# FTB-7200D LAN/WAN Access OTDR
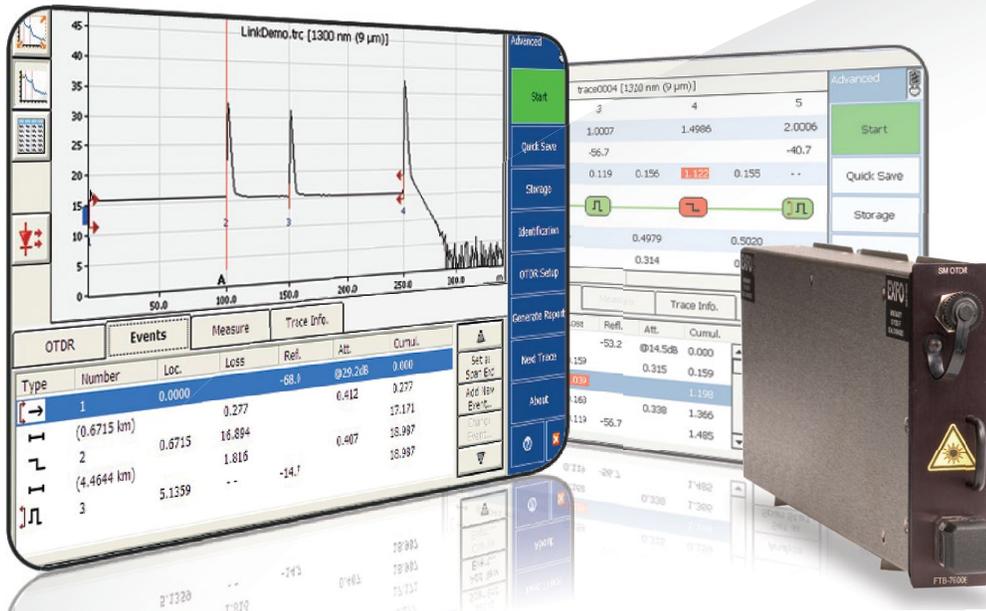
## OPTIMIZED FOR MULTIMODE AND SINGLEMODE ACCESS NETWORK TESTING



40G

EF READY

EXFO Connect Compatible

FROST & SULLIVAN
2014 BEST PRACTICES AWARD
GLOBAL
PORTABLE FIBER OPTIC TEST EQUIPMENT
MARKET LEADERSHIP AWARD

**Housed in a full-size portable platform, this OTDR maximizes the operational efficiency of fiber installers when testing multimode and singlemode fibers.**

## KEY FEATURES

Dynamic range of up to 36 dB

Event dead zone as low as 1 meter

Combined singlemode/multimode wavelengths (12CD-23B model)

Integrated tool: combines a visual fault locator, inspection probe, broadband power meter and a CW source mode

EF-Ready: use with external launch mode conditioner for EF-compliant, multimode results

EXFO Connect-compatible: automated asset management; data goes through the cloud and into a dynamic database

## APPLICATIONS

Access network testing

LAN/WAN characterization

## PLATFORM COMPATIBILITY



**Platform**
FTB-2/FTB-2 Pro

**Platform**
FTB-200

**Platform**
FTB-500

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## EXFO Connect

# EXFO|C●nnect

### AUTOMATE ASSET MANAGEMENT. PUSH TEST DATA IN THE CLOUD. GET CONNECTED.

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

## ADDITIONAL SOFTWARE TEST CAPABILITIES ON THE FTB-200 PLATFORM

**EXpert VoIP TEST TOOLS**

EXpert VoIP generates a voice-over-IP call directly from the test platform to validate performance during service turn-up and troubleshooting.

• Supports a wide range of signaling protocols, including SIP, SCCP, H.248/Megaco and H.323

• Supports MOS and R-factor quality metrics

• Simplifies testing with configurable pass/fail thresholds and RTP metrics

**EXpert IP TEST TOOLS**

EXpert IP integrates six commonly used datacom test tools into one platform-based application to ensure that field technicians are prepared for a wide range of testing needs.

• Rapidly performs debugging sequences with VLAN scan and LAN discovery

• Validates end-to-end ping and traceroute

• Verifies FTP performance and HTTP availability

**EXpert IPTV TEST TOOLS**

This powerful IPTV quality assessment solution enables set-top-box emulation and passive monitoring of IPTV streams, allowing quick and easy pass/fail verification of IPTV installations.

• Real-time video preview

• Analyzes up to 10 video streams

• Comprehensive QoS and QoE metrics including MOS score

## TROUBLESHOOTING OF HIGH-SPEED MULTIMODE NETWORKS WITH ENCIRCLED FLUX



**EF READY**

*SPSB-EF-C30*

Whether it's for an expanding enterprise-class business or a large-volume data center, new high-speed data networks built with multimode fibers are running under tighter tolerances than ever before. In case 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 different unit 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 encircled flux 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.

