# Intelligent Optical Link Mapper (iOLM)

## AUTOMATED, EXPERT-LEVEL SINGLEMODE FIBER TESTING



**Available on:**
> FTB-720 LAN/WAN test module
> FTB-730 FTTx/PON test module

POWERED BY

**LINK AWARE** ™
TECHNOLOGY

*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.*

Using automated multipulse acquisitions and advanced algorithms, the iOLM is an OTDR-based application that delivers detailed information on every element on the link, in a single button operation—providing maximum intelligence and simplicity for expert-level link characterization.

## KEY FEATURES

| | |
|---|---|
| Self-setting unit | Prompt diagnosis |
| Link-Aware technology | In-line optical power meter |
| Optical Link View | OTDR trace file generation (.sor) |

## CHOOSE THE PERFECT FIT

The iOLM is offered as a stand-alone application or as a field-upgradable software option with the OTDR application.

**FTB-720 LAN/WAN test module**

Dynamic range up to 36 dB

Point-to-point testing of short access links

Multimode and singlemode testing

**FTB-730 FTTx/PON test module**

Dynamic range up to 39 dB

Ideal for deploying FTTH and point-to-point (access and metro) networks

End-to-end PON characterization (splitter configuration up to 1 x 128)

## PLATFORM COMPATIBILITY



**FTB-1**
One-module platform
for dedicated applications

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## EXFO Connect

# EXFO | C•nnect

**AUTOMATED ASSET MANAGEMENT. PUSH TEST DATA IN THE CLOUD. GET CONNECTED.**

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

## REVOLUTIONIZING SINGLE-ENDED FIBER DEPLOYMENTS

### Link-Aware™ Technology

**Let it optimize the test run**

With one click, the unit automatically performs link recognition, sets the optimal parameters and launches multiple acquisitions and multiple analyses—at multiple wavelengths—consolidating the results obtained for every link section and every network element. Get accurate information right away on each link element and export it to a single report.

### Self-Setting Unit

**Let it be the expert**

Powered by Link-Aware technology, the iOLM self-manages the setting of all test parameters—ready-to-use intelligence that dramatically shortens the learning curve. Minimize training, avoid test misconfiguration, and facilitate your technicians' transition from copper to fiber.

### Optical Link View

**Let it crunch the data**

Leaving behind complex OTDR traces, the simplified link mapper provides a straightforward view of the fiber under test, with clear icons and pass/fail verdicts. Get actual results: end-to-end visual assessment of your link, complete with event characterization and fiber status.

### Prompt Diagnosis

**Let it show you the way**

Loaded with countless algorithms and a database of potential network failures, the iOLM guides you through your network's problem-solving process. Say goodbye to trace misinterpretation, and ensure that all your technicians—not just your most experienced ones—can efficiently fix network issues right on the spot.

### In-Line Optical Power Meter (available with FTB-730 only)

**Let it fast-track troubleshooting**

Connect, check power readings, get a link map and find the fault—all in one click and without disconnecting the fiber. Gear up for lightning-fast troubleshooting.

### OTDR Trace File Generation

**Let it fit your existing test filing requirements**

The iOLM can generate a universal and enhanced Bellcore format (.sor) OTDR trace to comply with your existing reporting and post-processing requirements. This OTDR trace integrates all the additional information gathered by the iOLM, providing more complete results.

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## Mandatory: Angled-Polished (APC) Connectors

Like any OTDR, the iOLM will be impacted by strong reflections at the unit's port. To ensure low reflections and maintain measurement accuracy, the iOLM singlemode port must be used with APC connectors. Another advantage of using APC connectors is their ability to handle harsher conditions without becoming highly reflective while maintaining the unit's performance.

In the case of UPC connectors, they are prone to be highly reflective if contaminated, worn or damaged. This will affect the measurement and will lead to premature connector replacement. Although testing a UPC network does not require a UPC unit, using an APC/UPC test jumper (included with the iOLM) or a launch fiber (SPSB) ensures compatibility.

### Recommended Test Method

EXFO recommends using a 150-meter launch cable (SPSB) to exclude the loss of the iOLM's connector or to allow UPC network testing. It will also extend the instrument's connector life by reducing the number of matings—ultimately improving the cost of ownership.

