Intelligent Optical Link Mapper (iOLM)

AUTOMATED, EXPERT-LEVEL SINGLEMODE FIBER TESTING

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
- Link-Aware technology
- Optical Link View
- Prompt diagnosis
- Consolidated bidirectional link view (patent-pending)
- OTDR trace file generation (.sor)

KEY NETWORK APPLICATIONS

- Point-to-point access
- LAN/WAN, enterprise and data centers
- FTTx/PON MDU
- Mobile backhaul (FTTA/DAS)
- Metro core and long-haul
- CWDM
- Cable testing (IL/ORL measurement)

PLATFORM COMPATIBILITY

- Platform FTB-1
- Compact Platform FTB-200
- Platform FTB-500 (Compatibility available soon)
GO BEYOND OTDR TESTING.

Innovation is front and center at EXFO, and the Intelligent Optical Link Mapper (iOLM) is a prime example of a game-changing solution. The iOLM lets you take advantage of the full power of your OTDR, bringing automation to a new level—and enabling even the untrained technician to become a test expert in no time.

The iOLM integrates all our expertise into a simple, easy-to-use software that will take your OTDR testing capabilities further than they’ve ever been. And since EXFO designs and optimizes each OTDR model so that it offers the best possible performance for its specific application, your solution will fit to your reality.

iOLM—WHAT IS IT AND HOW DOES IT WORK?

The iOLM is an innovative OTDR-based application that uses multipulse acquisitions and advanced algorithms to deliver detailed information on every element on the link.

- Offers one-touch, automatic analysis and clear link view display
- Minimizes training and avoids misconfiguration with self-settings and clear Go/No-Go results
- Turns complex OTDR information into simple and accurate analysis with Link-Aware technology, minimizing truck rolls
- Identifies each event on the network and obtain a straightforward fiber link status with the Optical Link View
- Provides prompt diagnosis to fix network issues quickly and efficiently
- Generates OTDR trace files (.sor)

TYPICAL WORKFLOW

Launch multiple OTDR acquisitions ➔ Analyze the traces ➔ Compound the results ➔ Display a schematic link view and prompt diagnosis
THREE EASY STEPS TO A PERFECT FIT

STEP 1: Choose your network application

True OTDR performance goes far beyond simple product specifications. It’s about optimizing your network services, based on application-specific parameters.

STEP 2: Choose your form factor

› FTB-1: Compact, dedicated handheld test set to perform single-minded tasks under tight budget constraints
› FTB-200: Modular handheld platform providing more flexibility for repetitive daily tasks
› FTB-500: Full-sized modular platform for advanced multi-application testing

PUT IT TOGETHER, FIND THE SOLUTION

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<th>STEP 2: FORM FACTOR</th>
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<td>FTB-200</td>
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<td>FTB-500*</td>
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STEP 1: APPLICATIONS

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<tr>
<th>LAN/WAN</th>
<th>CORRESPONDING SOLUTION</th>
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<tr>
<td>FTB-720</td>
<td>FTB-720 LAN/WAN Access test module + iOLM software</td>
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<td>DATA CENTERS</td>
<td>FTB-730 FTTx/PON MDU test module + iOLM software</td>
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<td>PRIVATE/ENTERPRISE</td>
<td>FTB-7300E Metro/CWDM test module + iOLM software</td>
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<td>POINT-TO-POINT ACCESS</td>
<td>FTB-7400E Metro/CWDM test module + iOLM software</td>
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<td>CELLULAR BACKHAUL (FTT/FTTA)</td>
<td>FTB-7400E Metro/CWDM test module + iOLM software</td>
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<th>FTTx</th>
<th>PASSIVE OPTICAL NETWORKS (PONs)</th>
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<td>FTB-730</td>
<td>FTB-730 FTTx/PON MDU test module + iOLM software</td>
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<tr>
<td>MULTIDWELLING UNITS</td>
<td>FTB-7300E Metro/CWDM test module + iOLM software</td>
</tr>
<tr>
<td>SHORT METRO</td>
<td>FTB-7400E Metro/CWDM test module + iOLM software</td>
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<tr>
<th>LONG-HAUL</th>
<th>CORRESPONDING SOLUTION</th>
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<tr>
<td>METRO/CORE</td>
<td>FTB-7400E Metro/CWDM test module + iOLM software</td>
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<tr>
<td>CWDM</td>
<td>FTB-7400E Metro/CWDM test module + iOLM software</td>
</tr>
<tr>
<td>CATV</td>
<td>FTB-7400E Metro/CWDM test module + iOLM software</td>
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* Note: iOLM compatibility for these modules on the FTB-500 platform will be available soon.

STEP 3: Choose your technology

Go traditional, go bleeding-edge, or combine the best of both worlds in a single unit:

› Time-proven OTDR technology with advanced modes, trace analysis and editing
› Groundbreaking iOLM and Link-Aware™ technology, with its multipulse approach, visual link depiction and per-event diagnosis
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<th>UNIQUE FEATURES</th>
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### 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.

**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.

**CONSOLIDATED BIDIRECTIONAL LINK VIEW** (PATENT-PENDING)

**Let it combine the results** | To ensure true splice characterization bidirectional testing is recommended. The iOLM bidirectional link view just makes this task easier as it combines the results from multiple wavelengths in multiple directions and presents it in a single, easy-to-read, iOLM-style format. Plus, you can easily generate batch reports through FastReporter2 Data Post-Processing Software.

