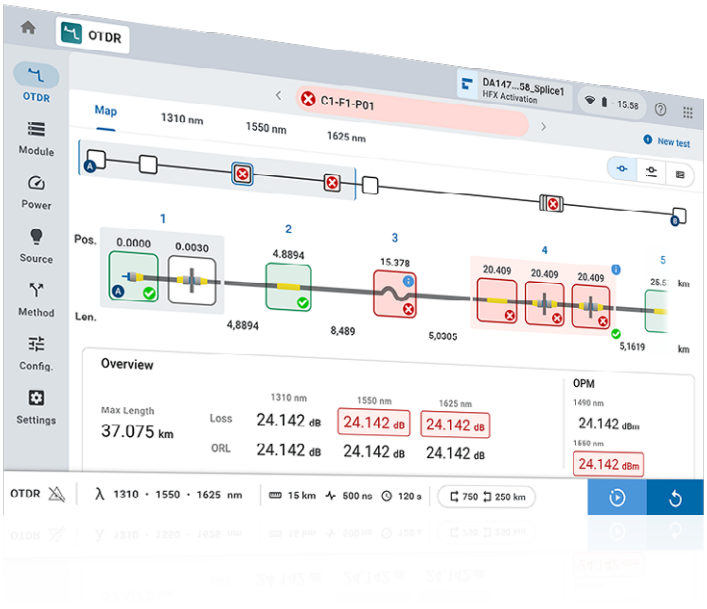
SPEC SHEET

intelligent Optical Link Mapper (iOLM)

OTDR-BASED APPLICATION MAKING EXPERT-LEVEL FIBER TESTING ACCESSIBLE TO ALL



Simplify OTDR tests while optimizing characterization accuracy for all network topologies. iOLM is powered by intelligent algorithms that can adapt to the context. Still unmatched in the industry, iOLM dynamically locates and identifies all network components and faults with maximal resolution—all at the push of one button.

COMPATIBLE WITH eXchange

Powered by LINK-AWARE™ TECHNOLOGY

4BTR 2012 Diamond

Available on:

- MaxTester 700B/C/D OTDR Series
- FTBx-700C/D OTDR Series
- FTB-7000E OTDR Series

KEY FEATURES

- Self-setting unit dynamically adapts to any fiber link
- Intelligent multi-acquisitions at multiple wavelengths in a single icon-based link view
- Comprehensive fault diagnosis and guidance
- Consolidated bidirectional link view (patent-pending)
- OTDR trace file generation (.sor)
- TIA/IEC automated pass/fail thresholds for enterprise/data centers (optional)
- Test two fibers at once with loopback testing mode (optional)

KEY NETWORK APPLICATIONS

- Point-to-point (P2P) access
- FTTx last mile
- LAN/WAN, enterprise and data center certification
- FTTx/PON MDU
- Fronthaul (FTTA, DAS and small cells) and backhaul
- FTTH unbalanced/tapered PON
- Passive optical LAN (POL)
- Metro core and longhaul
- CWDM/DWDM
- Cable certification (IL/ORL measurement)

COMPATIBLE PLATFORMS



Compact OTDR
AXS-130 (FTTH-iOLM)



Handheld OTDR
FTB Lite Series



Handheld OTDR
MaxTester 700B/C Series

FTB family platforms



FTB-1v2/
FTB-1 Pro



FTB-2/
FTB-2 Pro

FTB-4 Pro

MEGA HERTZ

EXFO

GO BEYOND OTDR TESTING

The iOLM lets you take advantage of the full power of your OTDR—bringing automation to a new level and enabling technicians of any skill level to become test experts in no time.

The iOLM integrates EXFO's fiber testing expertise into simple, easy-to-use software that will step up your OTDR testing capabilities. Moreover, EXFO designs and optimizes each OTDR model to offer the best possible performance for its specific application, giving you a tailored solution to meet your needs and context.

iOLM | intelligent Optical Link Mapper

OTDR testing comes with its share of challenges...

iOLM—REMOVING THE COMPLEXITY FROM OTDR TESTING

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

How does it work?

