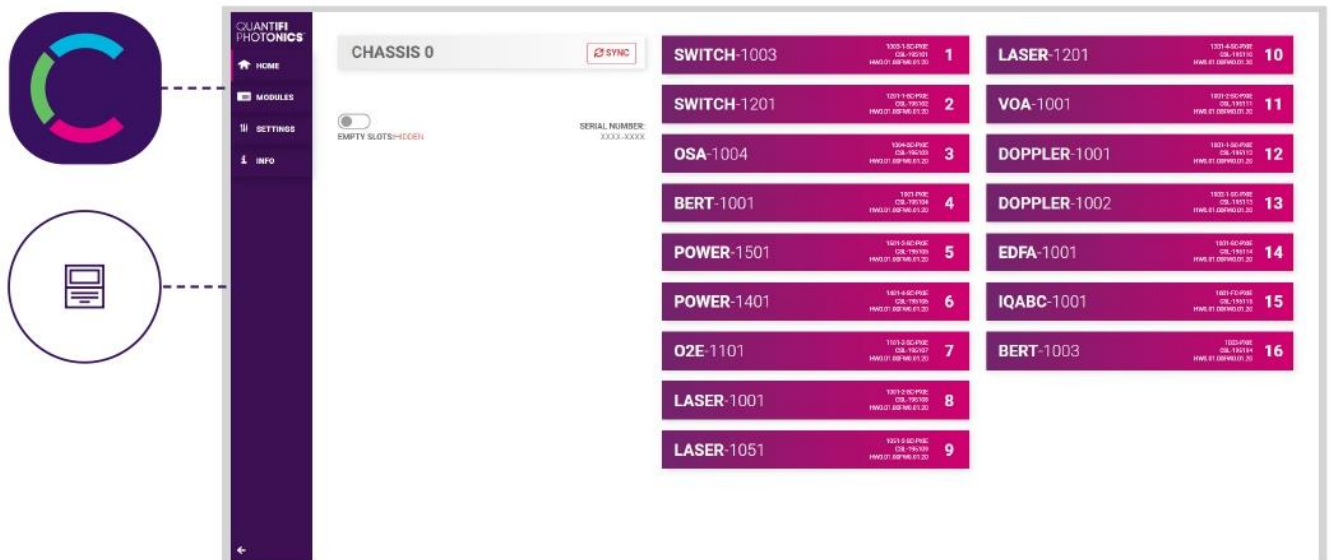


# CohesionUI™

## USER GUIDE



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## **Units of Measurement**

Units of measurement in this publication conform to SI standards and practices

**Version: 2.02**

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## 1 Conventions

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Before using the instrument described in this manual, take note of the following conventions:

### **WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in **death or serious injury**. Do not proceed unless the required conditions are met and understood.

### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in **minor or moderate injury**. Do not proceed unless the required conditions are met and understood.

### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in **component damage**. Do not proceed unless the required conditions are met and understood.

### **IMPORTANT**

Refers to information about this product that you should not overlook.

### **NOTE**

Indicates some information that requires your attention or some extra information for the current topic.

## 2 Accessing CohesionUI

CohesionUI is a web-based application that you can use to control any Quantifi Photonics product. Its cutting-edge design offers a sleek modern interface, cross-device compatibility, multi-instrument control, customizable views, and remote access.

### 2.1 Accessing CohesionUI for PXIe modules

To use CohesionUI, you need the IP address of the host chassis, with which you can access the chassis either locally or remotely. For local access, use the embedded PXIe controller operating system, and for remote access, use any compatible device that is connected to the PXIe chassis via an ethernet connection.

To obtain the IP address, open the **Command Prompt** window on the chassis controller and then run the `ipconfig` command. Note down the IPv4 address that is displayed

To access CohesionUI locally or remotely, open a compatible browser (Google Chrome or Microsoft Edge) and use the IP address `127.0.0.1` as the URL. Alternatively, you can double-click the desktop icon for CohesionUI or select it from the **Start** menu.



### 2.2 Accessing CohesionUI for MatriQ instruments

You can open CohesionUI from the Cohesion Operator application or from your browser.

The IP address of the MatriQ is displayed on the LCD screen on the back of the instrument. Irrespective of the operation mode of the MatriQ (access over USB or Ethernet), the appropriate IP address will be displayed on the screen.

