

# FTB-720 and FTB-7200D— LAN/WAN Access OTDRs

OPTIMIZED FOR MULTIMODE AND SINGLEMODE ACCESS NETWORK TESTING



The ideal construction OTDRs for everyday testing in any access network as well as in LAN/WAN networks

## KEY FEATURES

- Dynamic range of up to 36 dB
- Event dead zone as low as 0.8 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
- Controlled launch conditions for more accurate loss measurements
- Live fiber testing at 1625 nm (FTB-720 only)

## APPLICATIONS

- Access network testing
- LAN/WAN characterization



## PLATFORM COMPATIBILITY

For FTB-720:



**FTB-1**  
One-module platform for dedicated applications

For FTB-7200D:



**FTB-200**  
Two-slot modular platform for combined applications

**FTB-500**  
Four- or eight-slot platform for fiber characterization

SPECIFICATIONS <sup>a</sup>

TECHNICAL SPECIFICATIONS		
	FTB-7200D	FTB-720
Wavelength (nm) <sup>b</sup>	850 ± 20, 1300 ± 20, 1310 ± 20, 1550 ± 20	850 ± 20, 1300 ± 20, 1310 ± 20, 1550 ± 20, 1625 ± 15 (filtered)
Dynamic range (dB) <sup>c, d</sup>	27, 26, 36, 34	27, 26, 36, 34, 34
Event dead zone (m) <sup>e</sup>	1	0.8
Attenuation dead zone (m) <sup>f</sup>	3, 4, 4.5, 5	4, 4.5, 5, 5, 5
Distance range (km)	Multimode: 0.1, 0.3, 0.5, 1.3, 2.5, 5, 10, 20, 40 Singlemode: 1.25, 2.5, 5, 10, 20, 40, 80, 160, 260	Multimode: 0.1, 0.3, 0.5, 1.3, 2.5, 5, 10, 20, 40 Singlemode: 1.25, 2.5, 5, 10, 20, 40, 80, 160, 260
Pulse width (ns)	Multimode: 5, 10, 30, 100, 275, 1000 Singlemode: 5, 10, 30, 100, 275, 1000, 2500, 10 000, 20 000	Multimode: 5, 10, 30, 50, 100, 275, 500, 1000 Singlemode: 5, 10, 30, 50, 100, 275, 500, 1000, 2500, 10 000, 20 000
Launch conditions <sup>f</sup>	Class CPR 1 or 2	Class CPR 1 or 2 <sup>i</sup>
Linearity (dB/dB)	±0.03	±0.03
Loss threshold (dB)	0.01	0.01
Loss resolution (dB)	0.001	0.001
Sampling resolution (m)	Multimode: 0.04 to 2.5 Singlemode: 0.04 to 5	Multimode: 0.04 to 2.5 Singlemode: 0.04 to 5
Sampling points	Up to 128 000	Up to 256 000
Distance uncertainty (m) <sup>g</sup>	±(0.75 + 0.0025 % x distance + sampling resolution)	±(0.75 + 0.0025 % x distance + sampling resolution)
Measurement time	User-defined (60 min. maximum)	User-defined (60 min. maximum)
Typical real-time refresh (Hz)	3	3
Stable source output power (dBm) <sup>h</sup>	-1.5 (1300 nm), -7 (1550 nm)	-3 (1300 nm), -7 (1550 nm)
Visual fault locator (optional) <sup>b</sup>	Laser, 650 nm ± 10 nm CW, P <sub>out</sub> in 62.5/125 μm: 1.5 dBm (1.4 mW)	N/A

## NOTES

- All specifications valid at 23 °C ± 2 °C with an FC/PC connector, unless otherwise specified; APC connector for FTB-720 singlemode model.
- Typical.
- Typical dynamic range with longest pulse and three-minute averaging at SNR = 1.
- Multimode dynamic range is specified for 62.5 μm fiber; a 3 dB reduction is seen when testing 50 μm fiber.
- Typical dead zone for multimode reflectance below -35 dB and singlemode reflectance below -45 dB, using a 5 ns pulse.
- For multimode port, controlled launch conditions allow 50 μm and 62.5 μm multimode fiber testing.
- Does not include uncertainty due to fiber index.
- Typical output power is given at 1300 nm for multimode output and 1550 nm for singlemode output.
- Under improvement to achieve better conditions.

## LASER SAFETY

21 CFR 1040.10 AND IEC 60825-1:2007  
CLASS 1M WITHOUT VFL OPTION  
CLASS 3R WITH VFL OPTION



**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)

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

**Connector<sup>a</sup>**

EA-EUI-28 = APC/DIN 47256<sup>b</sup>  
 EA-EUI-89 = APC/FC narrow key<sup>b</sup>  
 EA-EUI-91 = APC/SC<sup>b</sup>  
 EA-EUI-95 = APC/E-2000<sup>b</sup>  
 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

**Software Option**

00 = Without software option  
 AD = Macrobend finder and linear view<sup>c</sup>

**Visual fault locator**

00 = Without visual fault locator  
 VFL = With visual fault locator (universal 2.5 mm connector)

**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-04B = OTDR 1310/1550 nm with filtered 1625 nm port  
 FTB-720-23B = OTDR 1310/1550 nm  
 FTB-720-12CD = OTDR 850/1300 nm  
 FTB-720-12CD-23B = OTDR 850/1300 nm, 1310/1550 nm

Example: FTB-720-23B-04B-EA-EUI-89-EA-EUI-89-AD

**First connector<sup>a</sup>**

EA-EUI-28 = APC/DIN 47256<sup>b</sup>  
 EA-EUI-89 = APC/FC narrow key<sup>b</sup>  
 EA-EUI-91 = APC/SC<sup>b</sup>  
 EA-EUI-95 = APC/E-2000<sup>b</sup>  
 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

**Software Option**

00 = Without software option  
 AD = Auto diagnostic (macrobend detection, pass/fail and fault finder)  
 EC = Event characterization (bidirectional analysis and Template mode)

**Second connector<sup>d</sup>**

EA-EUI-28 = APC/DIN 47256  
 EA-EUI-89 = APC/FC narrow key  
 EA-EUI-91 = APC/SC  
 EA-EUI-95 = APC/E-2000  
 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

**Notes**

- a. Please refer to the example above. First select the multimode connector, then the singlemode connector.
- b. Singlemode only.
- c. This software option is compatible only on FTB-200 platform.
- d. Available with second port 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-91 (UPC/ST).

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EXFO is certified ISO 9001 and attests to the quality of these products. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. EXFO has made every effort to ensure that the information contained in this specification sheet is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation. Units of measurement in this document conform to SI standards and practices. In addition, all of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit [www.EXFO.com/recycle](http://www.EXFO.com/recycle). Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.

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