## MaxTester 715B last-mile OTDR

### POINT-TO-POINT (P2P) LINKS, LAST-MILE INSTALLATION AND TROUBLESHOOTING



Fully featured, entry-level, dedicated OTDR with tablet-inspired design perfect for frontline singlemode fiber installers.

#### **KEY FEATURES**

Handy, lightweight, powerful, tablet-inspired design

7-inch, outdoor-enhanced touchscreen—the biggest in the handheld industry

- 12-hour autonomy
- Dead zones: EDZ 1 m, ADZ 4 m

Dynamic range of 30/28/28 dB

Rugged design built for outside plant

iOLM-ready: intelligent and dynamic application that turns complex OTDR trace analysis into a one-touch task

#### **APPLICATIONS**

FTTx last-mile installation and troubleshooting

Short access-network testing

FTTA fiber-DAS installations

CATV/HFC network testing

SPE

#### COMPLEMENTARY PRODUCTS AND OPTIONS



Fiber inspector probe FIP-400B (WiFi or USB) FastReporter

**Data post-processing software** FastReporter



Soft pulse suppressor bag



#### THE HANDHELD OTDR... REINVENTED.

The MaxTester 700B/C Series is the first tablet-inspired OTDR line that is handy, lightweight and rugged enough for any outside plant environment. With a 7-inch, outdoor-enhanced touchscreen-the most efficient handheld display in the industry-it delivers an unprecedented user experience. Its intuitive Windows-like GUI ensures a fast learning curve. Plus, its new and improved OTDR 2 environment offers icon-based functions, instant boot-up, automatic macrobend finders as well as improved auto and real-time modes.

The MaxTester 700B/C Series is a line of genuine high-performance OTDRs from the world's leading manufacturer. It delivers EXFO's tried and true OTDR quality and accuracy along with the best optical performance for right-first-time results, every time.

The amazing 12-hour battery life will never let a technician down, and the plug-and-play hardware options, like the VFL, power meter and USB tools, make every technician's job easier.

Most importantly, the MaxTester 700B/C Series is finally bringing the intelligent Optical Link Mapper (iOLM), an intelligent OTDR-based application, to the handheld market. This advanced software turns even the most complex trace analysis into a simple, one-touch task.

Ultimately, the MaxTester 700B/C Series is small enough to fit in your hand and big enough to fit all your needs!

#### THE ENTRY-LEVEL SOLUTION DESIGNED FOR ALL YOUR TESTING NEEDS

The MaxTester 715B OTDR/iOLM is optimized for the point-to-point testing and troubleshooting of FTTx architectures, and is ideal for testing short fibers (e.g., inside a CO environment or at FTTA/DAS network installations).

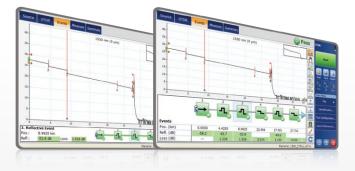
Other models available:

- MaxTester 720C LAN/WAN access OTDR-optimized for multimode and singlemode access network installation and maintenance
- · MaxTester 730C PON/Metro OTDR-optimized for FTTx/MDU and short metro fiber deployments and troubleshooting

#### LOOKING FOR ICON-BASED MAPPING?

#### Linear view (included on all EXFO OTDRs)

Available on our OTDRs since 2006, linear view simplifies interpretation of an OTDR trace by displaying icons in a linear way 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 linear view offers you the flexibility to display both the OTDR graph and its linear view without having to perform a toggle to analyze your fiber link.

Although this linear view simplifies OTDR interpretation of a single pulse-width trace, the user must still 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 about how the iOLM can perform this automatically and with more accurate results.





application designed to simplify OIDR 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?

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

#### Three ways to benefit from the iOLM





Add the iOLM software option to your iOLM-ready unit, even while in the field



Order a unit with the iOLM application only

**IOLM ONLY** 

#### iOLM features value pack

In addition to the standard iOLM feature set, you can select added-value features as part of the **Advanced** package or standalone options. Please refer to the iOLM specification sheet for the complete and most recent description of these value packs.

