SPEC SHEET

FTBx-750D metro/longhaul OTDR

LONG-DISTANCE FIBER CHARACTERIZATION AND FIBER UPGRADES

- High dynamic range combined with high resolution for highly accurate fiber characterization.

COMPATIBLE WITH

EXchange

iOLM READY

KEY FEATURES

- Dynamic range of up to 51 dB
- Event dead zone (EDZ) / Attenuation dead zone (ADZ): 0.5/2.0 m
- Up to 256 000 sampling points
- EXFO Connect-compatible: automated asset management; data goes through the cloud and into a dynamic database

APPLICATIONS

- Metro and middle-mile network testing
- Longhaul network testing
- Data center interconnect (DCI) testing
- Manufacturing automation

COMPLEMENTARY PRODUCTS AND OPTIONS

Platform
FTB-1v2/
FTB-1 Pro

Platform
FTB-2/FTB-2 Pro,
FTB-4 Pro

Fiber inspection scope
FIP-500 and FIP-400B
(Wi-Fi or USB)

FastReporter

Data post-processing software
FastReporter

EXFO

LOADED WITH FEATURES TO BOOST YOUR EFFICIENCY

Real-time averaging

Activates the OTDR laser in continuous shooting mode, the trace refreshes in real time and allows to monitor the fiber for a sudden change. Perfect for a quick overview of the fiber under test.

Zoom tools

Zoom and center to facilitate the analysis of your fibers. Draw a window around the area of interest and center in the screen quicker.

Set parameters on the fly

Dynamically change OTDR settings for the ongoing acquisition without stopping or returning to submenus.

Macrobend finder

This built-in feature enables the unit to automatically locate and identify macrobends, no need to spend further time analyzing the traces.

Automode

Used as a discovery mode, this feature automatically adjusts the distance range and the pulse width in function of the link under test. It is recommended to adjust the parameters to perform additional measurements to locate other events.

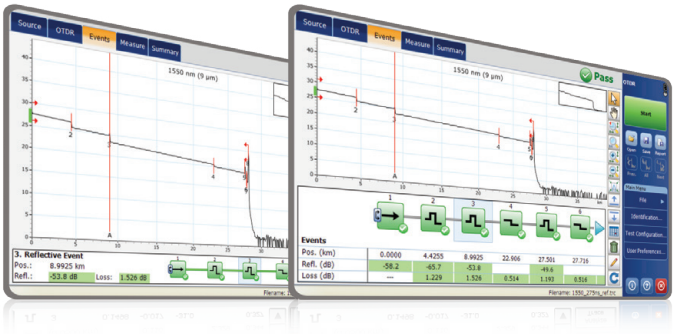
Bidirectional analysis (Via FastReporter data post-processing software)

Recommended to ensure true splice characterization, bidirectional analysis combines results from both directions to provide an average loss for each event. For a more complete event characterization, use intelligent Optical Link Mapper (iOLM) and benefit from maximum resolution on both directions (multiple pulse widths at multiple wavelengths) as well as a consolidated view.

LOOKING FOR ICON-BASED MAPPING?

Linear view (included on all EXFO OTDRs)

Available on our OTDRs since 2006, the linear view simplifies the reading of an OTDR trace by displaying icons in a linear way for each wavelength. This view converts the graph data points obtained from a traditional single pulse trace into reflective or non-reflective icons. With applied pass/fail thresholds, it becomes easier to pinpoint faults on your link.



This improved version of linear view provides the flexibility to display both the OTDR graph and its linear view without having to toggle to analyze your fiber link.

Although this linear view simplifies the OTDR reading of a single pulse width's trace, the user will still need to set OTDR parameters. In addition, multiple traces must often be performed in order to fully characterize fiber links. See the section below to learn how iOLM can do this automatically and provide more accurate results.

iOLM | intelligent Optical Link Mapper

iOLM—REMOVING THE COMPLEXITY FROM OTDR TESTING

OTDR testing comes with its load of challenges...

- WRONG OTDR TRACES
- COUNTLESS TRACES TO ANALYZE
- REPEAT JOBS
- COMPLEX TRAINING

In response to these challenges, EXFO developed a better way to test fiber optics: The iOLM is an OTDR-based application designed to simplify OTDR testing by eliminating the need to configure parameters, and/or analyze and interpret multiple complex OTDR traces. Its advanced algorithms dynamically define the testing parameters, as well as the number of acquisitions that best fit the network under test. By correlating multipulse widths on multiple wavelengths, the iOLM locates and identifies faults with maximum resolution—all at the push of a single button.

