Transition guide for optical products

LTB-1 and LTB-8 lab platforms

Smarter network in sight™

EXFO

> We bring you the essential tools to power through your transformation.

Table of contents

About EXFO

EXFO develops smarter test, monitoring and analytics solutions for the global communications industry. We are trusted advisers to fixed and mobile network operators, hyperscalers and leaders in the manufacturing, development and research sector. They count on us to deliver superior visibility and insights into network performance, service reliability and user experience. Building on 35 years of innovation, EXFO's unique blend of equipment, software and services enable faster, more confident transformations related to 5G, cloud-native and fiber-optic networks.

1 - Introduction

EXFO is deeply committed to providing its customers with high-performance products at the cutting edge of technology. We are proud of our new, innovative LTB product family, which will help ensure our optical products remain the best in the industry.

The 2016 introduction of the cutting-edge LTB-1 and LTB-8 platforms was the next step in the evolution of our benchtops and lab platforms product suites. This guide is intended to help you select the new equivalent models or replacement products for the legacy benchtops and IQS suite that best meet your needs. As many measurement devices are used in automated environments, we will also review the new remote control capabilities of the LTB product portfolio, as well as the differences between the IQS and LTB platforms, where applicable.

While this guide provides an overview of changes for many modules, the operational details can be found in the user guide for each module, and the LTB-1 and LTB-8 platforms; please refer to them for more information.

It is our pleasure to introduce the LTB family—we hope you find this guide helpful.

2 - LTB-1 and LTB-8 overview

EXFO is proud to present its new LTB-1 and LTB-8 product family. Here is what you can expect from a modern test solution:

LTB-1: Compact and Flexible Text Kits for Lab and Manufacturing Applications

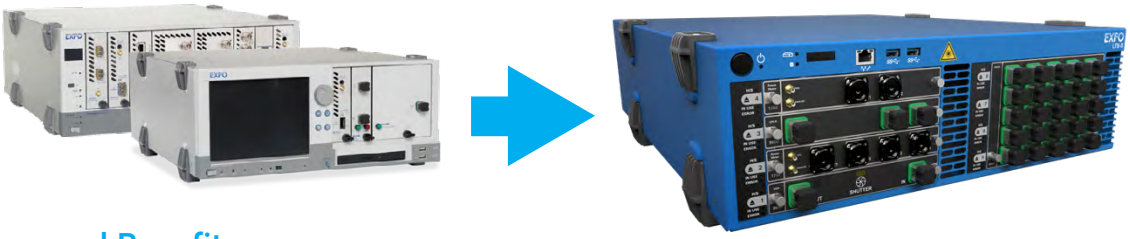
Benchtop Migration Path to LTB-1

Key Features and Benefits

- High-performance power meter with choice of one, two or four detectors
- Singlemode and multimode variable attenuator
- Easy-to-use, web-based interface
- The FIP-400B Fiber Inspection Probe can be added as an option
- IVI-compliant drivers for fast and simple integration into automated test systems

LTB-8: Powerful, Scalable, Eight-Slot Rackmount Platform Designed for Advanced Lab and Manufacturing Applications

IQS Migration Path to LTB-8



Key Features and Benefits

- Compact 3U solution with high-level module density for in-rack or tabletop applications
- Stand-alone or managed infrastructure for simultaneous multi-user control
- Intelligent module with hot-swap capability
- Power and flexibility to run automation software and protocol scripts without an external personal computer
- RAID 1 mirroring for redundancy and data protection

3 - Product equivalence

You will find in this section the models for product equivalence or replacement.

Benchtop power meters

Existing Model	New Model	Description
PM-1613	LTK-1-1-FTB-1750-031-1	1-channel InGaAs benchtop power meter
PM-1623	LTK-1-1-FTB-1750-031-2	2-channel InGaAs benchtop power meter

Benchtop variable attenuators

Existing Model	New Model	Description
FVA-3150-B	LTK-1-1-FTB-3500-B	Singlemode benchtop variable attenuator
FVA-3150-BM	LTK-1-1-FTB-3500-BI	Singlemode benchtop variable attenuator with monitor port
FVA-3150-C	LTK-1-1-FTB-3500-C	Multimode benchtop variable attenuator, 50 µm
FVA-3150-CM	LTK-1-1-FTB-3500-CI	Multimode benchtop variable attenuator with monitor port, 50 µm
FVA-3150-D	LTK-1-1-FTB-3500-D	Multimode benchtop variable attenuator, 62.5 µm
FVA-3150-DM	LTK-1-1-FTB-3500-DI	Multimode benchtop variable attenuator with monitor port, 62.5 µm

