MaxTester 720C Access OTDR

OPTIMIZED FOR MULTIMODE AND SINGLEMODE ACCESS NETWORK CONSTRUCTION AND TROUBLESHOOTING

NEW OTDR GENERATION

Fully featured, entry-level, dedicated OTDR with tablet-inspired design; perfect for construction, troubleshooting and everyday field testing in any access network.

KEY FEATURES

Handy, lightweight, powerful, tablet-inspired design

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

12-hour autonomy

Dynamic range of up to 36 dB in singlemode and 29 dB in multimode

Live fiber testing at 1625 nm

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

Rugged design built for the outside plant

APPLICATIONS

Access network construction and troubleshooting

FTTx/PON testing through splitters (up to 1x32)

Central office link certification

Data center and private networks

LAN/WAN characterization

Fronthaul/backhaul (FTTA, FTTT, RRH, DAS and small cells)

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 720C OTDR/iOLM features a dynamic range of 36 dB in singlemode and 29 dB in multimode, as well as industry-leading dead zones. This ensures efficient testing of closely spaced events such as patchcords in data centers, or patch panels in central offices (COs). The MaxTester 720C is optimized for point-to-point (P2P) testing of any access network, and is suitable for testing through 1x32 splitters.

Other models available:

› MaxTester 715B short access and FTTx last-mile installation and troubleshooting
› MaxTester 730C FTTH/PON installation and maintenance for testing through optical splitters and P2P metro

LOOKING FOR ICON-BASED MAPPING?

Linear View (Included on All EXFO OTDRs)

Available on our OTDRs since 2006, the linear view simplifies the reading 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, non-reflective or splitter icons. With applied pass/fail thresholds, it becomes easier to pinpoint faults on your link.

This improved version of linear view provides the flexibility to display both the OTDR graph and its linear view without having to toggle to analyze your fiber link.

Although this linear view simplifies the OTDR reading of a single pulse width's trace, the user will still need to 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 how the iOLM can perform this automatically and with more accurate results.

iOLM—REMOVING THE COMPLEXITY FROM OTDR TESTING

OTDR TESTING COMES WITH ITS LOAD OF CHALLENGES. . .

WRONG OTDR TRACES

COUNTLESS TRACES TO ANALYSE

REPEATING THE SAME JOB TWICE

COMPLEX INSTRUMENT TRAINING/SUPPORT

i OLM | 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** → **All results combined 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 iOLM, including its proprietary measurement software. EXFO's Universal Interface is protected by US patent 6,612,750.

THREE WAYS TO BENEFIT FROM THE iOLM

COMBO

Run both iOLM and OTDR applications (Oi code)

UPGRADE

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

iOLM ONLY

Order a unit with the iOLM application 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.

GET THE BEST OUT OF YOUR DATA POST-PROCESSING

FastReporter

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.
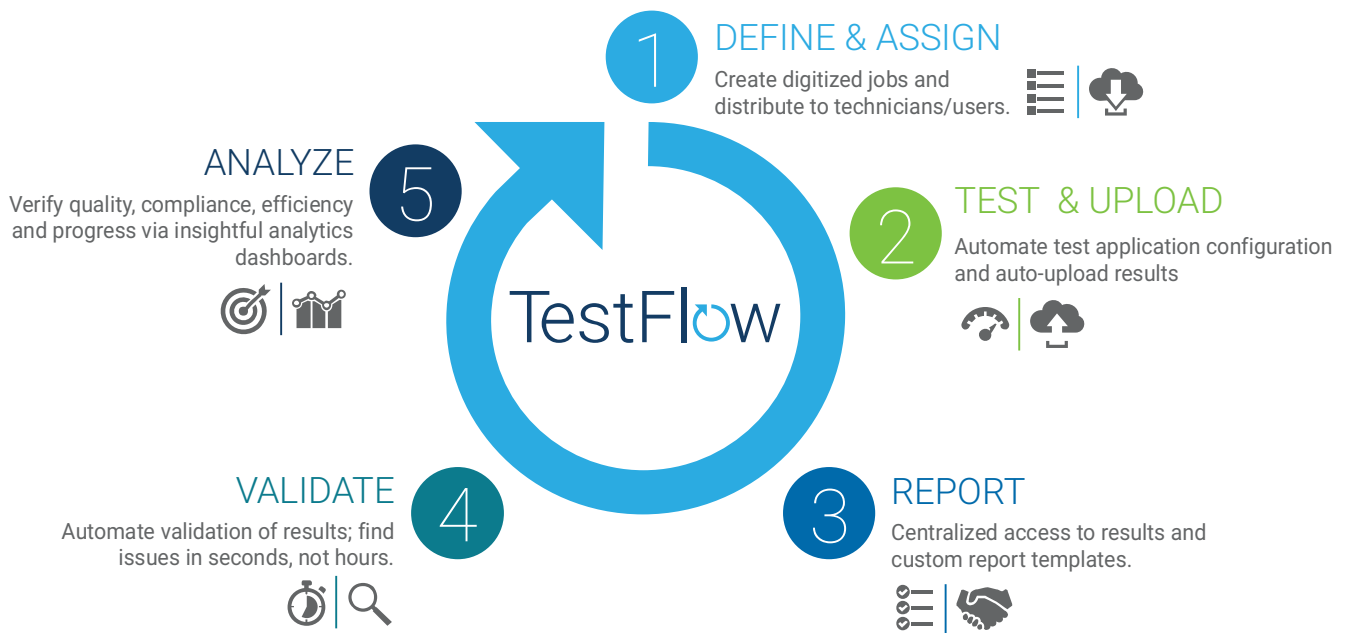
GET MORE FROM FastReporter WITH TestFlow