#### NOTE

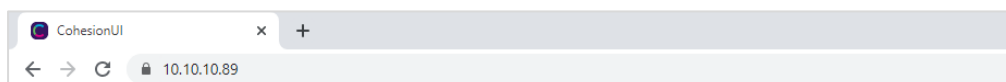
When both Ethernet and USB cables are connected to the MatriQ Instrument, the IP displayed on the LCD will alternate between the USB and Ethernet IP addresses.

To open CohesionUI from Cohesion Operator:

- Open Cohesion Operator and select the instrument.
- Click Open CohesionUI.

To open CohesionUI from a browser:

- Launch Google Chrome or Microsoft Edge on a computer.
- Type in the MatriQ instrument IP address into the address bar of the browser e.g. **10.10.10.89**.

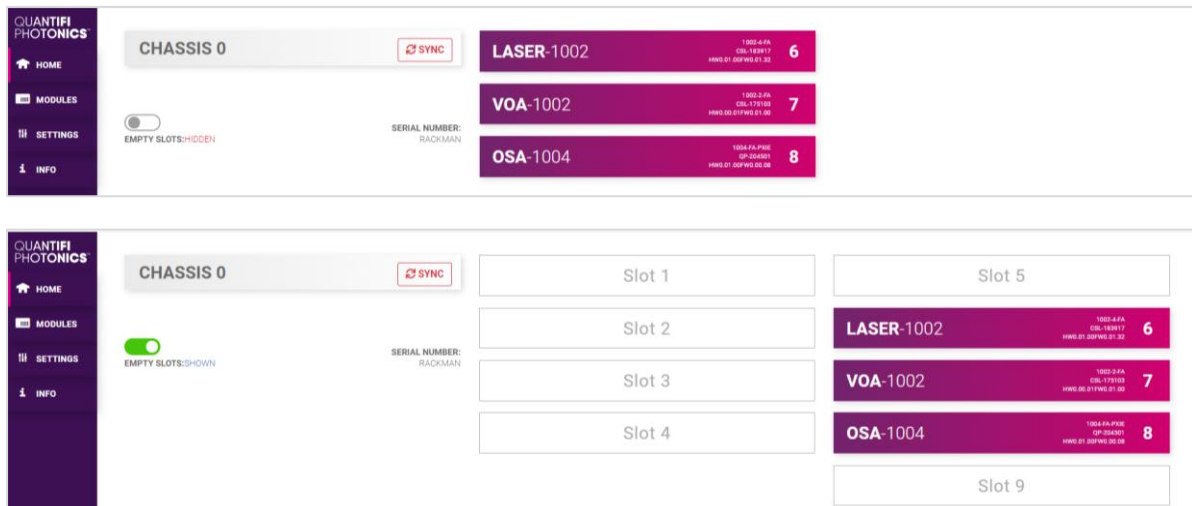


If needed, the IP address can be statically assigned to the Ethernet or USB connection (further information is available in the User Manual).