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

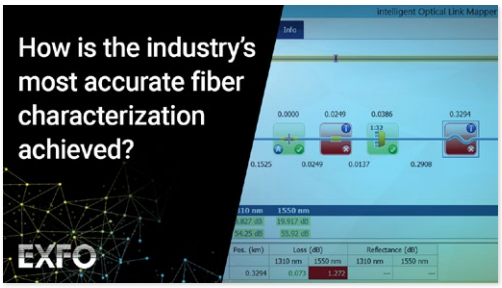


Three ways to benefit from the iOLM

1. **OTDR combo (Oi code)**
   Run iOLM and OTDR applications on one unit
2. **Upgrade**
   Add the iOLM software option, even while in the field
3. **iOLM only**
   Order a unit with the iOLM application only

To take on these challenges, EXFO developed a better way to test fiber optics





Watch it in action: **How iOLM works**

UNIQUE FEATURES (INCLUDED IN iOLM STANDARD)

Single-ended fiber deployments made easy



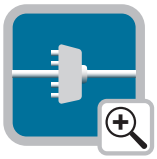
Link-Aware™ technology

Optimize the test run: With one click, the unit automatically performs link recognition, sets the optimal parameters, launches multiple acquisitions, analyses link element and export it to a single report.



Self-setting unit

Be the expert: The iOLM self-manages the setting of all test parameters, minimizes training and avoids test misconfiguration.



Optical link view

Crunch the data: The simplified link mapper provides a straightforward view of the fiber under test, with clear icons and pass/fail verdicts.



Intelligent diagnostics

Let it show you the way: The iOLM guides you through your network's problem-solving process.



OTDR trace file generation

Fits your existing procedures: 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.



Single iOLM file per link

Consolidate test results: While iOLM gives you more link information based on multiple acquisitions, it simplifies reporting. What you get in the field is what you can see and process on your PC!



Bidirectional analysis

Automate process and results: Recommended to ensure true splice characterization, bidirectional analysis combines results from both directions to provide an average loss for each event. Use of bidirectional analysis with the iOLM ensures that you benefit from maximum resolution in both directions (multiple pulse widths at multiple wavelengths), as well as a consolidated view. iOLM is suited for both single- and dual-ended automated bidir solutions.

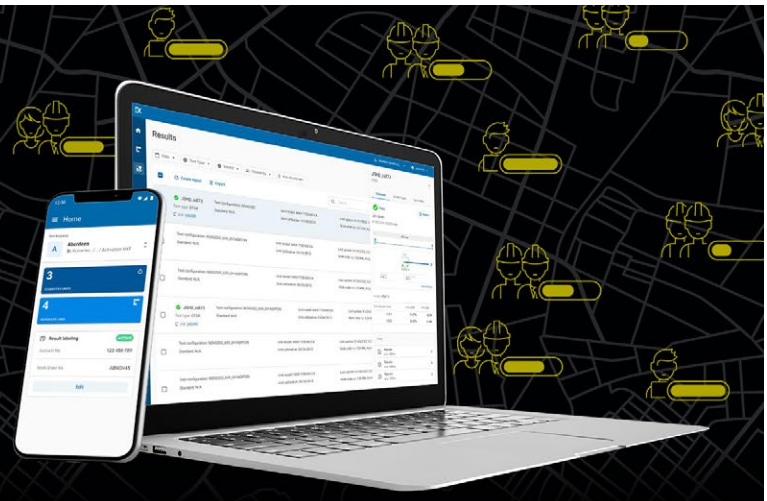


iOLM

Supports any network topology: P2P, centralized PON, cascaded PON or unbalanced/tapered PON (covered by standard iOLM).

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

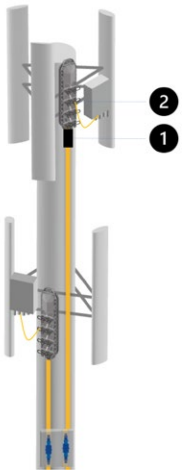
Once your account created—and the mobile app installed and paired with compatible EXFO devices—all test results will be sent to the cloud. On the web app, you will see field test results from all invited testers.

Get **started >**

EXFO

OPTIMODES: SITUATION-SPECIFIC TESTING

Optimodes are test configurations tailored to optimize specific use cases and go a step beyond recognized iOLM performance.



FTTA junction boxes and jumper connecting RRUs.

Optimode: Short-link close events

Application: fiber-to-the-antenna (FTTA), data centers, FTTx, central offices

Tailored to short links with close connectors, this Optimode offers the highest resolution achieved so far. Demerging closely spaced connectors is also key when troubleshooting data centers, central offices or FTTA with closely spaced patch panels.