How does it work?

DYNAMIC MULTIPULSE ACQUISITION → INTELLIGENT TRACE ANALYSIS → ALL RESULTS COMBINED INTO A SINGLE LINK VIEW → COMPREHENSIVE DIAGNOSIS →

Turning traditional OTDR testing into clear, automated, first-time-right results for technicians of any skill level.

Three ways to benefit from the iOLM

COMBO

Run both iOLM and OTDR applications (Oi code)

UPGRADE

Add the iOLM software option to your iOLM-ready unit, even while in the field

iOLM ONLY

Order a unit with the iOLM application only

iOLM features value pack and options

In addition to the standard iOLM feature set, you can select added-value features as part of the **Advanced** or **Pro** packages, or standalone options. Please refer to the iOLM specification sheet for the complete and most recent description of these features.

iOLM Standard

- Dynamic multipulse multiwavelength acquisition
- Intelligent traces analysis and diagnostics
- Single link view and event table
- SOR trace generation
- Single iOLM file per link for easy reporting
- **Optimode**: Short-link close events, fast short link, fast medium range

iOLM Advanced (iADV) [a]

- Real-time OTDR
- SOR pulse and wavelength editor
- SOR trace view
- Custom elements
- Advanced link edition and re-analysis
- 2:N splitter characterization
- **Optimode:** SFP-Safe Troubleshooting [b]

iLOOP [a]

- iOLM loopback
- iOLM automated bidirectional analysis over TestFlow [b, c]

iOLM Pro (iPRO includes iADV and iLOOP) [a]

Automated MPO cable characterization and troubleshooting (with EXFO switch) (iMF)

iCERT [a]

Cabling certification option

a. Require enabling iOLM standard.
b. Singlemode only, configuration without splitter.
c. Requires TestFlow subscription.

FIBER CONNECTOR INSPECTION AND CERTIFICATION–THE ESSENTIAL FIRST STEP BEFORE ANY OTDR TESTING

Taking the time to properly inspect a fiber-optic connector using an EXFO fiber inspection scope can prevent a host of issues from arising further down the line, thus saving you time, money and trouble. Moreover, using a fully automated solution with autofocus capabilities will turn this critical inspection phase into a fast and hassle-free one-step process.

Did you know that the connector of your OTDR/iOLM is also critical?

The presence of a dirty connector at an OTDR port or launch cable can negatively impact your test results, and even cause permanent damage during mating. Therefore, it is critical to regularly inspect these connectors to ensure that they are free of any contamination. Making inspection the first step of your OTDR best practices will maximize the performances of your OTDR and your efficiency.

FEATURES	USB WIRED	WIRELESS	AUTONOMOUS
	FIP-430B	FIP-435B	FIP-500
Image capture	•	•	•
Five-megapixel CMOS capturing device	•	•	•
Automatic fiber image-centering function and focus adjustment	•	•	•
On-board pass/fail analysis	•	•	•
Pass/fail LED indicator	•	•	•
USB connectivity to an EXFO platform or PC	•	•	
Wireless connectivity to an EXFO platform or PC		•	
Wireless connectivity to a smartphone		•	•
Manual scanning for multifiber / MPO connectors	•	•	
Semi-automated multifiber / MPO inspection	•	•	
Fully automated multifiber / MPO inspection			•
On-board touch screen			•
SmarTips with automated thresholds			•
Quick-connect mechanism			•

For more information, visit www.EXFO.com/fiberinspection.

AVAILABLE IN THE FTB-1V2/FTB-1 PRO, FTB-2/FTB-2 PRO AND FTB-4 PRO PLATFORMS

The EXFO FTB platforms are the most compact solutions on the market for **multirate, multitechnology, multiservice testing**, delivering all the power of a high-end platform in a conveniently sized, go-anywhere field-testing tool.

INTUITIVE INTERFACE

Widescreen display and multitouch capability

UNMATCHED CONNECTIVITY

Wi-Fi, Bluetooth, Gigabit Ethernet and multiple USB ports

INCREASED PRODUCTIVITY

Store, push and share test data automatically

Do more with the EXFO FTB platform

The Windows 10 operating system allows for a wide choice of third-party applications and supports an extensive range of USB devices.