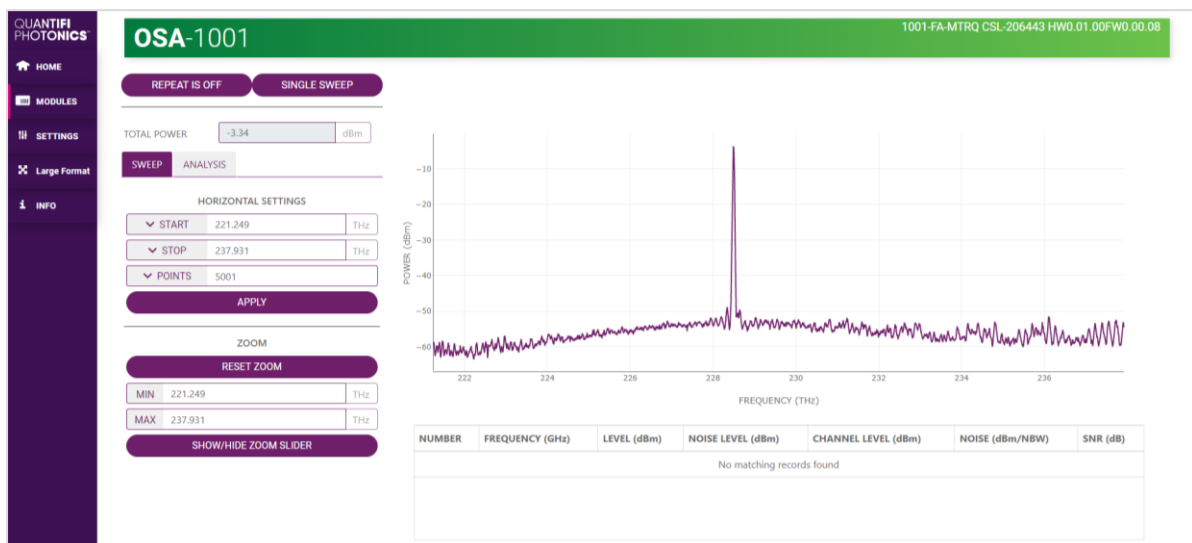
### 3 CohesionUI application

#### 3.1 Home page

Displays a graphical representation of the module arrangement in the PXIe chassis or the MatriQ instrument channels. For PXIe modules, white numbers are displayed beside each module corresponding the slot in which they are installed.



For MatriQ instruments, all the information relating to the instrument such as the model number, serial number and firmware versions is displayed in the top right corner of the window.



#### 3.2 Modules list

All the installed modules are displayed on the HOME page. To access the controls for a module, click the corresponding module name, or hover over the **MODULES** button and select a module from the displayed list. Controls for a specific module, or a channel in a module are then displayed.



### 3.2.1 Set and Actual values

Some Quantifi Photonics products will allow the user to set a given parameter's value and then read that parameter (eg. Laser, VOA, O2E, etc).

- **ACTUAL**: the actual value of the parameter, defined by querying the module
- **SET**: the intended value of a given parameter, defined by user input

The **SET** and **ACTUAL** values are only displayed for appropriate parameters which require user input.

For parameters that report a value and do not depend on user input, only an **ACTUAL** value is displayed.



### 3.3 Common settings controls

The **SETTINGS** page is used to configure the CohesionUI settings and unit preferences or to synchronize / reinitialize the system.

Step size refers to the amount by which the attenuation, frequency, or power increments / decrements when the + or - button is clicked.

#### NOTE

- The unit preferences and settings can be set by hovering over the **SETTINGS** button in the left side menu. This will bring up a dropdown menu that lists all settings for a quick access.
- Whenever the chassis / instrument is power cycled, CohesionUI reverts to default settings.