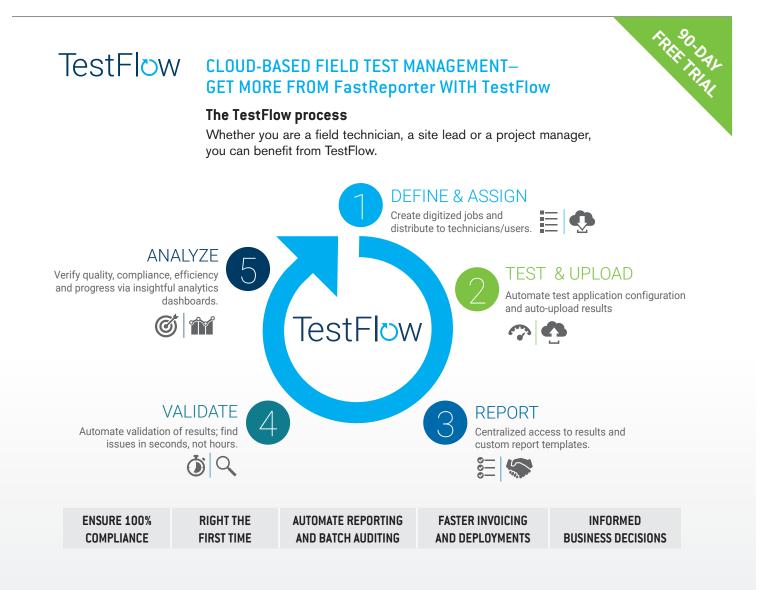


### FastRep**o**rter

#### 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.





Get your free trial today or for more info: EXFO.com/TestFlow



#### **OPTICAL PLUG-AND-PLAY OPTIONS**

The MaxTester features plug-and-play optical options that can be purchased whenever you need them: at the time of your order or later on. In either case, installation is a snap, and can be performed by the user without the need for any software update.

#### **Optical power meter**

A high-level power meter (GeX) that can measure up to 27 dBm, the highest in the industry. This is essential for hybrid fiber-coaxial (HFC) networks or high-power signals. If used with an auto-lambda/auto-switching compatible light source, the power meter automatically synchronizes on the same wavelength, thus avoiding any risk of mismatched measurement.

- · Extensive range of connectors
- · Auto-lambda and auto-switching
- · Offers measurement storage and reporting
- · Seven standard calibrated wavelengths

#### Visual fault locator (VFL)

The plug-and-play VFL easily identifies breaks, bends, faulty connectors and splices, in addition to other causes of signal loss. This basic, yet essential troubleshooting tool should be part of every field technician's toolbox. The VFL visually locates and detects faults over distances of up to 5 km by creating a bright-red glow at the exact location of the fault on singlemode or multimode fibers (available with the Optical Power Meter only).

#### FIBER CONNECTOR INSPECTION AND CERTIFICATION-THE ESSENTIAL FIRST STEP BEFORE ANY OTDR TESTING

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 the connector of your OTDR/iOLM 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 the performances of your OTDR and your efficiency.





#### Five models to fit your budget

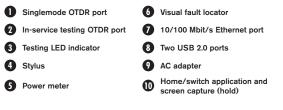
| FEATURES                                 | USB WIRED         |                            | WIRELESS                    |                            |                             |
|--|-------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|
|  | Basic<br>FIP-410B | Semi-automated<br>FIP-420B | Fully automated<br>FIP-430B | Semi-automated<br>FIP-425B | Fully automated<br>FIP-435B |
| Three magnification levels               | √                 | $\checkmark$               | √                           | √                          | √                           |
| Image capture                            | √                 | $\checkmark$               | √                           | √                          | √                           |
| Five-megapixel CMOS capturing device     | √                 | $\checkmark$               | √                           | √                          | √                           |
| Automatic fiber image-centering function | X                 | $\checkmark$               | √                           | √                          | √                           |
| Automatic focus adjustment               | X                 | X                          | √                           | X                          | √                           |
| Onboard pass/fail analysis               | X                 | $\checkmark$               | √                           | √                          | √                           |
| Pass/fail LED indicator                  | X                 | $\checkmark$               | √                           | √                          | √                           |
| WiFi connectivity                        | X                 | X                          | X                           | √                          | √                           |

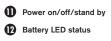
For additional information, please refer to the FIP-400B USB or FIP-400B wireless specification sheets.



| SOFTWARE UTILITIES          |  |
|-----------------------------|--|
| Software update             | Ensure that your MaxTester is up-to-date with the latest software.   |
| VNC configuration           | The Virtual Network Computing (VNC) utility allows technicians to easily remote control the unit via a computer or laptop. |
| Microsoft Internet Explorer | Access the Web directly from your device interface.  |
| Data mover                  | Transfer all your daily test results quickly and easily.   |
| Centralized documentation   | Instant access to user guides and other relevant documents.  |
| Wallpapers                  | Enhance your work environment with colorful and scenic backgrounds.  |
| PDF Reader                  | View your reports in PDF format.   |
| Bluetooth file sharing      | Share files between your MaxTester and any Bluetooth-enabled device.   |
| WiFi connection             | WiFi FIP inspection probe interface. Upload test results and browse the Internet.  |
| Inspection probe            | USB or WiFi probe to inspect and analyze connectors.   |