Optimode: Fast short link (FSL)

Application: Data centers, enterprise LAN/WAN, FTTA

FSL Optimode is designed to quickly test short connectorized links in high-volume contexts. It tests up to five times faster than any regular iOLM characterization and provides accurate link loss, length and high-level mapping of the link, all in less than 10 seconds per fiber.

Optimode: Fast medium range (FMR)

Application: FTTH feeder and distribution cables characterization, DCI, backhaul

FMR Optimode will quickly test P2P spliced links in high volume context. Within 30 seconds, characterize a link under 20 km at 2 wavelengths.



Example of a 3456 fibers cable.

ADDITIONAL FEATURES TO BOOST YOUR EFFICIENCY

iOLM Advanced (iADV)

Real-time test results

Activate the OTDR laser in continuous shooting mode directly from the iOLM interface. It's perfect for a quick overview of the fiber under test, distance to break, control field splicing or check for obvious impairments.

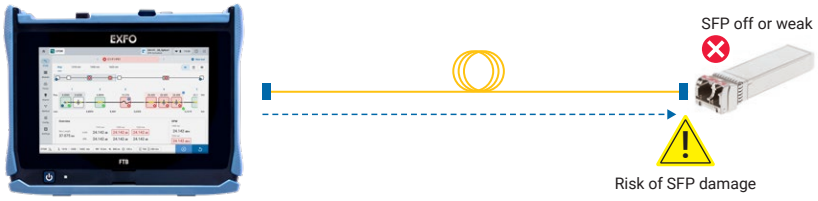


Dialing wheels allows to adjust real time acquisition parameters on the fly, immediately seeing the effect on the trace for optimal efficiency. Ready to launch the characterization?
Just press the bottom right retest button, no need to manually interrupt real time nor getting into any menus.

Optimode: SFP safe troubleshooting

Application: P2P troubleshooting up to 100 km, passive CWDM/DWDM

Ideal for P2P troubleshooting when an SFP might be connected on the far end. When technicians are dispatched, they are still unaware of what is wrong and may accidentally damage a transceiver with an uncontrolled pulse width. EXFO's patented solution prevents this risk and guarantees no damages to the SFP while troubleshooting.





Watch it in action: **SFP safe mode**

Optimode: PON last-mile certification

Application: Last-mile FTTx

Tailored to last-mile certification, Optimode tests all connections between customer premises and the splitter (including continuity at the splitter but excluding elements after the splitter).

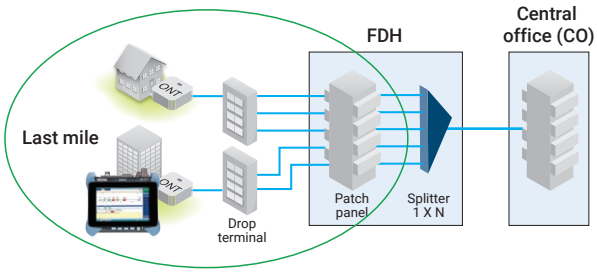


Figure 1. Certification of last-mile FTTH including continuity at splitter.

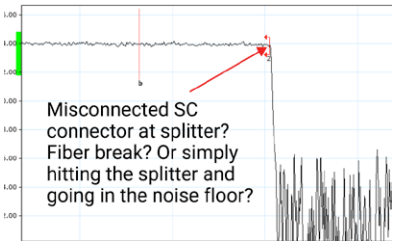
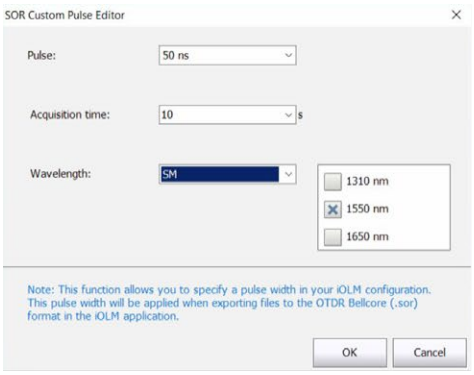


Figure 2. Last-mile OTDR trace.

Advanced SOR support

iOLM manages an unrestricted number of acquisitions for optimal link characterization; simply input the pulse width, averaging time and wavelength(s) requested for the SOR file report to add it to the results package. You can also check the reported SOR trace right on iOLM.



Need a specific pulse width for the SOR in your close-out package? Just ask iOLM to add it to the package.



