

# FTB/FTBx-740C-CWDM Tunable OTDR

18-WAVELENGTH CWDM OTDR FOR METRO ETHERNET AND C-RAN LINK CHARACTERIZATION



NEW OTDR GENERATION

A single and compact OTDR unit that covers all 18 CWDM ITU channels for testing through MUX/DEMUX channels, providing a complete end-to-end link characterization or troubleshooting for commercial services, C-RAN networks and metro Ethernet deployments.

SPEC SHEET

## KEY FEATURES

18 CWDM channels covered in a single OTDR port

In-service testing of active networks

High-resolution and short dead zones

Select favorite or imported channels list

## APPLICATIONS

Single-ended construction and troubleshooting solution

CWDM metro Ethernet links

Commercial services deployments

Fiber deep and node splitting

CBH antenna feeds and C-RAN networks

## RELATED PRODUCTS AND OPTIONS



**Platform**  
FTB-2/FTB-2 Pro



**Platform**  
FTB-1v2/FTB-1 Pro



**Fiber Inspection Probe**  
FIP-400B (WiFi or USB)



## LOADED WITH FEATURES TO BOOST YOUR EFFICIENCY



### Real-Time Averaging

Activates the OTDR laser in continuous shooting mode; the trace refreshes in real time, enabling the monitoring of the fiber for a sudden change. Perfect for a quick overview of the fiber under test.



### Automode

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



### Zoom Tools

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



### Set Parameters On The Fly

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

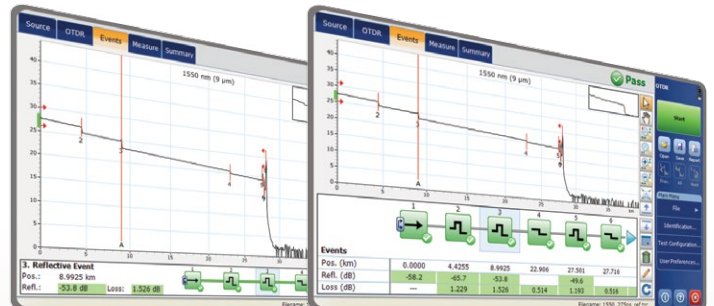
## LOOKING FOR ICON-BASED MAPPING?

### 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 manner 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 the OTDR parameters. In addition, multiple traces must often be performed in order to fully characterize the fiber links. See the section below to learn how the iOLM can automatically perform this function and with more accurate results.



## GET THE BEST OUT OF YOUR DATA POST-PROCESSING



### One software does it all

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.



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



**Connect**Max2

Taking the time to properly inspect a fiber-optic connector using an EXFO fiber inspection probe 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 Your OTDR/iOLM Connector 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 your OTDR performance and your efficiency.

**Five Models To Fit your Budget**

FEATURES	USB WIRED			WIRELESS	
	Basic FIP-410B	Semi-Automated FIP-420B	Fully Automated FIP-430B	Semi-Automated FIP-425B	Fully Automated FIP-435B
Three magnification levels	✓	✓	✓	✓	✓
Image capture	✓	✓	✓	✓	✓
Five-megapixel CMOS capturing device	✓	✓	✓	✓	✓
Automatic fiber image-centering function	X	✓	✓	✓	✓
Automatic focus adjustment	X	X	✓	X	✓
Onboard pass/fail analysis	X	✓	✓	✓	✓
Pass/fail LED indicator	X	✓	✓	✓	✓
WiFi connectivity	X	X	X	✓	✓

For additional information, please refer to the FIP-400B USB or FIP-400B wireless specification sheets.

**AVAILABLE IN THE FTB-1v2; FTB-1 PRO; FTB-2 AND FTB-2 PRO PLATFORMS**

The FTB-1v2 is an ultra-powerful, lightweight and compact test platform that enables field technicians to carry out dedicated optical, Ethernet and multiservice test applications simply and efficiently.

The FTB-2 is the most compact solution 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.

Both platforms are available in standard or Pro models.