Modular power meters

Existing Model	New Model	Description
IQS-1710	FTBx-1750-OHS-1	Single-channel interface module for OHS-1713-UH
IQS-1720	FTBx-1750-OHS-2	Two-channel interface module for OHS-1713-UH
IQS-1740	FTBx-1750-OHS-4	Four-channel interface module for OHS-1713-UH
IQS-1712X	Please call factory	Single-channel power meter, GeX detector
IQS-1722X	Please call factory	Two-channel power meter, GeX detector
IQS-1742X	Please call factory	Four-channel power meter, GeX detector
IQS-1713	FTBx-1750-031-1	Single-channel power meter, InGaAs detector
IQS-1723	FTBx-1750-031-2	Two-channel power meter, InGaAs detector
IQS-1743	FTBx-1750-031-4	Four-channel power meter, InGaAs detector

Modular variable attenuators

Existing Model	New Model	Description
IQS-3150-B	FTBx-3500-B	Singlemode benchtop variable attenuator
IQS-3150-BI	FTBx-3500-BI	Singlemode benchtop variable attenuator with integrated power meter
IQS-3150-C	FTBx-3500-C	Multimode benchtop variable attenuator, 50 µm
IQS-3150-CI	FTBx-3500-CI	Multimode benchtop variable attenuator with integrated power meter, 50 µm
IQS-3150-D	FTBx-3500-D	Multimode benchtop variable attenuator, 62.5 µm
IQS-3150-DI	FTBx-3500-DI	Multimode benchtop variable attenuator with integrated power meter port, 62.5 µm

Modular optical switches

Existing Model	New Model	Description
IQS-9100-01-02-B	FTBx-9150-01-02-B	Singlemode optomechanical optical switch 1 x 2
IQS-9100-01-04-B	FTBx-9150-01-04-B	Singlemode optomechanical optical switch 1 x 4
IQS-9100-01-08-B	FTBx-9150-01-08-B	Singlemode optomechanical optical switch 1 x 8
IQS-9100-01-12-B	FTBx-9150-01-12-B	Singlemode optomechanical optical switch 1 x 12
IQS-9100-01-16-B	FTBx-9150-01-16-B	Singlemode optomechanical optical switch 1 x 16
IQS-9100-01-24-B	FTBx-9150-01-24-B	Singlemode optomechanical optical switch 1 x 24
IQS-9100-01-32-B	FTBx-9150-01-32-B	Singlemode optomechanical optical switch 1 x 32
IQS-9100-02-02-B	FTBx-9150-02-02-B	Singlemode optomechanical optical switch 2 x 2
IQS-9100-02-04-B	FTBx-9150-02-04-B	Singlemode optomechanical optical switch 2 x 4, non-blocking
IQS-9100-01-02-C	FTBx-9150-01-02-C	Multimode optomechanical optical switch 1 x 2, 50 µm
IQS-9100-01-04-C	FTBx-9150-01-04-C	Multimode optomechanical optical switch 1 x 4, 50 µm
IQS-9100-01-08-C	FTBx-9150-01-08-C	Multimode optomechanical optical switch 1 x 8, 50 µm
IQS-9100-01-12-C	FTBx-9150-01-12-C	Multimode optomechanical optical switch 1 x 12, 50 µm
IQS-9100-01-16-C	FTBx-9150-01-16-C	Multimode optomechanical optical switch 1 x 16, 50 µm
IQS-9100-01-24-C	FTBx-9150-01-24-C	Multimode optomechanical optical switch 1 x 24, 50 µm
IQS-9100-01-32-C	FTBx-9150-01-32-C	Multimode optomechanical optical switch 1 x 32, 50 µm
IQS-9100-02-02-C	FTBx-9150-02-02-C	Multimode optomechanical optical switch 2 x 2, 50 µm
IQS-9100-02-04-C	FTBx-9150-02-04-C	Multimode optomechanical optical switch 2 x 4, non-blocking, 50 µm
IQS-9100-01-02-D	FTBx-9150-01-02-D	Multimode optomechanical optical switch 1 x 2, 62.5 µm
IQS-9100-01-04-D	FTBx-9150-01-04-D	Multimode optomechanical optical switch 1 x 4, 62.5 µm
IQS-9100-01-08-D	FTBx-9150-01-08-D	Multimode optomechanical optical switch 1 x 8, 62.5 µm
IQS-9100-01-12-D	FTBx-9150-01-12-D	Multimode optomechanical optical switch 1 x 12, 62.5 µm
IQS-9100-01-16-D	FTBx-9150-01-16-D	Multimode optomechanical optical switch 1 x 16, 62.5 µm
IQS-9100-01-24-D	FTBx-9150-01-24-D	Multimode optomechanical optical switch 1 x 24, 62.5 µm
IQS-9100-01-32-D	FTBx-9150-01-32-D	Multimode optomechanical optical switch 1 x 32, 62.5 µm
IQS-9100-02-02-D	FTBx-9150-02-02-D	Multimode optomechanical optical switch 2 x 2, 62.5 µm
IQS-9100-02-04-D	FTBx-9150-02-04-D	Multimode optomechanical optical switch 2 x 4, non-blocking, 62.5 µm