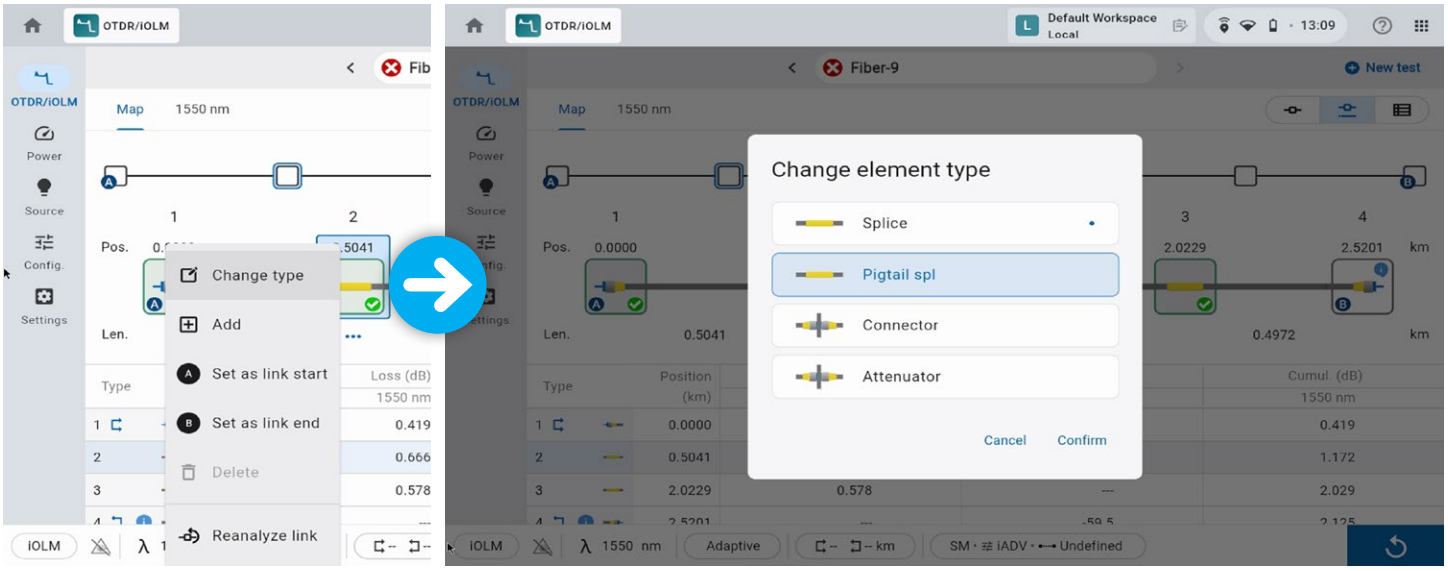
Want to view the reported SOR trace? Just ask iOLM to show it.

2:N splitter characterization

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

iOLM expert mode

This mode is meant for the fiber test expert or manager. They can create their own custom network elements, define their specific icon and own thresholds to better match network plans and avoid false failures. A common example is a spliced pigtail connector that will combine loss from a splice and from mating.



When you change events from a regular connector (threshold at 0.5 db in the example above) to a custom "pigtail spliced connector," a custom-built icon appears and the unit adjusts to a custom threshold (0.75 db in the example above) so you can avoid false failures. Modified elements are tagged with an asterisk (*) for traceability.

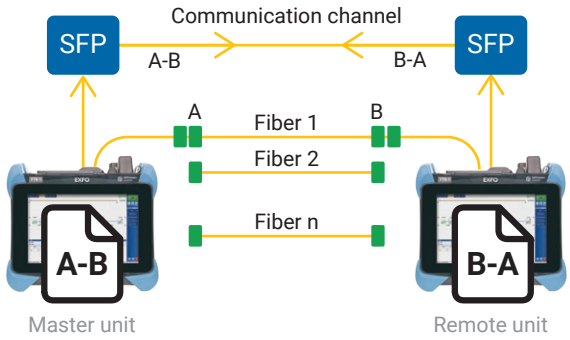
Expert mode also allows advanced trace editing (adding and deleting extra events) or re-analyzing the trace from the field.

iLOOP

Use iLOOP with iOLM to increase productivity and accuracy using three different test methods to obtain bidirectional OTDR results. All situations can be covered with one software license, giving you the versatility to pick the right tool for the job.