#### PACKAGED FOR EFFICIENCY





- Built-in WiFi/Bluetooth
- Stand support











#### SPECIFICATIONS <sup>a</sup>

| TECHNICAL SPECIFICATIONS               |   |
|--|---|
| Display                                | 7-in (178-mm) outdoor-enhanced touchscreen, 800 x 480 TFT   |
| Interfaces                             | Two USB 2.0 ports<br>RJ45 LAN 10/100 Mbit/s   |
| Storage                                | 2 GB internal memory (20 000 OTDR traces, typical)  |
| Batteries                              | Rechargeable lithium-polymer battery<br>12 hours of operation as per Telcordia (Bellcore) TR-NWT-001138 |
| Power supply                           | Power supply AC/DC adapter, input 100-240 VAC, 50-60 Hz, 9-16 V DCIN 15 Watts minimum                   |
| Wavelength (nm) <sup>b</sup>           | $1310 \pm 30/1550 \pm 30/1625 \pm 10$   |
| SM live port built-in filter           | 1625 nm: highpass >1595 nm<br>isolation >50 dB from 1270 nm to 1585 nm                                  |
| Dynamic range (dB) °                   | 30/28/28  |
| Event dead zone (m) <sup>d</sup>       | 1   |
| Attenuation dead zone (m) °            | 4   |
| Distance range (km)                    | 0.1 to 160  |
| Pulse width (ns)                       | 5 to 20 000   |
| Linearity (dB/dB)                      | ±0.05   |
| 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 + 0.005 % x distance + sampling resolution)  |
| Measurement time                       | User-defined  |
| Reflectance accuracy (dB) <sup>b</sup> | ±2  |
| Typical real-time refresh (Hz)         | 3   |

a. All specifications valid at 23  $^{\circ}\text{C}$   $\pm$  2  $^{\circ}\text{C}$  with an FC/APC connector, unless otherwise specified.

b. Typical.

c. Typical dynamic range with longest pulse and three-minute averaging at  $\ensuremath{\mathsf{SNR}}=1.$ 

d. Typical, for reflectance from -35 dB to -55 dB, using a 5-ns pulse.

e. Typical, for reflectance at -55 dB, using a 5-ns pulse. Attenuation dead zone at 1310 nm is 5 m typical with reflectance below -45 dB.

f. Does not include uncertainty due to fiber index.



| GENERAL SPECIFICATIONS           |   |
|----------------------------------|---|
| Size (H x W x D)                 | 155 mm x 200 mm x 68 mm (6 1/8 in x 7 7/8 in x 2 3/4 in)                  |
| Weight (with battery)            | 1.29 kg (2.8 lb)  |
| Temperature Operating<br>Storage | −10 °C to 50 °C (14 °F to 122 °F)<br>−40 °C to 70 °C (−40 °F to 158 °F) ª |
| Relative humidity                | 0 % to 95 % non-condensing  |

| SOURCE                          |                  |
|---------------------------------|------------------|
| Output power (dBm) <sup>b</sup> | -11.5            |
| Modulation                      | CW, 1 kHz, 2 kHz |

| BUILT-IN POWER METER SPECIFICATIONS (GeX) (optional)° |  |  |
|---|--|--|
| Calibrated wavelengths (nm)                           | 850, 1300, 1310, 1490, 1550, 1625, 1650                                  |  |
| Power range (dBm) <sup>d</sup>                        | 27 to -50  |  |
| Uncertainty (%) <sup>e</sup>                          | ±5 % ± 10 nW   |  |
| Display resolution (dB)                               | $0.01 = \max \text{ to } -40 \text{ dBm}$<br>0.1 = -40  dBm to  -50  dBm |  |
| Automatic offset nulling range d, f                   | Max power to −30 dBm   |  |
| Tone detection (Hz)                                   | 270/330/1000/2000  |  |

| VISUAL FAULT LOCATOR (VFL) (optional) |  |  |
|---------------------------------------|--|--|
| Laser, 650 nm ± 10 nm                 |  |  |
| CW/Modulate 1 Hz                      |  |  |

Typical  $P_{_{out}}$  in 62.5/125  $\mu m$   $\!$  of Bm (0.7 mW)