Existing Model	New Model	Description
IQS-9100B-01-02-B	FTBx-9160-01-02-B	Singlemode MEMS optical switch 1 x 2
IQS-9100B-01-04-B	FTBx-9160-01-04-B	Singlemode MEMS optical switch 1 x 4
IQS-9100B-01-08-B	FTBx-9160-01-08-B	Singlemode MEMS optical switch 1 x 8
IQS-9100B-01-12-B	FTBx-9160-01-12-B	Singlemode MEMS optical switch 1 x 12
IQS-9100B-01-16-B	FTBx-9160-01-16-B	Singlemode MEMS optical switch 1 x 16
IQS-9100B-01-24-B	FTBx-9160-01-24-B	Singlemode MEMS optical switch 1 x 24
IQS-9100B-01-32-B	FTBx-9160-01-32-B	Singlemode MEMS optical switch 1 x 32

Modular optical couplers/splitters

Existing Model	New Model	Description
IQS-9601-03-B05	FTBx-9600-01-02-01S	1 x 2 coupler, 1/99 coupling ratio
IQS-9601-03-B10	FTBx-9600-01-02-05S	1 x 2 coupler, 5/95 coupling ratio
IQS-9601-03-B04	FTBx-9600-01-02-10S	1 x 2 coupler, 10/90 coupling ratio
IQS-9601-03-B11	FTBx-9600-01-02-25S	1 x 2 coupler, 25/75 coupling ratio
IQS-9601-03-B06	FTBx-9600-01-02-50E	1 x 2 coupler, 50/50 coupling ratio
IQS-9601-03-B01	FTBx-9600-01-02-50B	1 x 2 coupler, 50/50 coupling ratio, balanced length, calibration set-up only • 58: FC/APC fixed connector
IQS-9601-03-B02	FTBx-9600-01-02-50U	1 x 2 coupler, 50/50 coupling ratio, unbalanced length, calibration set-up only • 58: FC/APC fixed connector
IQS-9601-05-B07	FTBx-9600-01-04-25E	1 x 4 coupler, 25/25/25/25 coupling ratio
IQS-9602-09-B08	FTBx-9600-01-08-12C	1 x 8 coupler, 12.5 coupling ratio on each port, C-Band
IQS-9602-09-B09	FTBx-9600-01-08-12L	1 x 8 coupler, 12.5 coupling ratio on each port, L-Band

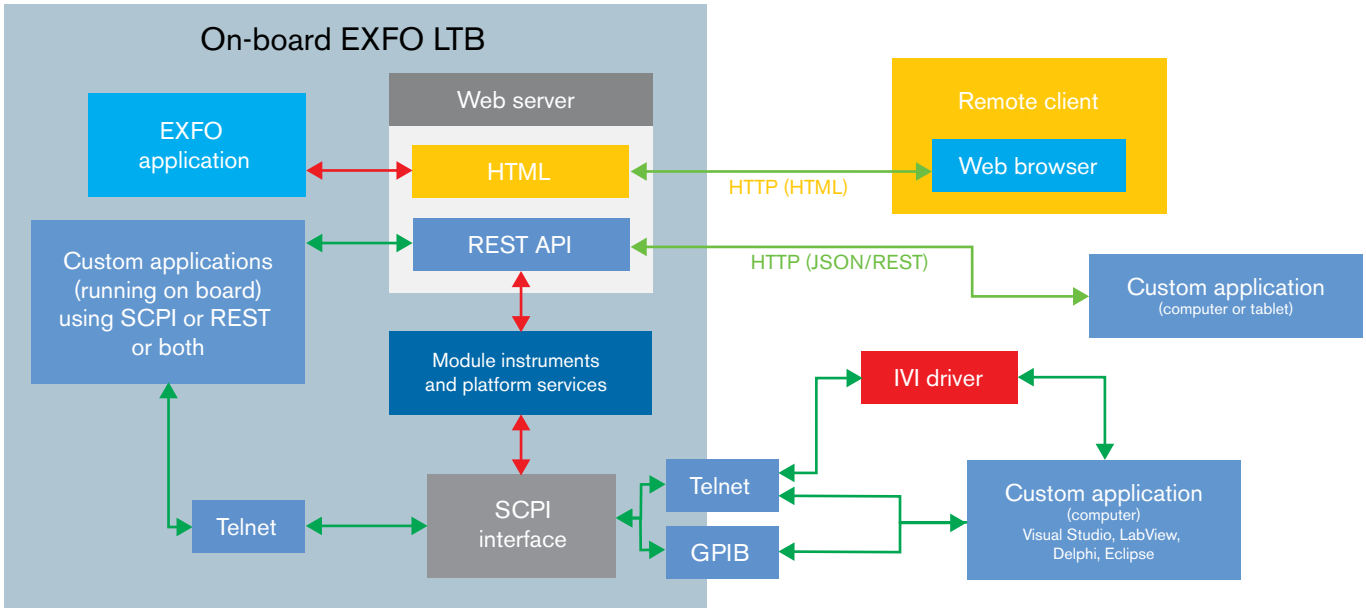
4 - Local operation and remote access

The new LTB-1 and LTB-8 platforms present multiple ways to access and control instruments. This section presents some of the main use case scenarios for remotely operating your unit.

