QUANTIFI
PHOTONICS™

Quick Start

IQTX EPIQ USER GUIDE

via USB

via Ethernet

Cohesion Operator

Step 1.
Installing the IQTX instrument.

With the instrument powered OFF, connect the power cord.

Turn the isolation switch ON.

Turn the instrument ON.

Connect the instrument:
to the client computer using a USB cable, *or*
to your network, *or* client computer via an Ethernet cable.

Note down the IP address as displayed on the front LCD screen. With both, USB and Ethernet cable connected, the IP address displayed will alternate between the USB and Ethernet IP address.

Note: After powering the IQTX on, please wait at least 1 minute before attempting to communicate with the IQTX. This will allow the IQTX enough time to finish boot procedures and initialize the communication server.

Important: You must use the external power supply that has been supplied by Quantifi Photonics with the unit. Any attempt to use a different external power supply may cause product damage and will void your warranty.

Step 2.
Installing the latest software on the client computer.

Set up the computer you will use to connect with the instrument by installing the Cohesion Operator software package. The package is included on the USB drive that we provide with your instrument.

Insert the USB drive on the computer. Alternatively, you can download the Cohesion Operator software package from quantifiphotonics.com.

Double-click **CohesionOperator- <version>.exe** and follow the prompts.

The installation wizard will install required drivers, applications, and desktop icons on the computer.
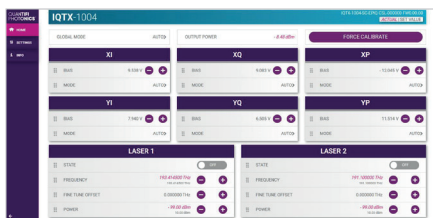
Step 3.
Communicating with the IQTX instrument.

You can control all available Quantifi Photonics instruments through CohesionUI, a web-based graphical user interface, or with SCPI commands.

To communicate with an instrument: Open the Cohesion Operator application on the client computer, for example by double-clicking the desktop icon.

Select the instrument – the IP address of the instrument is displayed on the LCD screen on the back of the instrument (e.g. 10.10.10.89).

Click **Connect** to validate the IP address and collect instrument information:

Click **Open SCPI Command Console** to work with SCPI commands.

Click **Open CohesionUI** to work with the graphical user interface.

Important: If another Quantifi Photonics instrument is already connected to the client computer via USB, consult the user manual on configuring the Ethernet / USB IP address for multi-instrument control.

Step 4.
Operating the IQTX from the LCD interface.

The IQTX has a touch-screen Graphical User Interface (GUI) which provides the user local access to the web server application.

The user can control the installed lasers and modulators configuration, adjust the settings of the display, and edit the Network settings.

To access the settings menu, click on the SETTINGS icon button on the right-hand bottom corner of the LCD screen.
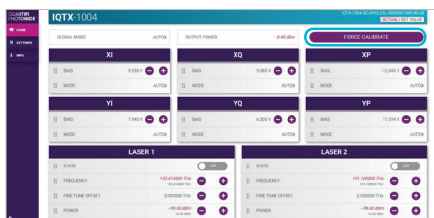
Step 5.
Initializing the ABC of IQTX.

Connect the internal laser output to a modulator input using the short PM patch cord provided with the instrument and turn the laser on. Once the laser has stabilized, click FORCE CALIBRATE in CohesionUI to perform the DC bias scan and start the Automatic Bias Control (ABC).

Step 6.
Applying the RF signal.

Once the ABC has locked, connect the RF signal generator to IQTX and turn the RF driving signal on. The peak-to-peak voltage amplitude of the driving signal should be set to below 1.8 x Vpi for QPSK signals, and around 1.2 x Vpi for multi-level formats such as 16 QAM. Typically, the driving signal amplitude should be around 200 mV to 300 mV. Do not exceed 500 mV as this will damage the instrument.

For detailed operating information, refer to the IQTX User Manual included on the USB media drive.

Test.
Measure.
Solve.

Quantifi Photonics is transforming the world of photonics test and measurement. Our portfolio of optical and electrical test instruments is rapidly expanding to meet the needs of engineers and scientists around the globe. From enabling ground-breaking experiments to driving highly efficient production testing, you'll find us working with customers to solve complex problems with innovative solutions.

To find out more, get in touch with us today.

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