### 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 operations from build-out to maintenance.
**ADDITIONAL FEATURES**

**Real-Time OTDR Mode**

The iOLM supports real-time OTDR mode (RT option) functionality via the iOLM software application. Either run the OTDR application (Oi option) or the RT mode (RT option) to measure field-splicing or to check the link before launching an iOLM acquisition.

**2xN Splitter Characterization**

The iOLM is the only solution on the market to characterize 2xN splitter with a clear pass/fail verdict for multi-input or redundancy networks. It identifies 2xN splitters as well as both their input branches allowing users to accurately document the network with one test (compared to three tests when using traditional methods).

**iOLM Expert Mode (iEX)**

iEX is a software option specifically designed for the fiber test expert or the manager who requires more flexibility in documenting the trace files for reporting purposes. Because flexibility also means that you can create your own elements to better match your network plans, this option allows you to add extra events, delete events or re-analyze the trace.

**RECOMMENDATIONS**

**Angled-Polished (APC) Connectors**

Like any OTDR, the iOLM will be offered 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.

**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.

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**GENERAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Module</th>
<th>FTB-720 and FTB-730</th>
<th>FTB-7300E and FTB-7400E</th>
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<tbody>
<tr>
<td>Size (H x W x D)</td>
<td>130 mm x 36 mm x 252 mm (5 1/8 in x 1 7/16 in x 9 13/16 in)</td>
<td>97 mm x 25 mm x 260 mm (3 1/16 in x 1 in x 10 ¼ in)</td>
</tr>
<tr>
<td>Weight</td>
<td>0.65 kg (1.4 lb)</td>
<td>0.55 kg (1.2 lb)</td>
</tr>
<tr>
<td>Temperature</td>
<td>0 °C to 50 °C (32 °F to 122 °F) -40 °C to 70 °C (−40 °F to 158 °F)</td>
<td>0 °C to 50 °C (32 °F to 122 °F) -40 °C to 70 °C (−40 °F to 158 °F)</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>0 % to 95 % non-condensing</td>
<td>0 % to 95 % non-condensing</td>
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**Laser Safety**

21 CFR 1040.10 AND IEC 60825-1:2007 CLASS 1M
ORDERING INFORMATION

Multimode and Singlemode Access and LAN/WAN OTDR

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

- **Model**
  - FTB-720-000-04B = OTDR with filtered 1625 nm port
  - FTB-720-023B = SM OTDR module, 1310/1550 nm (9/125 µm)
  - FTB-720-230B = SM OTDR module, 1310/1550 and 1625 nm live port
  - FTB-720-12CD = OTDR 850/1300 nm
  - FTB-720-12CD-230B = OTDR 850/1300 nm, 1310/1550 nm

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

Example: FTB-720-023B-04B-OTDR-APC-DIN-47256

**iOLM Software Option**
- 00 = Without iOLM option
- iEX = iOLM Expert mode
- RT = Real-time OTDR mode (via iOLM application)

**OTDR Software Option**
- 00 = OTDR application only
- AD = Auto diagnostic (macrobend detection, pass/fail and fault finder)
- EC = Event characterization (bidirectional analysis and Template mode)

**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

Example: FTB-720-023B-04B-APC-DIN-47256

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

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

- **Model**
  - Dual-Wavelength
    - FTB-730-023B = SM OTDR module, 1310/1550 nm (9/125 µm)
    - FTB-730-034B = 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-730-023B-04B = SM and SM live OTDR module, 1310/1550 and 1625 nm live port
  - FTB-730-000-04B = SM live OTDR with 1625 nm live port

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

Example: FTB-730-023B-04B-APC-DIN-47256

**iOLM Software Option**
- 00 = Without iOLM option
- iEX = iOLM Expert mode
- RT = Real-time OTDR mode (via iOLM application)

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- 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

Example: FTB-730-023B-04B-APC-DIN-47256

SINGLEMODE (PON FTTx/MDU) FOR FTB-200 COMPACT PLATFORM OR FTB-500 PLATFORM

**FTB-7300E-XX-XX-XX-XX**

- **Model**
  - Dual-Wavelength
    - FTB-7300E-023B = SM OTDR module, 1310/1550 nm (9/125 µm)
    - FTB-7300E-034B = SM OTDR module, 1550/1625 nm (9/125 µm)
  - Triple-Wavelength
    - FTB-7300E-234B = SM OTDR module, 1310/1550/1625 nm (9/125 µm)
    - FTB-7300E-236B = SM OTDR module, 1310/1490/1550 nm (9/125 µm)

- **SM Live Port**
  - FTB-7300E-023B-04B = SM and SM live OTDR module, 1310/1550 nm (9/125 µm)
  - FTB-7300E-000-04B = SM live OTDR with 1625 nm live port

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

Example: FTB-7300E-023B-04B-APC-DIN-47256

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- EA-EUI-98 = APC/LC

Example: FTB-7300E-023B-04B-APC-DIN-47256

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 with iOLM base software only. This feature is part of the OI base software.
- **c.** Available with OTDR and OI base software only.
- **d.** Available with FTB-730-000-04B and FTB-730-23B-04B only.
- **e.** Available on the FTB-200v2 platform only.
**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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