Before listing the remote access use cases, let's explore the automation and remote control services on the LTB platforms.

Automation and remote control capabilities of the LTB platforms have been significantly extended compared to IQS platforms and legacy benchtops. Here are the highlights of those capabilities:

- Introduction of the HTML API for simple and direct access to instruments using any web browser running on any device (assuming proper network connection, wired or wireless)
- Introduction of the REST API for cross-platform/cross-OS application development
- Legacy SCPI interface is available with usual hardware access like Telnet, GPIB and others
- Introduction of IVI drivers for optical instruments, an established standard for the test and measurement industry



Important Reminders

For most remote access scenarios, the remote computer and LTB-1/LTB-8 unit must be on the same network. As such, the LTB-8 has a built-in display that shows the current IP address of the AMT (management port) and the standard Ethernet port.

Please consult the user guide for detailed instructions and configuration. For highly secured networks, please consult with your information technology (IT) department, or other specialist to ensure adequate settings.

Use Case: Local Benchtop

Scenario: Using a keyboard, a mouse and a video monitor directly linked to the LTB-8 unit. In the case of LTB-1, use the touch screen.

This is the simplest and most direct way of controlling the unit.

LTB-8 Rackmount Platform

LTB-1 Platform

Use Case: Troubleshooting Using the LTB-8's Front Panel Ethernet

Scenario: Using a computer and network cable, connect to the Ethernet Management port on the LTB-8 platform.

Unlike the IQS-605P, the LTB-8 does not have a front display; this scenario helps you easily access the unit without the use of an external keyboard, mouse and display for troubleshooting or monitoring, including the capability to reboot the unit. This scenario involves the use of Intel® Active Management Technology (AMT) and UltraVNC, which must be installed on the computer prior to establishing the Ethernet connection.

AMT can be downloaded from the EXFO Apps website at http://www.exfo.com/software/exfo-apps. Simply click on the PC Software tab and download the AMT Remote Access kit, start installation and follow the on-screen instructions.

UltraVNC software can be downloaded from their website: http://www.uvnc.com/downloads/ultravnc.html.

NOTE: You do not need a cross-over Ethernet cable because the management port on the LTB-8 unit will automatically switch Tx/Rx signals. Make sure to plug the Ethernet cable in a port showing a wrench icon, indicating a management port capability.

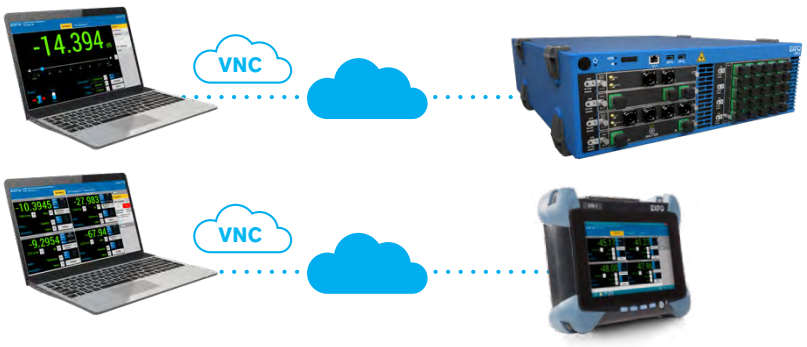
Use Case: Remote Control Using UltraVNC or Remote Desktop Connection

Scenario: Using any laptop or workstation, see and control the LTB-1/LTB-8 as if you were in front of the unit.

Just like the IQS-600 platforms, remote access and control is possible from anywhere on the network using UltraVNC or Windows Remote Desktop Connection as long as the remote computer is on the same network as the LTB-1/LTB-8 unit.

UltraVNC: Before establishing a VNC remote control session, UltraVNC software must be installed on the remote computer and UltraVNC Server must be configured and activated in the System Settings tab of ToolBox X. Please consult the platform user guide for details.

Remote Desktop Connection: In the case of Remote Desktop Connection, the network security settings must allow the remote computer to log on to the LTB-1/LTB-8 unit. Please make sure you change the LTB platform's remote settings in order to allow remote desktop connections. (Control Panel -> System -> Remote settings)



Use Case: Monitoring Optical Modules Using a Web User Interface (UI)

Scenario 1: Using any device with a web browser, access the LTB-1/LTB-8 optical application and monitor any of the optical modules as if you were using the same application from the platform's user interface.

Make sure the remote device has network access to the LTB-1/LTB-8 unit. Using the HTTP address of the LTB-1/LTB-8, you can access the module application as if the application had been launched on the unit.