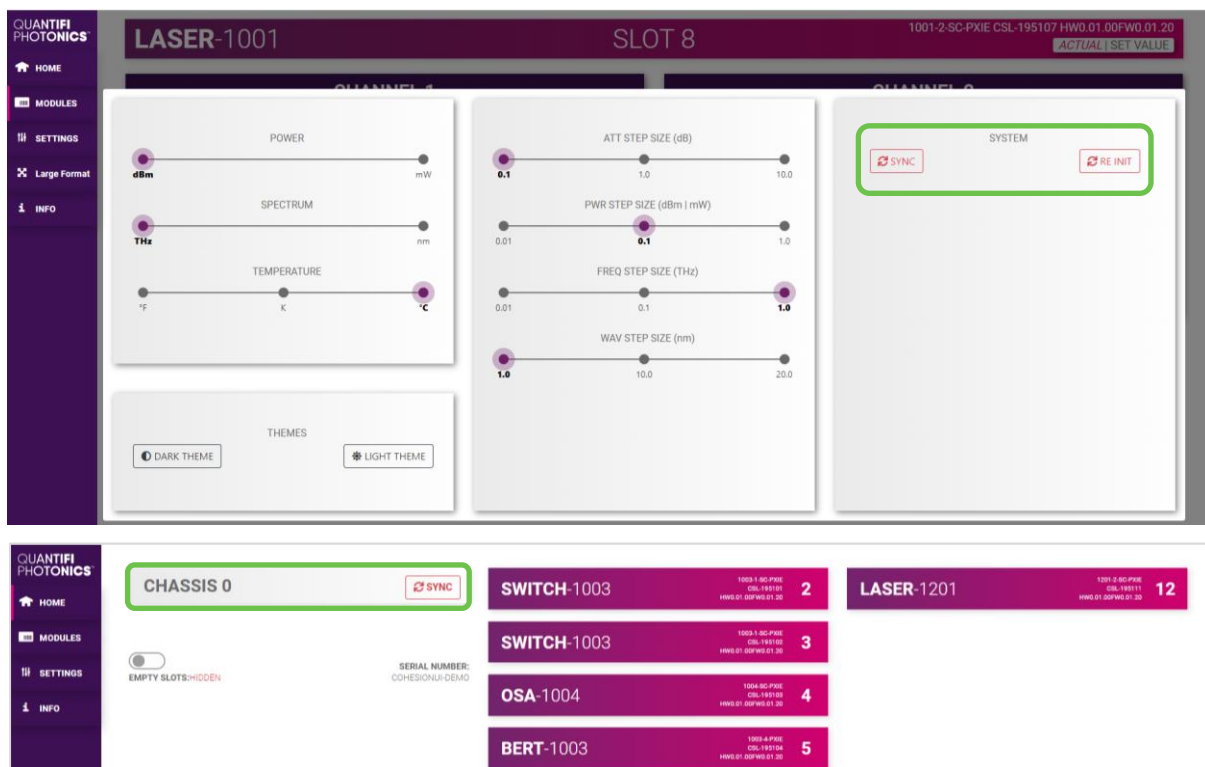
### 3.4 PXIe specific settings controls

#### 3.4.1 System controls

The SYSTEM controls facilitate re-discovery of any PXIe modules that may have been installed after initial startup, or in case no modules are displayed in the CohesionUI window.

- **SYNC:** Synchronize CohesionUI with the latest information from the CohesionSCPI service.
- **RE-INIT:** Re-initialize CohesionUI by synchronizing the CohesionSCPI service with the CohesionDriver service.

The **SYNC** button is also displayed on the **HOME** page beside every chassis in the setup. This allows any chassis to be synchronized independently. After clicking the **SYNC** button, CohesionUI will disable the page while it is synchronizing with the CohesionSCPI service.



Clicking the **RE-INIT** button will bring up a prompt to continue, since this action will temporarily disconnect all modules while the re-initialization with the CohesionDriver service is in progress. Once it is complete, the page will be functional again.

#### **NOTE**

The **RE-INIT** action will disconnect any connected users to the PXIe system while the action is being completed. All modules will be disabled during this time.





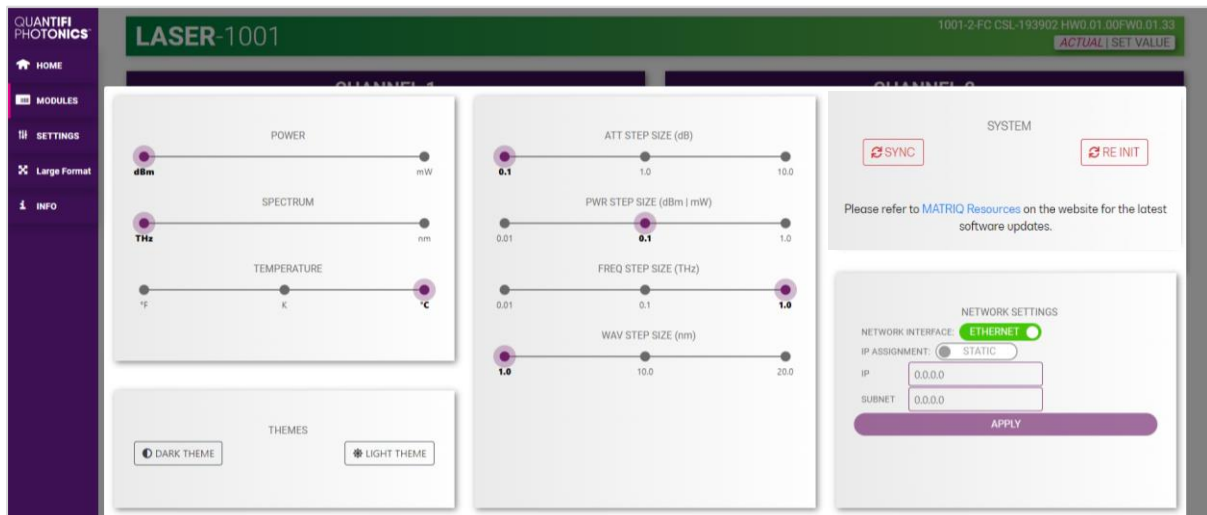
### 3.5 MATRIQ specific settings controls

#### 3.5.1 Network settings controls

The network configuration control panel enables the user to set the preferred communication interface (Ethernet or USB).

#### **NOTE**

The Network interface controls are only available when connected over **USB**.



