

# FTB-7300E PON FTTx/MDU OTDR

OPTIMIZED FOR ACCESS FIBER DEPLOYMENTS AND TROUBLESHOOTING



EXFO Connect  
Compatible

iOLM  
READY



Perfect for fiber installers needing to seamlessly characterize splitters in PON FTTx and MDU applications

## KEY FEATURES

Test through high-port-count splitters (up to 1x128)

Singlemode port for in-service troubleshooting

Dynamic range of up to 39 dB

Short acquisition time to speed up deployment process

EXFO Connect-compatible: automated asset management; data goes through the cloud and into a dynamic database

iOLM-ready: one-touch multiple acquisitions, with clear go/no-go results presented in a straightforward visual format

## APPLICATIONS

FTTx/MDU test challenges within PON networks

Access network testing

## PLATFORM COMPATIBILITY



Platform  
FTB-2/FTB-2 Pro



Platform  
FTB-200



Platform  
FTB-500

EXFO

## REMOVING COMPLEXITY FROM THE OTDR

## OTDR TESTING COMES WITH ITS LOAD OF CHALLENGES...



WRONG  
OTDR TRACES



COUNTLESS TRACES  
TO ANALYZE



REPEATING THE  
SAME JOB TWICE



COMPLEX INSTRUMENT  
TRAINING/SUPPORT

## iOLM | intelligent Optical Link Mapper

### 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



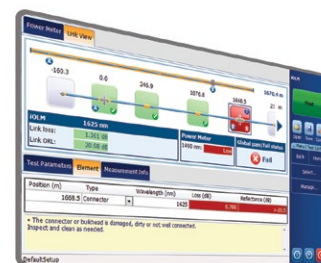
Intelligent  
trace analysis



Combines all  
results into a  
single link view



Comprehensive  
diagnosis



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

Patent protection applies to the intelligent Optical Link Mapper, including its proprietary measurement software. EXFO's Universal Interface is protected by US patent 6,612,750.

### Three ways to benefit from the iOLM:

#### OTDR Combo (Oi Code)

Run iOLM and OTDR applications on one unit

#### Upgrade

Add the iOLM software option, even while in the field

#### iOLM Only

Order a unit with the iOLM application only

### Three iOLM feature value packs:

#### iOLM Standard

- › Dynamic multipulse acquisition
- › Intelligent trace analysis
- › Map view
- › Diagnosis
- › SOR trace generation

#### iOLM Advanced

All the features of iOLM, plus additional Advanced features

#### iOLM Pro

All the features of iOLM Advanced, plus additional high-value professional features

Note: Refer to the intelligent Optical Link Mapper (iOLM) specification sheet for the most recent description of the added-value features available in the iOLM Advanced and iOLM Pro packs.

## 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.

## ADDITIONAL SOFTWARE TEST CAPABILITIES ON THE FTB-1 PLATFORM



EXpert Test Tools is a series of software applications leveraged through the FTB ecosystem platforms and designed to enhance and simplify FTTH/FTTx service deployments:

**EXpert VoIP:** Generate voice-over-IP call to validate performance during service turn-up and troubleshooting. This tool boasts a highly configurable test interface to maximize control over test parameters yet maintains an intuitive user interface, allowing for fast and easy test setup and completion.

**EXpert IP:** Benefit from six commonly used IP test tools in one application, helping field technicians deal with the complex testing environments of today's networks and further preparing them to handle unexpected customer issues easily and without interruption.

**EXpert IPTV:** Enables quick pass/fail verification on IPTV installations during service turn-up. By emulating a set-top box and displaying a real-time video preview, video and audio quality can be determined before any other equipment is installed, further ensuring subscribers' quality of experience (available on FTB-1 platform only).

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

## TECHNICAL SPECIFICATIONS

|                                               |                                                          |
|-----------------------------------------------|----------------------------------------------------------|
| Model                                         | FTB-7300E <sup>a</sup>                                   |
| Wavelength (nm) <sup>b</sup>                  | 1310 ± 20/1490 ± 15/1550 ± 20/1625 ± 10/1650 ± 7         |
| Dynamic range at 20 μs (dB) <sup>c</sup>      | 39/38/37/39 <sup>d</sup> /37                             |
| Event dead zone (m) <sup>e</sup>              | 0.8                                                      |
| Attenuation dead zone (m) <sup>e</sup>        | 4/4.5/4.5/4.5/4.5                                        |
| Distance range (km)                           | 1.25, 2.5, 5, 10, 20, 40, 80, 160, 260, 400              |
| Pulse width (ns)                              | 5, 10, 30, 50, 100, 275, 500, 1000, 2500, 10 000, 20 000 |
| Linearity (dB/dB) <sup>b</sup>                | ± 0.03                                                   |
| Loss threshold (dB)                           | 0.01                                                     |
| Loss resolution (dB)                          | 0.001                                                    |
| Sampling resolution (m)                       | 0.04 to 5                                                |
| Sampling points                               | Up to 256 000                                            |
| Distance uncertainty (m) <sup>f</sup>         | ± (0.75 + 0.001 % x distance + sampling resolution)      |
| Measurement time                              | User-defined (60 min. maximum)                           |
| Typical real-time refresh (Hz)                | 4                                                        |
| Stable source output power (dBm) <sup>g</sup> | -2.5                                                     |
| Reflectance (dB) <sup>b</sup>                 | ± 2                                                      |