For example, using the IP address displayed on the LTB-8 unit, a remote operator could enter the URL with the IP address in a web browser to access the LTB-8.

Note: the IP address can be obtained using IPConfig tool at the command line on LTB-1 platform.

The URL would look like this:

http://169.254.223.5.

The platform's default HTML page is a list of the available instruments with a direct link to each instrument. You will have access to the same level of control and values as if running the instrument application.

Scenario 2: Using any laptop or workstation to control transport and datacom modules as if you were running the application locally.

Remote ToolBox must be installed on the laptop or workstation prior to connect to the LTB-8 platform. It can be downloaded from the EXFO Apps website at http://www.exfo.com/software/exfo-apps. Click on the *PC Software* tab and select *Remote ToolBox* to download it. software and download it. Follow the on-screen instructions to install this software.

NOTE: optical modules are not available in Remote ToolBox. For instructions, please refer to the use case above entitled *Monitoring Optical Modules Using a Web User Interface (UI)*.

5 - Changes to automation using SCPI and programming interfaces

The LTB-1 and LTB-8 units can be automated using SCPI commands as was the case with the IQS-600 and legacy benchtop units. Every effort has been made to maintain the compatibility between new and legacy command sets; however, there are some minor changes for both platforms.

This section presents the changes from IQS and legacy benchtop units to the LTB-8 and LTB-1.

Specific Changes Applicable to Both the LTB-1 and LTB-8

GPIB: Communication Provided Through a USB Accessory

The LTB-1 and LTB-8 do not have GPIB connector ports. The GPIB capability is provided through a dedicated USB-to-GPIB cable. You will need to install NI 488.2 software on the LTB-1 or LTB-8 prior to using the USB-to-GPIB adapter cable. This cable is shipped with the required software. The reference number for this accessory is GP-2258. Please refer to the user guide for more information.

Specific Changes for the IQS to LTB-8 Transition

Instrument Numbering

The SCPI script must still prefix each instrument command with *LINSx*: where *x* represents the designated logical instrument number (LINS). The LINS identification is no longer attached to the module location in the LTB-8 unit. The user can configure the logical instrument number and whether the module is accessible remotely. A default LINS number will be assigned, but it can be modified using the Remote Control Configuration settings.

If the instrument has remote control capabilities, then this will be enabled by default. The user can disable remote control by modifying the Remote Control Configuration settings (see Figure 1 below).

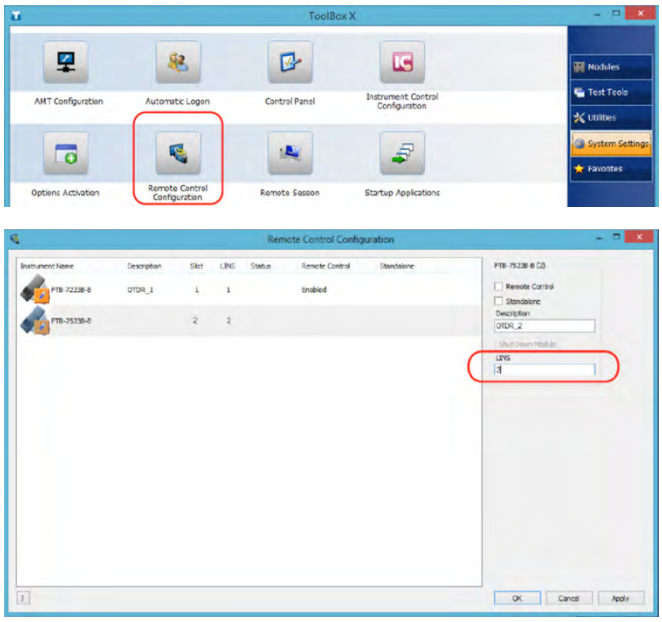
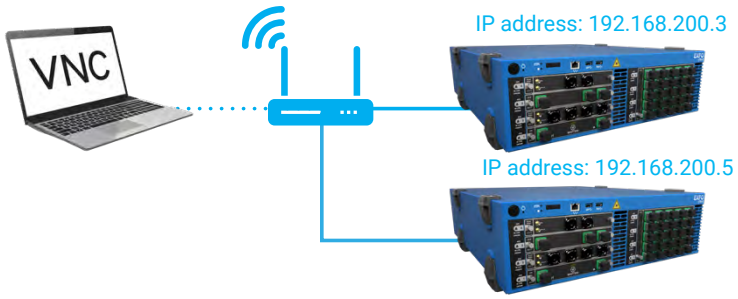


Figure 1: Remote Control Configuration icon in ToolBox.

Please note that, unlike the IQS-600, the unit number is not part of the instrument number. As such, the LINS numbering starts at 1. As with IQS platforms, available LINS numbers can be listed from the remote location by using the “INST:CAT:FULL?” SCPI command.

