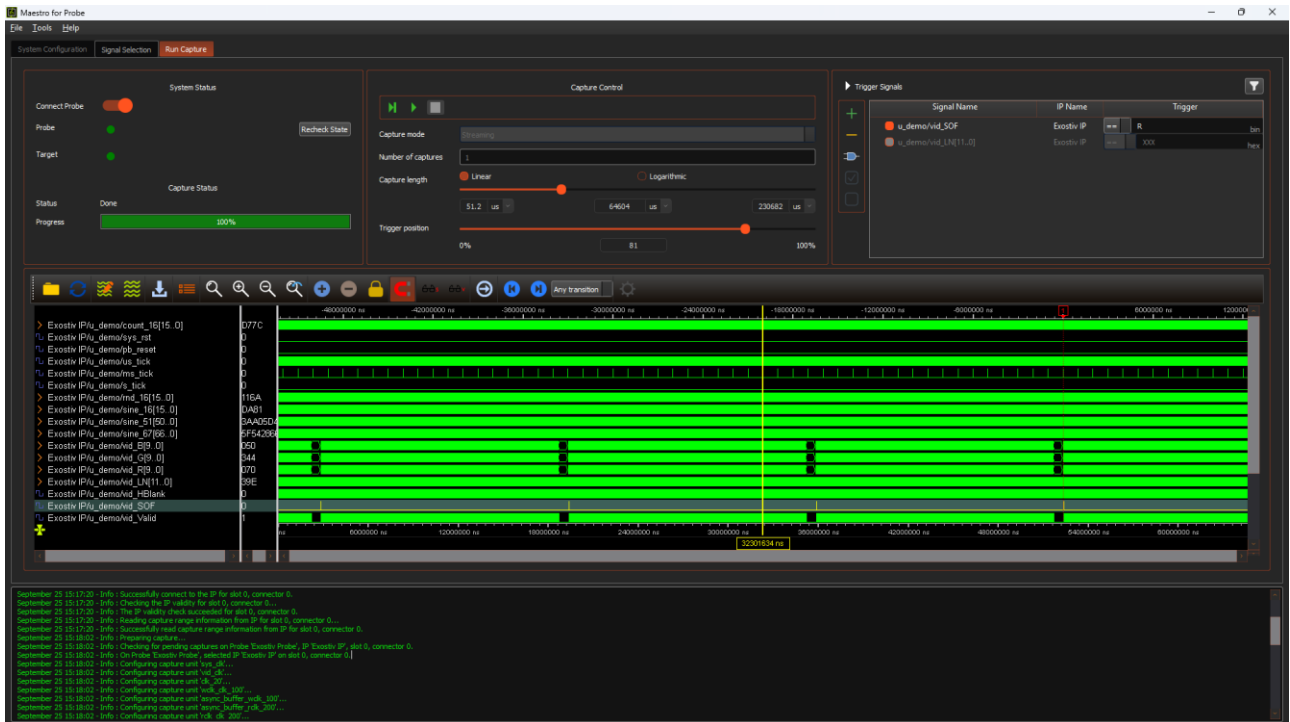
Run the capture

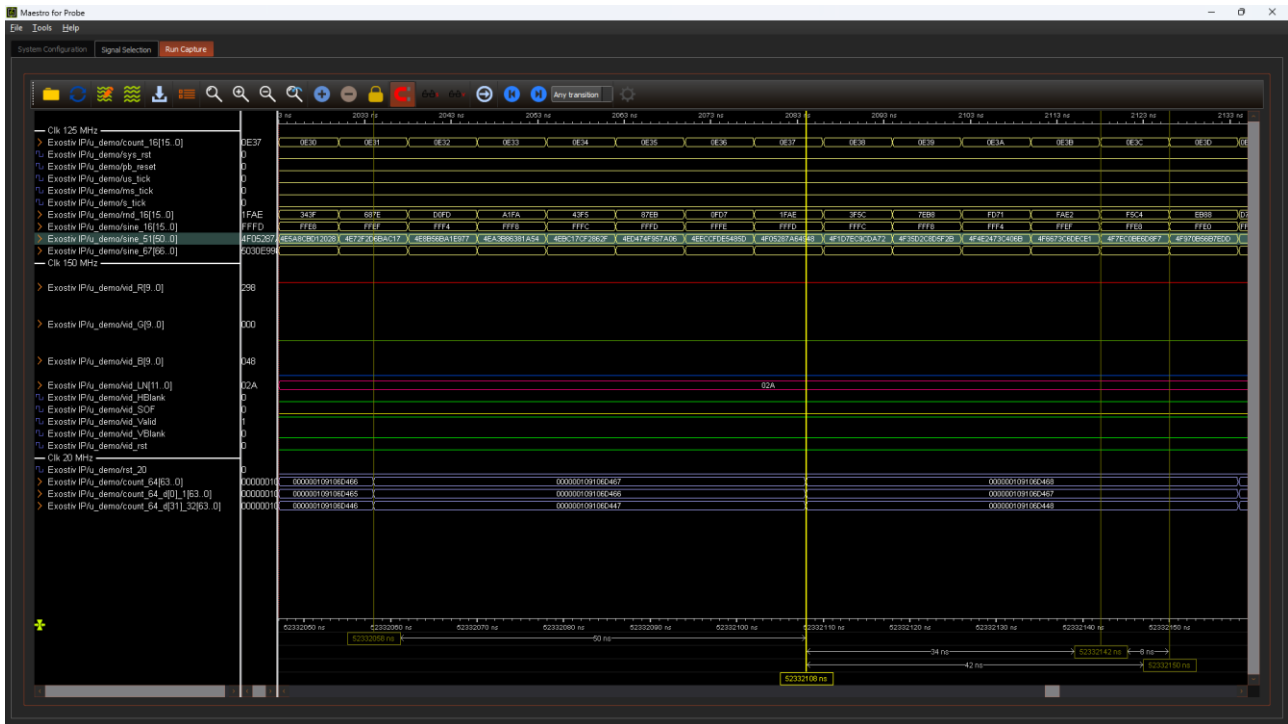
Index	Item	Description
1		Conditional Start : The capture is effectively started when the trigger condition is verified. If no trigger equation is defined, or if no trigger equation is enabled, the capture is started immediately. When a capture is running, this button is greyed.
2		Unconditional Start : The capture is started immediately ignoring any trigger condition. When a capture is running, this button is greyed.
3		Capture Stop : This button is active only when a capture is running. This button can be used to stop or abort a capture.

Analyze the results in the waveform viewer

When the capture is complete, the captured data is displayed in the waveform viewer area. It can be organized, formatted and analyzed from there.







Copyright

© Exostiv Labs Srl, 2026. Exostiv Labs™, the Exostiv Labs logo, EXOSTIV™ and MYRIAD™ are trade names and/or trademarks of Exostiv Labs Srl. All rights reserved. Other brands and names mentioned in this document may be the trademarks of their respective owners.

Exostiv Labs Srl is a company registered in Belgium, 18 Avenue Molière, 1300 Wavre.
VAT / REG nr: BE0873.279.914.

Disclaimer

THIS DOCUMENT IS PROVIDED "AS IS". EXOSTIV LABS PROVIDES NO REPRESENTATIONS AND NO WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, SATISFACTORY QUALITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE DOCUMENT. For the avoidance of doubt, EXOSTIV LABS makes no representation with respect to, and has undertaken no analysis to identify or understand the scope and content of, third party patents, copyrights, trade secrets, or other rights.

This document may include technical inaccuracies or typographical errors.

The contents of this document are subject to change without notice. This document may contain information on a Exostiv Labs product under development by Exostiv Labs. Exostiv Labs reserves the right to change or discontinue work on any product without notice.

TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL EXOSTIV LABS BE LIABLE FOR ANY DAMAGES, INCLUDING WITHOUT LIMITATION ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF ANY USE OF THIS DOCUMENT, EVEN IF EXOSTIV LABS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Exostiv Labs products are not designed or intended to be fail-safe or for use in any application requiring fail-safe performance; you assume sole risk and liability for use of Exostiv Labs products in such critical applications.

<https://www.exostivlabs.com>