Dual-ended automated bidirectional results [a, b]

Using two end-to-end devices, obtain bidirectional iOLM results without the need for post-processing or internet connections. Start a test from the main unit and take advantage of iOLM to make setup easy and avoid errors. Results are transferred to both devices through a communication fiber so both technicians stay up to date on test progress and quality. The full close-out package can be created on both devices directly in the field. Repairs or corrections can be done the same day to avoid redeploying resources while waiting for results in post-processing.



Loopback testing mode

The iLOOP feature allows your iOLM to double its testing efficiency by testing two fibers simultaneously using the loopback single-ended measurement. This capability halves testing time. The application splits results into two individual links to generate individual iOLM and OTDR (.sor) files and a PDF report without waiting for post-processing. This option is particularly efficient in applications such as FTTA, distributed antenna systems and data centers where Rx/Tx fibers can be tested simultaneously. Once the measurement is completed, iLOOP gives a pass/fail assessment for each single fiber.

Bidirectional results can be achieved by testing the fiber loop in both directions but from the same end, then combining the results from each individual fiber.



Using the loopback test method and iLOOP option on your iOLM enables you to test two fibers at once. View only the A link, B link, or the complete A-B link including the loop.

Automated and flexible bidirectional characterization

When instruments are connected to the internet, bidirectional results can be achieved by testing a fiber from both ends and sharing test results wirelessly. Bidirectional test files are available on both devices while on-site with no post-processing, preventing the need for additional truck rolls.

The same results can be achieved offline by sharing the individual results (which are combined in post-processing) for a bidirectional close-out package. This means that a single technician with a single device can do bidirectional testing asynchronously from each end of the fiber.

WHICH BIDIRECTIONAL SOLUTION IS RIGHT FOR YOU?

	iOLM LOOPBACK	iOLM WITH CLOUD WORKFLOW	DUAL-ENDED AUTOMATED BIDIRECTIONAL
	or	or	
Asynchronous testing	✗	✓	✗
Internet required	✗	✓	✗
20-60 km fibers	✓	✓	✓
60+ km fibers	✗	✓	✓
Instant data on device	✓	✗	✓
Dual device required	✗	✗	✓
Additional hardware required	✗	✗	✓

iLOOP provides even more versatility for bidirectional testing. Choose the solution that fits for each job. All three solutions are available as soon as your license is activated.

a. Available for dual FTB units equipped with FTBx-730C/735C/750C modules, iOLM, and iLOOP.
b. Requires one accessory kit per FTB unit (PCK-BIDIR120 KIT).

iCERT

Data center multistandard certification

The iCERT option turns the iOLM into an intelligent Tier-2 certifier with automated pass/fail thresholds for SM/MM cables. iOLM iCERT helps fiber installers certify or troubleshoot any enterprise or data center network to multiple cabling and application standards simultaneously. You can therefore certify the cabling according to internationally recognized standards (including TIA-568, ISO 11801), as well as the application that the fiber can carry (including IEEE or Fibre Channel standards).

Having predefined cable standards built into the application ensures compliance with test requirements of different standard bodies without risk of error during testing.

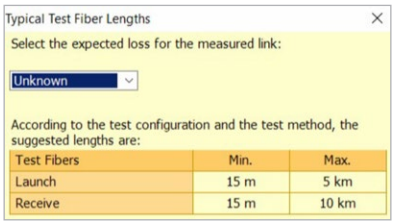
USING LAUNCH AND RECEIVE CABLES

EXFO recommends using a launch cable to compensate for the loss of the iOLM's connector, or to allow UPC network testing. Thanks to the dynamic multipulse width approach, launch cables up to 15 m are suitable for most applications; meaning that you can use compact and cost-efficient cables.

Using a launch cable extends the instrument's connector's life by reducing the number of matings, which positively impacts ownership cost.

Wondering about the appropriate length of the launch or receive fiber for your specific test? iOLM can recommend length ranges and calibrate your launch and receive fiber length for optimal results.





TROUBLESHOOTING HIGH-SPEED MULTIMODE NETWORKS WITH ENCIRCLED FLUX

Whether for an expanding enterprise-class business or a large-volume data center, new high-speed data networks built with multimode fibers run under tighter tolerances than ever before. In the event of failure, intelligent and accurate test tools are needed to quickly find and fix the fault.



Multimode fibers are the trickiest links to test because the test results are highly dependent on each device's output conditions. Troubleshooting with a unit other than the construction unit may mislead the technician or result in the inability to find the fault, creating longer network downtimes.