Multiple Instances of Communication Links With More Than Eight (8) Instruments

The LTB-8 cannot be “daisy chained,” as was the case with the IQS-600. The LTB-8 is limited to eight physical modules—and therefore eight instruments—which is why a separate communication link must be established with each platform when an application or a script needs to “talk” with more than eight instruments. The same logic applies if two instruments are located in two separate LTB-8 platforms.



Specific Changes for the Legacy Benchtop to LTB-1 Transition

Instrument Numbering

The most important change for legacy benchtop SCPI scripts is the new requirement for them to include a reference to the logical instrument number (LINS) in front of the effective SCPI command. As a result, the LINSx prefix is now applicable to benchtop scripts.

For example, a SCPI command for setting a current attenuation of FVA-3150 “INP:ATT 12.5 DB” will now require a prefix; the equivalent could be “LINS1:INP:ATT 12.5 DB” with 1 as the designated instrument number. Remote Control Configuration is used to change instruments settings on the LTB-1/LTB-8 platform.

Multiple Instances of Communication Links With More Than Two Instruments

As indicated earlier in this document, the LTB-1 is limited to one or two physical modules, depending on hardware configuration. A separate communication link must be established with each platform when an application or an automation script needs to “talk” with more than one or two instruments.

Automating Optical Modules Using LabView

LTB platforms and optical modules are delivered with new IVI drivers as a replacement for legacy LabView drivers previously used with the IQS-600.

The new EXFO IVI drivers can be downloaded from EXFO’s Apps website: www.exfo.com/software/exfo-apps. Go to PC Software and download the IVI drivers kit, start installation and follow the on-screen instructions.

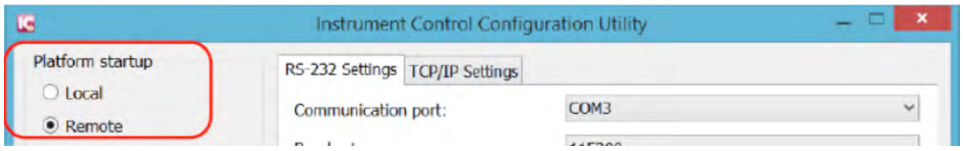
For more detailed information, please refer to the IVI Foundation’s website for tutorials and introduction videos: http://www.ivifoundation.org/resources/default.aspx

General Reminder

No changes were made to IEEE-488.2 commands from IQS, FVA or PM platforms; *CLS, *IDN? and SYST:ERR? commands are present and have the same behavior.

The system SCPI command INST:CAT:FULL? will return the current instrument inventory with designated LINS number.

Please note that if you are using Telnet or ActiveX on the LTB-1/ LTB-8 unit—for example, running a SCPI script locally on the unit—the settings for remote control must be set to Remote to access the SCPI functionality.



6 - Detailed changes to SCPI

This section of the document details the changes to the SCPI commands hierarchy when going from existing devices (IQS, PM, FVA) to the new LTB product family.

Although SCPI command syntax is identical to legacy instruments, there may be changes in the internal behavior of the command. Every effort has been made to minimize the functionality changes but there are some minor unavoidable differences. If you are not sure whether functionality changes could affect your tests, please consult the specific SCPI command documentation in the instruments user guide.

Tables list only the changes to the existing SCPI commands. For new commands, please see the listings in the High-Performance Power Meter user guide.

Changes From the PM-1600 to the FTB-1750 Command Tree

NOTE: Remember that a LINSx prefix must be added to all SCPI commands in legacy scripts.
Example: if you have the PM-1600 command “UNIT:POW W”, then you will need to change it to “LINS1:UNIT:POW W”.

When using new command syntax the target detector port must be specified with each command. The implicit detector port will always be channel 1.

Unless otherwise specified, the legacy SCPI commands can still be used on the new platform.