#### 3.5.2 Configuring the Network Interface settings

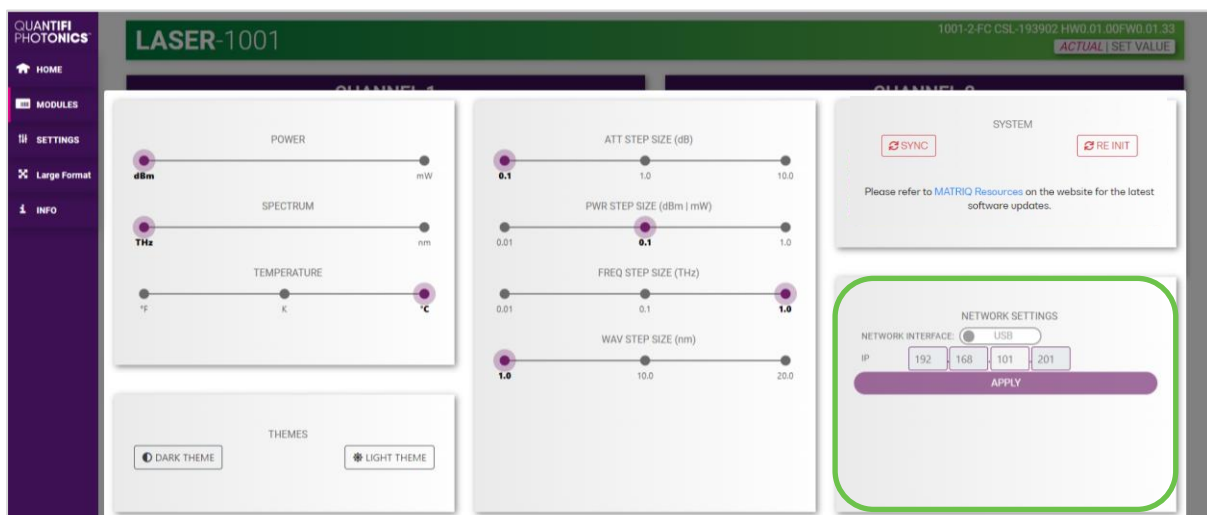
The MATRIQ instrument can operate over either an Ethernet or USB connection. To communicate with the instrument, the IP address is required.

#### **NOTE**

The Network interface controls are **only available when connected over USB**. When connected over Ethernet the settings will be locked.

#### 3.5.3 Setting the USB IP address

When connected via USB, the default IP address is **192.168.101.201**. This is a static address set during instrument calibration. If necessary, this address can be changed in CohesionUI. The Network Interface configuration controls are available in the **SETTINGS** page.



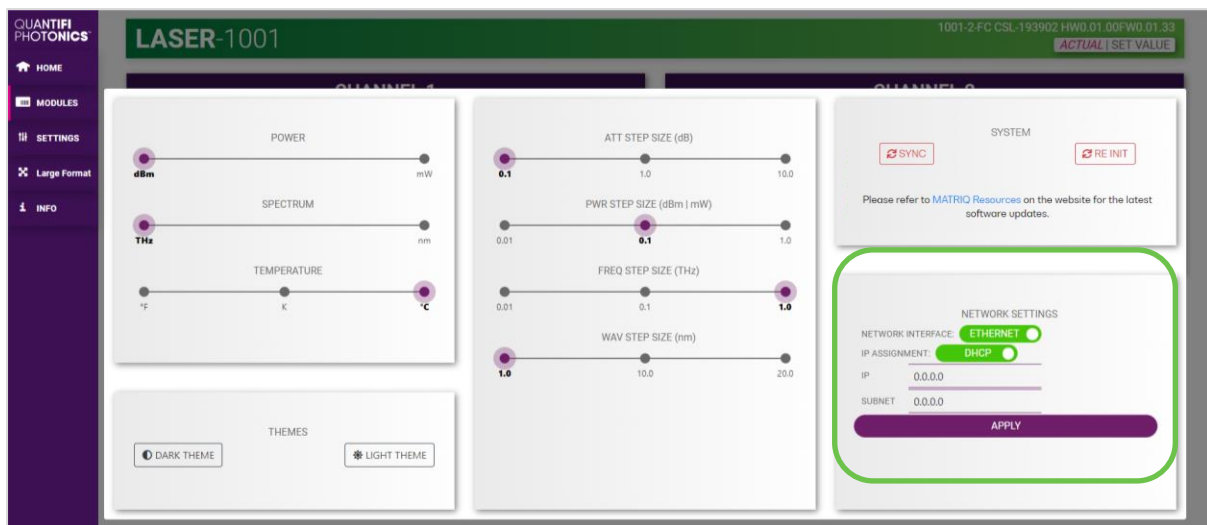
The **value in the 3<sup>rd</sup> octet of the IP address can be changed** to any available value. It is important to make sure that any other instruments connected to the computer do not share this new IP address, as there will be an addressing conflict.