TestFlow | CLOUD-BASED FIELD TEST MANAGEMENT

FREE TRIAL

THE TestFlow PROCESS

Whether you are a field technician, a site lead or a project manager, you can benefit from TestFlow.

1 DEFINE & ASSIGN
Create digitized jobs and distribute to technicians/users.

2 TEST & UPLOAD
Automate test application configuration and auto-upload results

3 REPORT
Centralized access to results and custom report templates.

4 VALIDATE
Automate validation of results; find issues in seconds, not hours.

5 ANALYZE
Verify quality, compliance, efficiency and progress via insightful analytics dashboards.

TestFlow

| Ensure 100% compliance | Right the first time | Automate reporting and batch auditing | Faster invoicing and deployments | Informed business decisions |

TROUBLESHOOTING HIGH-SPEED MULTIMODE NETWORKS WITH ENCIRCLED FLUX

EF *READY*

EF launch fiber
(SPSB-EF-C30)

Whether for expanding enterprise-class businesses or large-volume data centers, new high-speed data networks built with multimode fibers are running 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.

QUAD OPTION FOR MULTIMODE UNITS

SM MM

QUAD READY

The multimode units offer maximum flexibility by featuring a unique quad-ready ability.

Upgrading to the quad option is easy and instantaneous, thanks to a software key that activates the singlemode wavelengths. Singlemode wavelengths are pre-calibrated at the factory, so you are ready to test singlemode fibers right after the upgrade with no other constraints. This will save you both time and money.

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 **FIP-410B**	Semi-Automated **FIP-420B**	Fully Automated **FIP-430B**	Semi-Automated **FIP-425B**	Fully Automated **FIP-435B**
Three magnification levels	√	√	√	√	√
Image capture	√	√	√	√	√
Five-megapixel CMOS capturing device	√	√	√	√	√
Automatic fiber image-centering function	X	√	√	√	√
Automatic focus adjustment	X	X	√	X	√
Onboard pass/fail analysis	X	√	√	√	√
Pass/fail LED indicator	X	√	√	√	√
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 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 Windows computer.
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.
FTP server	Exchange files over wifi to an FTP application on a smartphone for easier file sharing from the field