PM-1600 to FTB-1750

Legacy Command Syntax	New Command Syntax or Comments
FORMat:READing[:DATA]	LINSx:FORMat[1..n]:DATA
FORMat:READing[:DATA]?	LINSx:FORMat[1..n]:DATA?
INITiate:AUTOstop	LINSx:INIT[1..n]:AUTO
INITiate:AUTOstop?	LINSx:INIT[1..n]:AUTO?
INITiate:CONTinuous	No equivalence - measurements are always running continuously
INITiate:CONTinuous?	No equivalence
INITiate[:IMMediate]	LINSx:INITiate[1..n][:IMMediate]
INST:NSELect	No equivalence - use channel parameter in specific commands
INST:NSELect?	No equivalence
READ:ALL:POWer:DC?	No exact equivalence - use LINSx:READ[1..n][:SCALar]:POWer:DC? with each channel
READ[:SCALar]:POWer:DC?	LINSx:READ[1..n][:SCALar]:POWer:DC?
SENSe:AVERage:COUNt	LINSx:SENSe[1..n]:AVERage:COUNt
SENSe:AVERage:COUNt?	LINSx:SENSe[1..n]:AVERage:COUNt?
SENSe:AVERage[:STATe]	LINSx:SENSe[1..n]:AVERage[:STATe]
SENSe:AVERage[:STATe]?	LINSx:SENSe[1..n]:AVERage[:STATe]?
SENSe:CORRection:COLLect:ZERO	LINSx:SENSe[1..n]:CORRection:COLLect:ZERO
SENSe:CORRection:OFFSet[:MAGNitude]	LINSx:SENSe[1..n]:CORRection:OFFSet[:MAGNitude]
SENSe:CORRection:OFFSet[:MAGNitude]?	LINSx:SENSe[1..n]:CORRection:OFFSet[:MAGNitude]?
SENSe:FREQuency:CONTinuous	LINSx:SENSe[1..n]:FREQuency:CONTinuous
SENSe:FREQuency:CONTinuous?	LINSx:SENSe[1..n]:FREQuency:CONTinuous?
SENSe:FREQuency:CONTinuous:CATalog?	LINSx:SENSe[1..n]:FREQuency:CONTinuous:CATalog?
SENSe:FREQuency:NCONtinuous	LINSx:SENSe[1..n]:FREQuency:NCONtinuous
SENSe:FREQuency:NCONtinuous?	LINSx:SENSe[1..n]:FREQuency:NCONtinuous?
SENSe:FREQuency:NCONtinuous:CATalog?	LINSx:SENSe[1..n]:FREQuency:NCONtinuous:CATalog?
SENSe:POWer[:DC]:RANGe?	No equivalence
SENSe:POWer[:DC]:RANGe:AUTO	LINSx:SENSe[1..n]:POWer[:DC]:RANGe:AUTO
SENSe:POWer[:DC]:RANGe:AUTO?	LINSx:SENSe[1..n]:POWer[:DC]:RANGe:AUTO?
SENSe:POWer[:DC]:RANGe:HIGH	Not applicable
SENSe:POWer[:DC]:RANGe:LOW	Not applicable
SENSe:POWer[:DC]:REFerence	LINSx:SENSe[1..n]:POWer[:DC]:REFerence
SENSe:POWer[:DC]:REFerence?	LINSx:SENSe[1..n]:POWer[:DC]:REFerence?
SENSe:POWer[:DC]:REFerence:DISPlay	LINSx:SENSe[1..n]:POWer[:DC]:REFerence:DISPlay
SENSe:POWer[:DC]:REFerence:STATe	LINSx:SENSe[1..n]:POWer[:DC]:REFerence:STATe
SENSe:POWer[:DC]:REFerence:STATe?	LINSx:SENSe[1..n]:POWer[:DC]:REFerence:STATe?
SENSe:POWer:UNIT	No exact equivalence - see LINSx:UNIT[1..n]:POWer for similar behavior
SENSe:POWer:UNIT?	No exact equivalence - see LINSx:UNIT[1..n]:POWer? for similar behavior
SENSe:POWer:WAVelength	LINSx:SENSe[1..n]:POWer:WAVelength
SENSe:POWer:WAVelength?	LINSx:SENSe[1..n]:POWer:WAVelength?
TRACe:DATA?	LINSx:TRACe[1..n][:DATA]?
TRACe:POINts	LINSx:TRACe[1..n]:POINts
TRACe:POINts?	LINSx:TRACe[1..n]:POINts?
TRIGger:SEQuence:LEVel	LINSx:TRIGger[1..n][:SEQuence]:LEVel
TRIGger:SEQuence:LEVel?	LINSx:TRIGger[1..n][:SEQuence]:LEVel?
TRIGger:SEQuence:SLOPe	LINSx:TRIGger[1..n][:SEQuence]:SLOPe
TRIGger:SEQuence:SLOPe?	LINSx:TRIGger[1..n][:SEQuence]:SLOPe?
TRIGger:SEQuence:SOURce	LINSx:TRIGger[1..n][:SEQuence]:SOURce
TRIGger:SEQuence:SOURce?	LINSx:TRIGger[1..n][:SEQuence]:SOURce?
TRIGger:SEQuence:STATe	LINSx:TRIGger[1..n][:SEQuence]:STATe
TRIGger:SEQuence:STATe?	LINSx:TRIGger[1..n][:SEQuence]:STATe?
UNIT:POWer	LINSx:UNIT[1..n]:POWer

Changes From the IQS-1700 to the FTBx-1750 Command Tree

Unless otherwise specified, the legacy SCPI commands can still be used on the new platform.

