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

OPTIMIZED FOR MULTIMODE AND SINGLEMODE ACCESS NETWORK TESTING

FROST & SULLIVAN
2011 BEST PRACTICES AWARD
GLOBAL PORTABLE FIBER OPTIC TEST EQUIPMENT MARKET SHARE LEADERSHIP AWARD

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

SPEC SHEET

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

40 Gbit/s Test Solutions

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

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SPECIFICATIONS [a]

TECHNICAL SPECIFICATIONS

	FTB-7200D	FTB-720
Wavelength (nm) [b]	850 ± 20, 1300 ± 20, 1310 ± 20, 1550 ± 20	850 ± 20, 1300 ± 20, 1310 ± 20, 1550 ± 20, 1625 ± 15 (filtered)
Dynamic range (dB) [c, d]	27, 26, 36, 34	27, 26, 36, 34, 34
Event dead zone (m) [e]	1	0.8
Attenuation dead zone (m) [f]	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 [f]	Class CPR 1 or 2	Class CPR 1 or 2 [i]
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) [g]	±(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) [h]	–1.5 (1300 nm), –7 (1550 nm)	–3 (1300 nm), –7 (1550 nm)
Visual fault locator (optional) [b]	Laser, 650 nm ± 10 nm CW, P_{out} in 62.5/125 µm: 1.5 dBm (1.4 mW)	N/A

NOTES

a. All specifications valid at 23 °C ± 2 °C with an FC/PC connector, unless otherwise specified; APC connector for FTB-720 singlemode model.

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. For multimode port, controlled launch conditions allow 50 µm and 62.5 µm multimode fiber testing.

g. Does not include uncertainty due to fiber index.

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

i. 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)

Connector [a]
EA-EUI-28 = APC/DIN 47256 [b]
EA-EUI-89 = APC/FC narrow key [b]
EA-EUI-91 = APC/SC [b]
EA-EUI-95 = APC/E-2000 [b]
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 [c]

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

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

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

First connector [a]
EA-EUI-28 = APC/DIN 47256 [b]
EA-EUI-89 = APC/FC narrow key [b]
EA-EUI-91 = APC/SC [b]
EA-EUI-95 = APC/E-2000 [b]
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 [d]
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

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

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).

EXFO Corporate Headquarters > 400 Godin Avenue, Quebec City (Quebec) G1M 2K2 CANADA | Tel.: +1 418 683-0211 | Fax: +1 418 683-2170 | info@EXFO.com

Toll-free: +1 800 663-3936 (USA and Canada) | www.EXFO.com

EXFO America	3400 Waterview Parkway, Suite 100	Richardson, TX 75080 USA	Tel.: +1 972 761-9271	Fax: +1 972 761-9067
EXFO Asia	100 Beach Road, #22-01/03 Shaw Tower	SINGAPORE 189702	Tel.: +65 6333 8241	Fax: +65 6333 8242
EXFO China	36 North, 3rd Ring Road East, Dongcheng District Room 1207, Tower C, Global Trade Center	Beijing 100013 P. R. CHINA	Tel.: + 86 10 5825 7755	Fax: +86 10 5825 7722
EXFO Europe	Omega Enterprise Park, Electron Way	Chandlers Ford, Hampshire S053 4SE ENGLAND	Tel.: +44 2380 246810	Fax: +44 2380 246801
EXFO NetHawk	Elektroniikkatie 2	FI-90590 Oulu, FINLAND	Tel.: +358 (0)403 010 300	Fax: +358 (0)8 564 5203
EXFO Service Assurance	270 Billerica Road	Chelmsford, MA 01824 USA	Tel.: +1 978 367-5600	Fax: +1 978 367-5700

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