**INTUITIVE INTERFACE**  
Widescreen display and multitouch capability



**UNMATCHED CONNECTIVITY**  
WiFi, Bluetooth, Gigabit Ethernet and multiple USB ports



**INCREASED PRODUCTIVITY**  
Store, push and share test data automatically

**Do More By Going FTB Pro**

The Windows 8.1 Pro operating system enables 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 e-mail services and over-the-top (OTT) apps
- Record and automate actions
- Share files via cloud-based storage

**GO FTB PRO!**



## SOFTWARE TEST TOOLS

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

### 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 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 FTP performance and HTTP availability

#### EXpert IPTV TEST TOOLS

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

- › Real-time video preview
- › Analyzes up to 10 video streams
- › Comprehensive QoS and QoE metrics including MOS score

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

TECHNICAL SPECIFICATIONS	
Wavelength (nm) <sup>a</sup>	1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610
Central wavelength tolerance (nm) <sup>b</sup>	±3
Dynamic range at 20 µs (dB) <sup>c</sup>	>37
Event dead zone (m) <sup>d</sup>	1.2
Attenuation dead zone (m) <sup>d</sup>	5
Distance range (km)	0.1 to 400
Pulse widths (ns)	5 to 20 000
Sampling points	Up to 256 000
Sampling resolution (m)	0.04 to 10
Distance accuracy (m) <sup>e</sup>	±(0.75 + 0.0025 % x distance + resolution)

GENERAL SPECIFICATIONS		FTB-740C-CWDM	FTBx-740C-CWDM
Size (H x W x D)		50 mm x 254 mm x 210 mm (2 in x 10 in x 8 ¼ in)	158 mm x 24 mm x 174 mm (6 ¼ in x 1 5/16 in x 6 7/8 in)
Weight		0.9 kg (2 lb)	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)	Refer to platform's specification sheet -40 °C to 70 °C (-40 °F to 158 °F)
Relative humidity		0 % to 95 % non-condensing	0 % to 95 % non-condensing



FTB-740C-CWDM



FTBx-740C-CWDM

These pictures are shown as a guideline only. Actual modules may differ depending on the configuration selected.

**LASER SAFETY**

For complete details on all available configurations, refer to the ordering information section.

**Notes**

- a. Typical.
- b. Typical, using 10 µs pulse.
- c. Typical dynamic range with a three-minute averaging at SNR = 1.
- d. Typical dead zone of singlemode modules for reflectance at -45 dB, using a 5-ns pulse.
- e. Does not include uncertainty due to fiber index.

## ORDERING INFORMATION

## FTBx-740C-CWXX-XX-OTDR-XX

**Model**

- 10** = Singlemode CWDM OTDR module with 10 wavelengths:  
1430/1450/1470/1490/1510/1530/1550/1570/1590/1610 nm
- 18-M8W** = Singlemode CWDM OTDR module with 8 activated wavelengths:  
1470/1490/1510/1530/1550/1570/1590/1610 nm  
Hardware ready and field upgradable to:  
1270/1290/1310/1330/1350/1370/1390/1410/1430/1450 nm
- 18-M10W** = Singlemode CWDM OTDR module with 10 activated wavelengths:  
1430/1450/1470/1490/1510/1530/1550/1570/1590/1610 nm  
Hardware ready and field upgradable to:  
1270/1290/1310/1330/1350/1370/1390/1410 nm
- 18-M18W** = Singlemode CWDM OTDR module with all 18 activated wavelengths:  
1270/1290/1310/1330/1350/1370/1390/1410/1430/1450 nm  
1470/1490/1510/1530/1550/1570/1590/1610 nm

**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

**Wavelength options**

- 00 = No additional activated wavelengths
- M1310W = Add 1310 nm wavelength<sup>a</sup>

Example: FTBx-740C-CW18-M10W-M1310W-OTDR-EA-EUI-91

## ORDERING INFORMATION

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- 18-M10W** = Singlemode CWDM OTDR module with 10 activated wavelengths:  
1430/1450/1470/1490/1510/1530/1550/1570/1590/1610 nm  
Hardware ready and field upgradable to:  
1270/1290/1310/1330/1350/1370/1390/1410 nm
- 18-M18W** = Singlemode CWDM OTDR module with all 18 activated wavelengths:  
1270/1290/1310/1330/1350/1370/1390/1410/1430/1450 nm  
1470/1490/1510/1530/1550/1570/1590/1610 nm

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**Wavelength options**

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Example: FTB-740C-CW18-M10W-M1310W-OTDR-EA-EUI-91

**Notes:**

- a. Available for models: FTBx-740C-CW18-M8W and FTBx-740C-CW18-M10W.
- b. Available for models: FTB-740C-CW18-M8W and FTB-740C-CW18-M10W.

## EI CONNECTORS



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

Note: UPC connectors are not available.

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EXFO serves over 2000 customers in more than 100 countries. To find your local office contact details, please go to [www.EXFO.com/contact](http://www.EXFO.com/contact).

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