IQS-1700 to FTBx-1750

Legacy Command Syntax	New Command Syntax
:MMEMory[1..n]:FNAMe	:MMEMory[1..n]:FNAMe
:SENSe[1..n]:AVERage:COUNt	:SENSe[1..n]:AVERage:COUNt
:SENSe[1..n]:CORRection:COLLect:ZERO	:SENSe[1..n]:CORRection:COLLect:ZERO
:SENSe[1..n]:CORRection:COLLect:ZERO:ALL	:SENSe[1..n]:CORRection:COLLect:ZERO:ALL
:SENSe[1..n]:FREQuency:CONTinuous	:SENSe[1..n]:FREQuency:CONTinuous
:SENSe[1..n]:FREQuency:CONTinuous?	:SENSe[1..n]:FREQuency:CONTinuous?
:SENSe[1..n]:FREQuency:CONTinuous:CATalog?	:SENSe[1..n]:FREQuency:CONTinuous:CATalog?
:SENSe[1..n]:FREQuency:NCONtinuous	:SENSe[1..n]:FREQuency:NCONtinuous
:SENSe[1..n]:FREQuency:NCONtinuous?	:SENSe[1..n]:FREQuency:NCONtinuous?
:SENSe[1..n]:FREQuency:NCONtinuous:CATalog?	:SENSe[1..n]:FREQuency:NCONtinuous:CATalog?
:TRACe[1..n]:POINts	:TRACe[1..n]:POINts
:TRACe[1..n]:POINts?	:TRACe[1..n]:POINts?
:TRIGger[1..n][:SEQuence]:SOURce	:TRIGger[1..n][:SEQuence]:SOURce
:UNIT[1..n]:POWer	:UNIT[1..n]:POWer
:UNIT[1..n]:POWer?	:UNIT[1..n]:POWer?
:OUTP:ANAL:COUN?	:OUTP:ANAL:COUN?

Changes From the FVA-3150 to the FTB-3500 Command Tree

NOTE: Remember that a LINSx prefi x must be added to all SCPI commands in legacy scripts.
Example: if you have the FVA-3150 command “INP:ATT 12.5 DB”, then you will need to change it to “LINS1:INP:ATT 12.5 DB”.

Unless otherwise specifi ed, the legacy SCPI commands are still used on the new platform.

FVA-3150 to FTB-3500

Legacy Command Syntax	New Command Syntax or Comments
ATTenuation	LINSx:INPut:ATTenuation
ATTenuation?	LINSx:INPut:ATTenuation?
CAL	No equivalence
CAL?	No equivalence
D	LINSx:OUTPut[:STATe]
D?	LINSx:OUTPut[:STATe]?
DISPlay:DIMMer	No equivalence
DISPlay:DIMMer?	No equivalence
Fiber	No equivalence
Fiber?	No equivalence
INPut:ATTenuation	LINSx:INPut:ATTenuation
INPut:ATTenuation?	LINSx:INPut:ATTenuation?
INPut:OFFSet	LINSx:INPut:OFFset
INPut:OFFSet:DISPlay	LINSx:OUTPut:APMode REFerence
INPut:OFFSet?	LINSx:INPut:OFFset?
INPut:STEP	No equivalence
INPut:STEP?	No equivalence
INPut:STEP:CATAlog?	No equivalence
INPut:WAVElength	LINSx:INPut:WAVelength
INPut:WAVElength?	LINSx:INPut:WAVelength?
OUTPut:APMode	LINSx:OUTPut:APMode
OUTPut:APMode?	LINSx:OUTPut:APMode?
OUTPut[:STATe]	LINSx:OUTPut[:STATe]
OUTPut[:STATe]?	LINSx:OUTPut[:STATe]?
PROGram:SELected:ATTenuation	No equivalence
PROGram:SELected:DELAy	No equivalence
PROGram:SELected:DURAtion	No equivalence
PROGram:SELected:STATe	No equivalence
PROGram:SELected:STATe?	No equivalence
PROGram:SELected:STEP	No equivalence
WaVeLength	LINSx:INPut:WAVelength
WaVeLength?	LINSx:INPut:WAVelength?

Changes From the IQS-3150 to the FTBx-3500 Command Tree

There are no changes. Please refer to the Variable Optical Attenuator (VOA) user guide for the list of commands.

Changes From the IQS-9100 and IQS-9100B to the FTBx-9150 and FTBx-9160 Command Tree

There are no changes. Please refer to the FTBx-9150 and FTBx-9160 user guides for the list of commands.

NOTE: Like the IQS-9600 modules, the FTBx-9600 instruments do not have SCPI commands or remote control capability.

Sales and customer service

EXFO headquarters
400 Godin Avenue
Quebec City, Quebec G1M 2K2 CANADA
T 1 800 663-3936 (U.S. and Canada)

EXFO America Inc.
3400 Waterview Parkway, Suite 100
Richardson, TX 75080 USA
T +1 800 663-3936 (U.S. and Canada)

EXFO Europe Ltd.
Winchester House
School Lane, Chandlers Ford, SO53 4DG UK
T +800 22 55 39 36 (+800 CALL EXFO; from most European countries)
Sales: +44 2380 246 810

EXFO Asia Pacific PTE Ltd.
62 Ubi Road 1, #09-01/02
Oxley Biz Hub 2, SINGAPORE 408 734
T +65 6333 8241

Smarter network in sight.™

EXFO