#### LASER SAFETY (Complies with FDA 1040.10 and IEC 60825-1:2014)



Laser safety: Class 2

| GP-10-061 | Soft carrying case               | GP-2205 | DC vehicle battery-charging adaptor (12 V)       |
|-----------|----------------------------------|---------|--|
| GP-10-072 | Semi-rigid carrying case         | GP-2207 | Kickstand  |
| GP-10-086 | Rigid carrying case              | GP-2208 | Spare stylus                                     |
| GP-1008   | VFL adapter (2.50 mm to 1.25 mm) | GP-2209 | Spare battery                                    |
| GP-2155   | Carry-on size backpack           | GP-2210 | Spare AC/DC adapter (specify country power cord) |
| GP-2180   | Utility glove                    |         |  |

a. –20 °C to 60 °C (–4 °F to 140 °F) with the battery pack.

b. Typical output power is given at 1550 nm.

c. At 23 °C  $\pm$  1 °C, 1550 nm and FC connector. With modules in idle mode. Battery operated after 20-minute warm-up.

d. Typical.

e. At calibration conditions.

f. For  $\pm 0.05$  dB, from 10 °C to 30 °C.



#### **ORDERING INFORMATION**

| MAX-715B-XX-XX-XX-XX-XX-XX-XX-   | (X-XX-XX-XX-XX  |
|--|---|
| MAX-715B-XX-XX-XX-XX-XX-XX-XX-XX-XX-XX-XX-XX-XX  | <ul> <li>C+XX-XX-XX</li> <li>FastReporter software</li> <li>00 = Without software option</li> <li>FR2 = FastReporter software</li> <li>00 = Without RF components</li> <li>RF = With RF capability (WiFi and Bluetooth) *:</li> <li>Extra FIP-400B tips<sup>4</sup></li> <li>Bukhead tips</li> <li>FIPT-400-LC = LC tip for bukhead adapter</li> <li>FIPT-400-LC = C C IP for bukhead adapter</li> <li>FIPT-400-SC-APC = SC APC tip for bukhead adapter</li> <li>FIPT-400-U12M = Universal patchcord tip for 1.25 mm ferrules APC</li> <li>FIPT-400-U12M = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U12MA = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U12MA = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>FIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules APC</li> <li>HIPT-400-U2SM = Universal patchcord tip for 2.5 mm ferrules</li> <li>APC = Includes FIPT-400-U2SM and FIPT-400-SC-APC</li> <li>UPC = Includes FIPT-400-U2SM and FIPT-400-FC-SC</li> <li>Inspection probe model<sup>1</sup></li> <li>00 = Without inspection probe</li> <li>FP420B = Analysis digital video inspection probe</li> <li>Automated pass/fail analysis</li> <li>Tiple magnification</li> <li>Automated pass/fail analysis</li> <li>Tiple magnification</li> <li>Automated pass/fail analysis</li> <li>Tiple magnification&lt;</li></ul> |
| Please refer to the intelligent Optical Link Mapper (iOLM) specification sheet for the | a complete and e. Included when UPC base tips are selected.   |

- a. Please refer to the intelligent Optical Link Mapper (iOLM) specification sheet for the complete and most recent description of these value packs. b. Only available if power meter option is selected.
- Additional connector adapters available: contact EXFO

c. Not available in China.

- d. This list represents a selection of fiber inspection tips that covers the most common connectors and applications but does not reflect all the tips available. EXFO offers a wide range of inspection tips, bulkhead adaptors and kits to cover many more connector types and different applications. Please contact your local EXFO sales representative or visit <u>www.EXFO.com/FIPtips</u> for more information.
- f. Included when APC base tips are selected.
- g. Available if inspection probe is selected.

model is selected.



- e. Included when UPC base tips are selected.
- h. Includes ConnectorMax2 software.
  - i. RF option is mandatory and automatically included if FP425B or FP435B fiber inspection probe

EXFO

## EI CONNECTORS To maximize the performance of your OTDR, EXFO recommends using APC connectors on singlemode port. These connectors generate lower reflectance, which is a critical parameter that affects performance, particularly in dead zones. APC connectors provide better performance than UPC connectors, thereby improving testing efficiency. For best results, APC connectors are mandatory with the iOLM application. Note: UPC connectors are also available. Simply replace EA-XX by EI-XX in the ordering part number. Additional connector available: EI-EUI-90 (UPC/ST).

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In case of discrepancy, the web version takes precedence over any printed literature.