For multimode fibers, EXFO recommends using an external launch mode conditioner that is Encircled Flux (EF)-compliant. The EF standard (as recommended in TIA-568 via TIA-526-14-B and IEC 61280-4-1 Ed. 2.0) is a way of controlling the source launch conditions so that tier-2 troubleshooting can be performed with maximum accuracy and consistency.

Use of an external EF-compliant device [a] such as the SPSB-EF-C30 is a fast and easy way to fix faulty networks.

a. For more information about EF compliance, please read the **Encircled Flux test solution specification sheet**.

COMPARISON TABLE – iOLM

FEATURES	FTB LITE SERIES	MAXTESTER SERIES	FTBx SERIES	AXS-130 FTTH-iOLM
Standard iOLM: Dynamic self-adjusting acquisition (multipulse)	✓	✓	✓	✗
Intelligent traces analysis	✓	✓	✓	✓
Single link view and event table	✓	✓	✓	✓
Intelligent diagnostics	✓	✓	✓	✓
SOR trace generation	✓	✓	✓	✓
Single iOLM file per link for easy reporting	✓	✓	✓	✓
Real-time OTDR	✓	iADV	iADV	✓
SOR trace view	✓	iADV	iADV	✓
Optimode: Short-link close event (multipulse)	✓	✓ [a]	✓ [d]	✗
Optimode: Fast short link (multipulse)	✓	✓ [a, b]	✓ [d]	✗
Optimode: Fast medium range (multipulse)	✓	✓ [a, b]	✓ [d]	✗
Optimode: SFP safe troubleshooting (multipulse)	✓	iADV [b]	iADV	✓
Optimode: PON last-mile certification (multipulse)	✓ [c]	iADV [c, d]	iADV [c, d]	✓
Optimode: FTTH full link characterisation (multipulse)	✗	✗	✗	✓
Unbalanced/tapered splitters	Upcoming (June 2026) [e]	✓ [e]	✓ [e]	✗

COMPARISON TABLE – iADV

FEATURES	FTB LITE SERIES	MAXTESTER SERIES	FTBx SERIES
SOR pulse width and wavelength editor	✓	✓	✓
Custom elements	✓	✓	✓
Advanced link edition and re-analysis	✓	✓	✓
2:N splitter characterization	✗	✓ [b]	✓

COMPARISON TABLE – iLOOP

FEATURES	FTB LITE SERIES (SEPT. 2026)	MAXTESTER SERIES	FTBx SERIES
iOLM loopback (unidirectional and bidirectional)	✓	✓	✓
Dual-ended automated bidirectional iOLM (via accessory kit PCK-BIDIR120)	✗	✗	✓

a. Excluding MaxTester 740C.
b. Excluding MaxTester 715D.
c. Excluding 720D models.
d. Excluding 740C models.
e. Only on 730D models.

THE BENEFITS OF APC CONNECTORS FOR OTDR/iOLM TESTING

Like any OTDR, the iOLM will be impacted by strong reflections at the unit's port. To ensure low reflection 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.

On the other hand, ultra-polished connectors (UPCs) are prone to being highly reflective when contaminated, worn or damaged. This impacts singlemode measurement and leads to premature connector replacement. Although a UPC unit is not needed to test a UPC network, using an APC/UPC test jumper or a launch fiber (SPSB) ensures compatibility.

For optimal results, APC connectors are mandatory on singlemode ports when using the iOLM application.

ORDERING INFORMATION

To configure your new instrument with iOLM, please refer to the ordering guide available on the spec sheet of the selected model: **www.EXFO.com/products/field-network-testing/bu3-optical/otdr-iolm-testing**

To upgrade your OTDR/iOLM-ready instrument [a]**:**

XX-XX

Base software
Oi = Enables iOLM standard application in addition to your existing OTDR application
Oi2 = Converts your existing OTDR software into iOLM software
00 = No change to your current base software

iOLM software option [b]
00 = iOLM Standard software
iADV = Enables iOLM Advanced
iLOOP = Enables loopback testing mode and automated bidirectional analysis [c, d]
iCERT = Enables iOLM tier-2 cabling certification

Example: Oi-iADV-iCERT

a. For iOLM-ready instruments only (look for the "iOLM-ready" sticker on your unit or contact EXFO); if your instrument is not iOLM-ready, please contact EXFO for upgrade options.
b. Requires iOLM base software.
c. EXFO Exchange required for single-ended automated bidirectional analysis.
d. PCK-BIDIR120 accessory kit required for dual-ended automated bidirectional analysis.

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