- Start faster and multitask
- Use any office suite
- Connect to printers, cameras, keyboards, mice, and more

Bring your own apps

- Share your desktop (e.g., using TeamViewer)
- Antivirus software
- Communicate via email services and over-the-top (OTT) apps
- Record and automate actions
- Share files via cloud-based storage

SOFTWARE TEST TOOLS

This series of platform-based software testing tools enhance the value of the FTB-1v2/FTB-1 Pro, FTB-2/FTB-2 Pro and FTB-4 Pro platforms, providing additional testing capabilities without the need for additional modules or units.

Remote control and measurement automation

SCPI commands available for OTDR measurements. With FTB-1v2/FTB-1 Pro, FTB-2/FTB-2 Pro and FTB-4 Pro: GPIB (IEEE 488.1, IEEE 488.2) or Ethernet.

EXpert Test Tools

EXpert VoIP TEST TOOLS

EXpert VoIP generates a voice-over-IP call directly from the test platform to validate performance during service turn-up and troubleshooting.

- Supports a wide range of signaling protocols, including SIP, SCCP, H.248/Megaco and H.323
- Supports mean-opinion-score (MOS) and R-factor quality metrics
- Simplifies testing with configurable pass/fail thresholds and RTP metrics

EXpert IP TEST TOOLS

EXpert IP integrates six commonly used datacom test tools into one platform-based application to ensure that field technicians are prepared for a wide range of testing needs.

- Rapidly performs debugging sequences with VLAN scan and LAN discovery
- Validates end-to-end ping and traceroute
- Verifies file-transfer-protocol (FTP) performance and hypertext-transfer-protocol (HTTP) availability

EXpert IPTV TEST TOOLS

This powerful Internet-protocol-television (IPTV) quality assessment solution enables set-top box emulation and passive monitoring of IPTV streams, allowing for quick and easy pass/fail verification of IPTV installations.

- Real-time video preview
- Analyzes up to 10 video streams
- Comprehensive quality-of-service (QoS) and quality-of-experience (QoE) metrics, including the MOS score

Automate asset management. Push test data in the cloud. Get connected.

EXFO Connect

EXFO Connect pushes and stores test equipment and test-data content automatically in the cloud, allowing you to streamline test operation from build-out to maintenance.

GET THE BEST OUT OF YOUR DATA POST-PROCESSING—THE SOFTWARE THAT DOES IT ALL

FastReporter

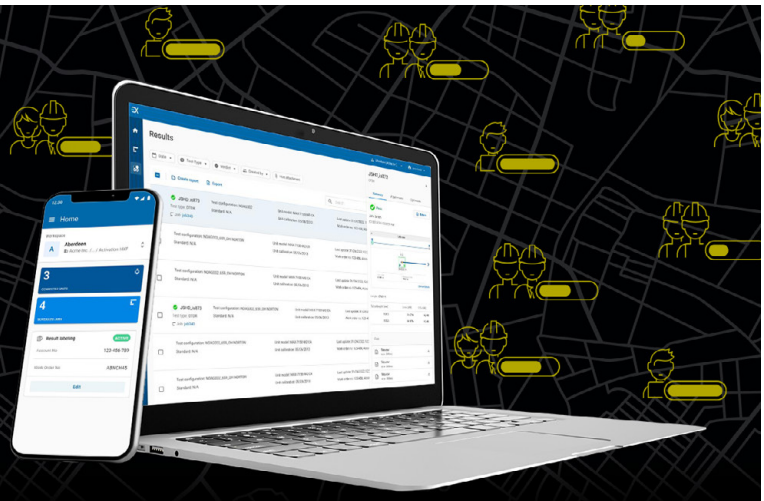
This powerful reporting software is the perfect complement to your OTDR, and can be used to create and customize reports to fully address your needs.

EXchange

SHARE TEST RESULTS. BOOST COMPLIANCE. UNLOCK INSIGHTS.

Cloud-hosted solution for sharing test results and ensuring compliance.

Paired with EXFO's leading test instruments, EXFO Exchange drives an entire ecosystem, while integrating seamlessly with existing operation processes.