PACKAGED FOR EFFICIENCY

1 Singlemode OTDR port

2 Multimode OTDR port or Live Singlemode OTDR port

3 Stylus

4 Power meter

5 Visual fault locator

6 10/100 Mbit/s Ethernet port

7 Two USB 2.0 ports

8 AC adapter

9 Home/switch application and screen capture (hold)

10 Power on/off/stand by

11 Battery LED status

12 Built-in WiFi/Bluetooth

13 Stand support
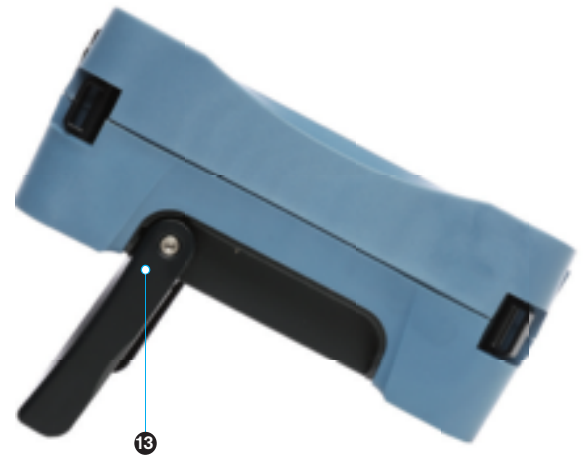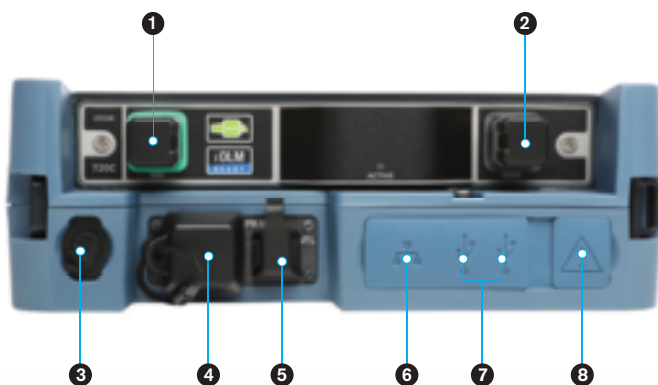
SPECIFICATIONS [a]

TECHNICAL SPECIFICATIONS	
Display	7-in (178-mm) outdoor-enhanced touchscreen, 800 x 480 TFT
Interfaces	Two USB 2.0 ports RJ45 LAN 10/100 Mbit/s
Storage	2 GB internal memory (20 000 OTDR traces, typical)
Batteries	Rechargeable lithium-polymer battery 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
Wavelength (nm) [b]	850 ± 20/1300 ± 20/1310 ± 20/1550 ± 20/1625 ± 10
SM live port built-in filter	1625 nm: highpass >1595 nm isolation >50 dB from 1270 nm to 1585 nm
Dynamic range (dB) [c]	27/29/36/35/35
Event dead zone (m) [d]	Singlemode: 0.7 Multimode: 0.5
Attenuation dead zone (m)	Singlemode: 3 [e] Multimode: 2.5 [f]
PON dead zone (m) [g]	35
Distance range (km)	Multimode: 0.1 to 40 Singlemode: 0.1 to 260
Pulse width (ns)	Multimode: 3 to 1000 Singlemode: 3 to 20 000
Launch conditions [h]	EF-compliant
Linearity (dB/dB)	±0.03
Loss threshold (dB)	0.01
Loss resolution (dB)	0.001
Sampling resolution (m)	Multimode: 0.04 to 5 Singlemode: 0.04 to 10
Sampling points	Up to 256 000
Distance uncertainty (m) [i]	±(0.75 + 0.0025 % x distance + sampling resolution)
Measurement time	User-defined
Reflectance accuracy (dB) [b]	±2
Typical real-time refresh (Hz)	4

Notes

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

b. Typical.

c. Typical dynamic range with longest pulse and three-minute averaging at SNR = 1.

d. Typical, for reflectance from −35 dB to −55 dB in singlemode and −45 dB to −30 dB in multimode, using a 3-ns pulse.

e. Typical at 1310 nm, for reflectance at −55 dB, using a 3-ns pulse. Attenuation dead zone is 4 m typical with reflectance below −45 dB.

f. Typical, for reflectance at −35 dB, using a 3-ns pulse.

g. Non-reflective FUT, non-reflective splitter, 13-dB loss, 50-ns pulse, typical value.

h. Compliant with Encircled Flux TIA-526-14-B and IEC 61280-4-1 Ed. 2.0 using an external EF conditioner (SPSB-EF-C-30).

i. Does not include uncertainty due to fiber index.

GENERAL SPECIFICATIONS

Size (H x W x D)	166 mm x 200 mm x 68 mm (6 $^9/_{16}$ in x 7 $^7/_8$ in x 2 ¾ in)
Weight (with battery)	1.5 kg (3.3 lb)
Temperature 　Operating 　Storage	 −10 °C to 50 °C (14 °F to 122 °F) −40 °C to 70 °C (−40 °F to 158 °F) [a]
Relative humidity	0 % to 95 % noncondensing

SOURCE

Output power (dBm) [b]	Multimode: −3 Singlemode: −6
Modulation	CW, 330 Hz, 1 kHz, 2 kHz, 1 kHz + blink, 2 kHz + blink

BUILT-IN POWER METER SPECIFICATIONS (GeX) (optional) [c]

Calibrated wavelengths (nm)	850, 1300, 1310, 1490, 1550, 1625, 1650
Power range (dBm) [d]	27 to −50
Uncertainty (%) [e]	±5 % ± 10 nW
Display resolution (dB)	0.01 = max to −40 dBm 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 µm: > −1.5 dBm (0.7 mW)
Laser safety: Class 2

LASER SAFETY

ACCESSORIES (optional)

GP-10-061	Soft carrying case		GP-2209	Spare Battery
GP-10-072	Semi-rigid carrying case		GP-2240	Utility glove
GP-10-100	Rigid carrying case		GP-2242	Replacement Hand strap
GP-1008	VFL adapter (2.50 mm to 1.25 mm)		GP-2243	Spare AC/DC adapter (Specify country power cord)
GP-2155	Carry-on size backpack		GP-3115	Kickstand
GP-2205	DC vehicle battery-charging adaptor (12 V)		SPSB-EF-C30	Encircled Flux launch cables (specify connectors)
GP-2208	Spare Stylus			

Notes

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

b. Typical output power is given at 1300 nm for multimode output and 1550 nm for singlemode output.

c. At 23 °C ± 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 ±0.05 dB, from 10 °C to 30 °C.