The use of an external EF-compliant device* such as the SPSB-EF-C30 will ensure a fast and easy way to fix faulty networks.

*For more detailed information about encircled flux compliance, please read the encircled flux test solution specification sheet.
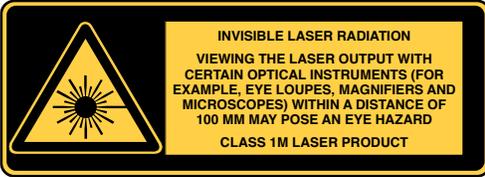
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## SPECIFICATIONS [a]

| TECHNICAL SPECIFICATIONS | |
|---|---|
| Wavelength (nm) [b] | 850 ± 20, 1300 ± 20, 1310 ± 20, 1550 ± 20 |
| Dynamic range (dB) [c, d] | 27, 26, 36, 34 |
| Event dead zone (m) [e] | 1 |
| Attenuation dead zone (m) [e] | 3, 4, 4.5, 5 |
| Distance range (km) | Multimode: 0.1, 0.3, 0.5, 1.3, 2.5, 5, 10, 20, 40<br>Singlemode: 1.25, 2.5, 5, 10, 20, 40, 80, 160, 260 |
| Pulse width (ns) | Multimode: 5, 10, 30, 100, 275, 1000<br>Singlemode: 5, 10, 30, 100, 275, 1000, 2500, 10 000, 20 000 |
| Launch conditions [f] | Encircled Flux (EF) compliant [g] |
| Linearity (dB/dB) [b] | ±0.03 |
| Loss threshold (dB) | 0.01 |
| Loss resolution (dB) | 0.001 |
| Sampling resolution (m) | Multimode: 0.04 to 2.5<br>Singlemode: 0.04 to 5 |
| Sampling points | Up to 128 000 |
| Distance uncertainty (m) [h] | ±(0.75 + 0.0025 % x distance + sampling resolution) |
| Measurement time | User-defined (60 min. maximum) |
| Typical real-time refresh (Hz) | 3 |
| Stable source output power (dBm) [i] | −1.5 (1300 nm), −7 (1550 nm) |

**NOTES**

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

b. Typical.

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

d. Multimode dynamic range is specified for 62.5 µm fiber; a 3 dB reduction is seen when testing 50 µm fiber.

e. Typical dead zone for multimode reflectance below −35 dB and singlemode reflectance below −45 dB, using a 5 ns pulse.

f. Multimode port output fiber is 62.5/125 µm, controlled launch conditions allow 50 µm and 62.5 µm multimode fiber testing..

g. For 50/125 µm fiber at 850 nm, compliant to TIA-526-14-B and IEC 61280-4-1 Ed. 2.0 using an external EF conditioner (SPSB-EF-C-30). Typically compliant for 50/125 µm fiber at 1300 nm.

h. Does not include uncertainty due to fiber index.

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

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## LASER SAFETY

INVISIBLE LASER RADIATION
VIEWING THE LASER OUTPUT WITH
CERTAIN OPTICAL INSTRUMENTS (FOR
EXAMPLE, EYE LOUPES, MAGNIFIERS AND
MICROSCOPES) WITHIN A DISTANCE OF
100 MM MAY POSE AN EYE HAZARD

CLASS 1M LASER PRODUCT

## ORDERING INFORMATION

**Multimode and singlemode (access and LAN/WAN OTDR)**

**FTB-7200D-XX-XX-XX-XX**

**Model**
FTB-7200D-12CD-23B = Four-wavelength MM/SM OTDR module, 850/1300 nm
(50/125 µm and 62.5/125 µm) and 1310/1550 nm (9/125 µm)
FTB-7200D-12CD = Dual-wavelength MM OTDR module, 850/1300 nm
(50/125 µm and 62.5/125 µm)
FTB-7200D-023B = Dual-wavelength SM OTDR module, 1310/1550 nm (9/125 µm)

**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
EA-EUI-98 = APC/LC
EI connectors = See note below

Example: FTB-7200D-12CD-23B-EI-EUI-89-EA-EUI-95-AD

**OTDR Software Option [a]**
00 = Without software option [b]
AD = Macrobend finder and linear view [c]

**Multimode Connector [d]**
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
EI-EUI-98 = UPC/LC

**Notes**
a. This software option is compatible only on FTB-2 Pro, FTB-200 and FTB-200-V2 platform.
b. Includes macrobend finder in FTB-2/FTB-2 Pro.
c. Included in FTB-200v2. Not available in FTB-2/FTB-2 Pro.
d. Please refer to the example above. First select the multimode connector, then the singlemode connector.

## EI CONNECTORS

**APC**

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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