Clicking **APPLY** will write the new IP address to the instrument settings. Once set, the new IP address will be displayed on the LCD screen on the back of the instrument.

### 3.5.4 Setting the Ethernet IP address

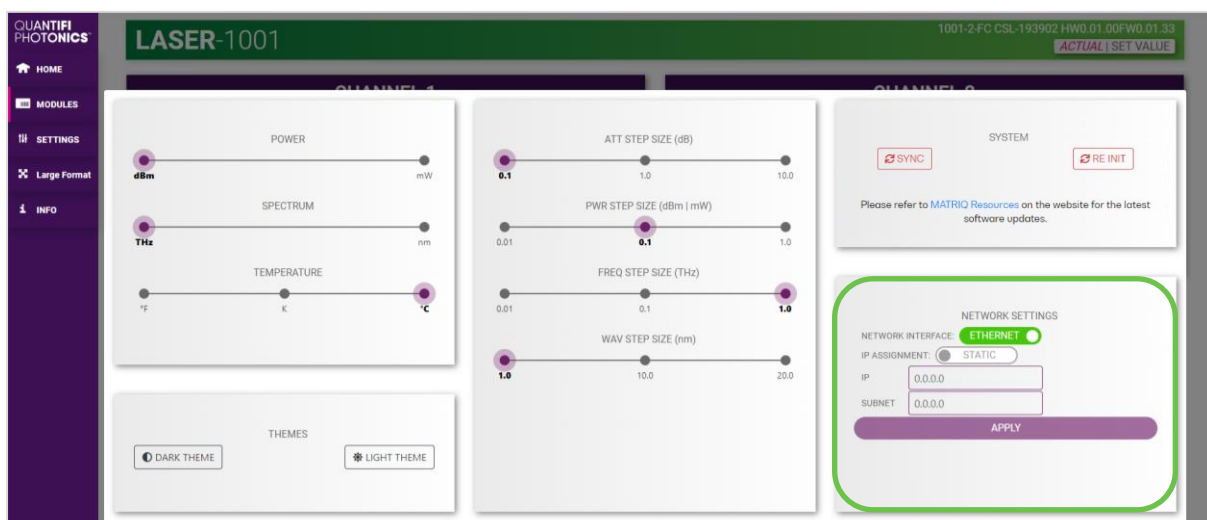
The default Ethernet IP addressing method is dynamic, as the DHCP will automatically assign the instrument an IP address. This address can be found on the back of the instrument on the LCD screen.

**While connected over USB**, typing in the assigned IP address in a supported web browser will open the CohesionUI page for the instrument.



The addressing method can be changed to a static method, where the MATRIQ instrument will always have the same IP address over Ethernet. Typing in a **valid IP address and Subnet mask**, and then clicking **APPLY** will save the IP address into the settings of the instrument.

To test if the IP addressing has worked, power **OFF** the instrument, and disconnect the USB cable. Turn the unit back **ON**, and once it has finished booting, check the IP address shown on the LCD screen.



### 3.6 Info panel

Clicking the **INFO** button will display an information panel on the right side of the page. Information such as the chassis operation mode, manufacturer, model, and serial number of the chassis, CohesionUI version number, and the version of CohesionSCPI service running on the chassis is displayed in this panel.

The screenshot shows the CohesionUI interface with the **INFO** panel expanded on the right. The interface includes a sidebar with navigation options: HOME, MODULES, SETTINGS, and INFO. The main area displays a list of modules for CHASSIS 0, including SWITCH-1003, OSA-1004, BERT-1003, POWER-1501, O2E-1101, LASER-1001, VOA-1001, and EDFA-1001. The INFO panel on the right provides detailed system information.

| COHESIONUI™    |                        |
|----------------|------------------------|
| COMPANY        | QUANTIFI PHOTONICS LTD |
| MODEL          | COHESIONSCPI           |
| SERIAL         | COHESIONUI-DEMO        |
| UI VERSION     | 3.00.02                |
| SERVER VERSION | 3.00.05                |
| DRIVER VERSION | 3.01.04                |
| CHASSIS MODE   | SINGLE                 |

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