KEY BENEFITS

- **Automate test results management**
- **Boost compliance and efficiency**
- **Improve collaboration and visibility**
- **Access comprehensive reporting**
- **Unlock insights to see what matters**

SIMPLE SETUP IN THREE STEPS

1

Create your free EXFO Exchange account

Begin your journey by creating an EXFO Exchange account. Setting up your account is quick and easy.

Create an account

2

Install the mobile app

Download the EXFO Exchange app to allow test data from compatible EXFO devices to be uploaded securely to the cloud (free of charge).

GET IT ON Google Play | Download on the App Store

For MaxTester and FTB users, install the native app.

Access the Native app

3

Save time and boost efficiency

Once your account created—and the mobile app installed and paired with compatible EXFO devices—all test results will be sent to the cloud. On the web app, you will see field test results from all invited testers.

Get **started >**

EXFO

All specifications valid at 23 °C ± 2 °C with an FC/APC connector, unless otherwise specified.

TECHNICAL SPECIFICATIONS

Wavelengths (nm) [a]	1310 ± 20/1550 ± 20/1625 ± 15
Dynamic range at 20 µs (dB) [b]	1310/1550 nm model: dynamic range = 49/48 dB 1310/1550/1625 nm model: dynamic range = 49/48/46.5 dB
High dynamic range at 20 µs (dB) [c]	1310/1550 nm model: dynamic range = 51/49.5 dB 1310/1550/1625 nm model: dynamic range = 51/49.5/48.5 dB
Event dead zone (m) [d]	0.5
Attenuation dead zone (m) [e]	2.0
Distance range (km)	0.1 to 400
Pulse width (ns)	3 to 20 000
Linearity (dB/dB) [a]	±0.03
Loss threshold (dB)	0.01
Loss resolution (dB)	0.001
Sampling resolution (m)	0.04 to 10
Sampling points	Up to 256 000
Distance uncertainty (m) [f]	±(0.75 + 0.001 % × distance + sampling resolution)
Measurement time	User-defined (maximum: 60 minutes)
Typical real-time refresh (Hz)	4
Stable source output power (dBm) [g]	4
Reflectance (dB) [a]	±2

GENERAL SPECIFICATIONS

Size (H × W × D)		158 mm × 24 mm × 174 mm (6 ¼ in × 15/16 in × 6 7/8 in)
Weight		0.4 kg (0.9 lb)
Temperature	Operating Storage	Refer to platform's specification sheet −40 °C to 70 °C (−40 °F to 158 °F)
Relative humidity		0% to 95% non-condensing
Warranty (year)		1

LASER SAFETY

a. Typical.
b. Typical dynamic range with a 3-minute averaging time at SNR=1.
c. With a 10-minute averaging time.
d. Typical for reflectance from −40 dB to −55 dB, at 3-ns pulse.
e. Typical at 1310 nm, for reflectance at −55 dB. Attenuation dead zone is 3.0 m below −45 dB.
f. Does not include uncertainty due to fiber index.
g. Typical output power value at 1550 nm.

ORDERING INFORMATION

FTBx-750D-XX-XX-XX-XX

Optical configuration
SM1 = SM OTDR module, 1310/1550 nm
SM3 = SM OTDR module, 1310/1550/1625 nm

Base software
OTDR = Enables OTDR application only
iOLM = Enables iOLM application only
Oi = Enables OTDR and iOLM applications

iOLM software option [a]
00 = iOLM Standard
iADV = iOLM Advanced
iLOOP = iOLM loopback mode
iCERT = iOLM tier-2 certification

Singlemode connector
EA-EUI-28 = APC/DIN 47256
EA-EUI-89 = APC/FC narrow key
EA-EUI-91 = APC/SC
EA-EUI-95 = APC/E-2000
EA-EUI-98 = APC/LC
EI connectors = See section below about APC connectors

Example: FTBx-750D-SM1-OTDR-EA-EUI-89

a. Please refer to the iOLM specification sheet for the complete and most recent description of these value packs.

EI CONNECTORS

To maximize the performance of your OTDR, EXFO recommends using APC connectors on singlemode port. These connectors generate lower reflectance, which is a critical parameter that affects performance, particularly in dead zones. APC connectors provide better performance than UPC connectors, thereby improving testing efficiency.

For best results, APC connectors are mandatory with the iOLM application.

Note: UPC connectors are also available. Simply replace EA-XX by EI-XX in the ordering part number. Additional connector available: EI-EUI-90 (UPC/ST).

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