For complete details on all available configurations, refer to the Ordering Information section.

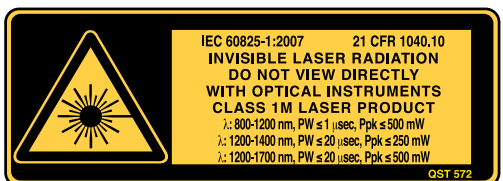
### Notes

- a. SM Live port built in filter's bandpass 1625 nm ± 15 nm/1650 nm ± 7 nm.
- b. Typical.
- c. Typical dynamic range with a three-minute averaging at SNR = 1.
- d. Non-SM Live 1625 nm dynamic range is 37 dB.
- e. Typical dead zone of singlemode modules for reflectance below -45 dB, using a 5 ns pulse.
- f. Does not include uncertainty due to fiber index.
- g. Typical output power value at 1550 nm.

## GENERAL SPECIFICATIONS

|                   |                                                                                                        |
|-------------------|--------------------------------------------------------------------------------------------------------|
| Size (H x W x D)  | 97 mm x 25 mm x 260 mm (3 <sup>13</sup> / <sub>16</sub> in x 1 in x 10 <sup>1</sup> / <sub>4</sub> in) |
| Weight            | 0.55 kg (1.2 lb)                                                                                       |
| Temperature       | operating<br>storage                                                                                   |
|                   | 0 °C to 50 °C (32 °F to 122 °F)<br>-40 °C to 70 °C (-40 °F to 158 °F)                                  |
| Relative humidity | 0 % to 95 % non-condensing                                                                             |

## LASER SAFETY



## ORDERING INFORMATION

## Singlemode (PON FTTx/MDU) for FTB-2, FTB-2 Pro, FTB-200 or FTB-500 Platform

## FTB-7300E-XX-XX-XX-XX

## Model ■

## Dual Wavelength

FTB-7300E-023B = SM OTDR module, 1310/1550 nm (9/125  $\mu$ m)  
 FTB-7300E-034B = SM OTDR module, 1550/1625 nm (9/125  $\mu$ m)

## Triple Wavelength

FTB-7300E-234B = SM OTDR module, 1310/1550/1625 nm (9/125  $\mu$ m)  
 FTB-7300E-236B = SM OTDR module, 1310/1490/1550 nm (9/125  $\mu$ m)

## SM Live Port

FTB-7300E-023B-04B = SM and SM live OTDR module, 1310/1550 and 1625 nm live port  
 FTB-7300E-023B-08B = SM and SM live OTDR module, 1310/1550 and 1650 nm live port  
 FTB-7300E-000-04B = SM live OTDR with 1625 nm live port (9/125  $\mu$ m)

## Base Software ■

OTDR = Enables the OTDR application only  
 iOLM = Enables the iOLM application only  
 Oi = Enables iOLM and OTDR applications

## iOLM Software Option

00 = iOLM Standard  
 iADV = iOLM Advanced<sup>a</sup>  
 iPRO = iOLM Pro<sup>a</sup>

## OTDR Software Option

00 = Without software option<sup>b</sup>  
 AD = Macrobend finder and linear view<sup>c</sup>

## 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 note below

Example: FTB-7300E-023B-04B-Oi-EA-EUI-89-AD

## Notes

- a. The features available in iOLM Advanced and Pro depend on the platform and the module. Please refer to the intelligent Optical Link Mapper (iOLM) specification sheet for package details.  
 b. Includes macrobend finder and linear view in FTB-2/FTB-2 Pro.  
 c. Included in FTB-200. Not available in FTB-2/FTB-2 Pro.

## EI CONNECTORS



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

Note: UPC connectors are also available, simply replace EA-XX by EI-XX in the ordering part number. Additional connectors available are the EI-EUI-76 (UPC/HMS-10/AG) and EI-EUI-90 (UPC/ST).

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