### GENERAL SPECIFICATIONS

| Module | FTB-720 | FTB-730 |
|---|---|---|
| Size (H x W x D) | 130 mm x 36 mm x 252 mm (5 $^1/_8$ in x 1 $^7/_{16}$ in x 9 $^{15}/_{16}$ in) | 130 mm x 36 mm x 252 mm (5 $^1/_8$ in x 1 $^7/_{16}$ in x 9 $^{15}/_{16}$ in) |
| Weight | 0.65 kg (1.4 lb) | 0.65 kg (1.4 lb) |

### LASER SAFETY

21 CFR 1040.10 AND IEC 60825-1:2007
CLASS 1M WITHOUT VFL OPTION
CLASS 3R WITH VFL OPTION

IEC 60825-1:2007     21 CFR 1040.10
INVISIBLE LASER RADIATION
DO NOT VIEW DIRECTLY
WITH OPTICAL INSTRUMENTS
CLASS 1M LASER PRODUCT
λ: 800÷1200 nm, PW ≤ 1 μsec, Ppk ≤ 500 mW
λ: 1200÷1400 nm, PW ≤ 20 μsec, Ppk ≤ 250 mW
λ: 1200÷1700 nm, PW ≤ 20 μsec, Ppk ≤ 500 mW
QST 572

IEC 60825-1:2007
21 CFR 1040.10
VISIBLE LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
λ: 650 ±10 nm
P$_{out}$ maximum < 5mW (into free space)

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## ORDERING INFORMATION

### Multimode and Singlemode Access and LAN/WAN OTDR

**FTB-720-XX-XX-XX-XX-XX**

**Model**
FTB-720-000-04B = OTDR with filtered 1625 nm port
FTB-720-023B-04B = OTDR 1310/1550 nm with filtered 1625 nm port
FTB-720-23B = OTDR 1310/1550 nm
FTB-720-12CD = OTDR 850/1300 nm
FTB-720-12CD-23B = OTDR 850/1300 nm, 1310/1550 nm

Example: FTB-720-23B-04B-OTDR-EI-EUI-89-EA-EUI-89

**Multimode Connector**
EI-EUI-28 = UPC/DIN 47256
EI-EUI-76 = UPC/HMS-10/AG
EI-EUI-89 = UPC/FC narrow key
EI-EUI-90 = UPC/ST
EI-EUI-91 = UPC/SC
EI-EUI-95 = UPC/E-2000

**Base Software**
OTDR = Enables the OTDR application only
iOLM [a] = Enables the iOLM application only
Oi [a] = Enables iOLM and OTDR applications

**Software Options [b]**
00 = Without software option
AD = Auto diagnostic (macrobend detection, pass/fail and fault finder)
EC = Event characterization (bidirectional analysis and Template mode)

**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
EI connectors = See note below

### Singlemode (PON FTTx/MDU) OTDR for FTB-1 Platform

**FTB-730-XX-XX-XX-XX-XX**

**Model**
**Dual-Wavelength**
FTB-730-23B = SM OTDR module, 1310/1550 nm (9/125 µm)
FTB-730-34B = SM OTDR module, 1550/1625 nm (9/125 µm)

**Triple-Wavelength**
FTB-730-236B = SM OTDR module, 1310/1490/1550 nm (9/125 µm)

**SM Live Port**
FTB-730-23B-04B = SM and SM live OTDR module, 1310/1550 and 1625 nm live port including in-line broadband power meter
FTB-730-000-04B = SM live OTDR with 1625 nm live port (9/125 µm) including in-line broadband power meter
FTB-730-000-08B = SM live OTDR with 1650 nm live filtered port (9/125 µm)

Example: FTB-730-023B-04B-OPM-iOLM-EA-EUI-89

**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
EI connectors = See note below

**Base Software**
OTDR = Enables the OTDR application only
iOLM = Enables the iOLM application only
Oi = Enables iOLM and OTDR applications

**OPM Option [c]**
OPM = One broadband channel included
OPM2 = Dual channel 1490/1550 nm

**Software Options [b]**
00 = Without software option, OTDR application
AD = Automatic diagnosis (macrobend detection, pass/fail and fault finder) and linear view
EC = Event characterization (bidirectional analysis and Template mode)

**SPSB-XX-XX**

**Model**
**Dual-Wavelength**
SPSB-B-150 = Soft pulse suppressor bag, singlemode fiber 9/125 µm, 150 m

Example: SPSB-B-150-58-101

**Connector**
58 = FC/APC narrow key
88 = SC/APC narrow key
89 = FC/UPC
90 = ST/UPC
91 = SC/UPC
95 = E2000/UPC
96 = E2000/APC
101 = LC/UPC [d]
104 = LC/APC [d]

**Notes**
a. The iOLM software is available on singlemode port only. FTB-720-12CD-23B must be ordered with Oi option to enable iOLM on the singlemode port.
b. Available only with OTDR base software.
c. Available only with FTB-730-000-04B and FTB-730-23B-04B.
d. LC connectors are not available for first connector.

## 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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