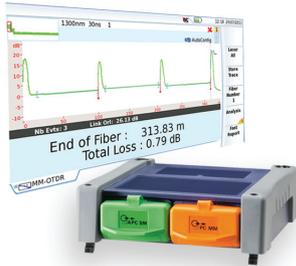


T-BERD®/MTS-2000/-4000 Platforms

Multimode/Single-mode (Quad & MM) OTDR Modules



- Key Benefits**
- Offer ideal test solution for use in the installation, turn-up and maintenance of LAN/WAN, Access, Metro and Wireless Backhaul networks
 - Bring flexibility with quad-wavelength Singlemode/ Multimode version (Quad) and dual-wavelength Multimode version (MM)
 - Enable to perform a full range of fiber certification tests with integrated Loss Test Set on both multimode and singlemode OTDR ports
 - Include bi-directional analysis, fault locator, macrobend detection and multi-pulse acquisition test features

Key Features

- Dynamic range of 26/24dB (MM) and 37/35dB (SM)
- Integrated singlemode and multimode CW Light source and Broadband Power Meter
- TIA/IEC pass/fail thresholds
- Propagation delay measurement in multimode (TIA-568-C)
- Optimized for testing 10MB to 40GigE
- Enables Tier 2 certification of Premises networks
- For Tier 1 Fiber Certification, see the JDSU Certifier40G
- IEC 61280-4-1 compliant using an external mode conditioner

The MM OTDR module an ideal companion for the installation and maintenance of LAN/WAN and multimode Access networks thanks to its fast acquisition time, sharp resolution (0.8m event dead zone) and 26/24dB dynamic range at 850nm and 1300nm.

The Quad OTDR module combines singlemode and multimode testing capabilities (850/1300nm multimode and 1310/1550nm singlemode wavelengths) within a single module, making it the right tool to address the testing needs of Premises/Enterprise networks as well as wireless backhaul infrastructures. With 37/35dB dynamic range for singlemode wavelengths, the Quad OTDR module can also be used in Metro and Access/FTTx networks. Therefore, the Quad OTDR is the ideal module for installers/contractors and any users dealing with both singlemode and multimode applications in their daily work.

Combining a true loss test set (light source and power meter) with the OTDR on the same port enables users to perform a full range of fiber certification tests (continuity check, total link loss, length, connectors reflectance, and events loss measurements) without disconnecting fibers. This capability is integrated in both singlemode and multimode optical ports.

PLATFORM COMPATIBILITY

T-BERD 2000 / MTS-2000



One-Slot Handheld Modular Platform Singlemode/Multimode Fiber Testing

T-BERD 4000 / MTS-4000



Two-Slot Handheld Modular Platform Singlemode/Multimode Fiber and Enterprise IT Network Testing

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Specifications

General (Typical at 25°C)

Weight	0.4 kg (0.88 lb)
Dimensions (w × h × d)	128x134x40 mm (5x5.28x1.58 in)

Optical Interfaces

Interchangeable optical connectors	FC, SC, DIN, LC, and ST
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Technical Characteristics

Laser safety class (21 CFR)	Class 1
Distance units	Kilometers, feet, and miles
Group index range	1.300000 to 1.700000 in 0.00001 steps
Number of data points	Up to 128,000 data points
Distance measurement	Automatic or dual cursor
Display range	0.5 m to 260 km

Cursor resolution	1 cm
Sampling resolution	4 cm
Accuracy	$\pm 1 \text{ m} \pm \text{sampling resolution} \pm 1.10^{-5} \times \text{distance}$ (Excluding group index uncertainties)

Attenuation Measurement

Automatic, manual, 2-point, 5-point, and LSA	
Display range	1.25 dB to 55 dB
Display resolution	0.001 dB
Cursor resolution	0.001 dB
Linearity	$\pm 0.03 \text{ dB/dB}$
Threshold	0.01 to 5.99 dB in 0.01 dB steps

Reflectance/ORL Measurements

Reflectance accuracy	$\pm 2 \text{ dB}$
Display resolution	0.01 dB
Threshold	-11 to -99 dB in 1 dB steps

CW Source and Broadband Power Meter (optional)

CW Source output power level	-3.5 dBm
Power level range (MM/SM)	-3 to -30 / -2 to -50 dBm
Calibrated wavelengths (SM)	1310, 1490, 1550, 1625, and 1650 nm
Calibrated wavelengths (MM)	850, 1300 nm
Measurement accuracy (SM)	$\pm 0.5 \text{ dB}$
Measurement accuracy (MM) ¹	$\pm 1 \text{ dB}$

(1) Using a mode conditioner

Multimode (MM) OTDR Module (Typical at 25°C)

Central Wavelength ²	Pulse Width	RMS Dynamic Range ³	Event Dead Zone ⁴	Attenuation Dead Zone ⁵
850/1300 nm $\pm 30 \text{ nm}$	3 ns to 1 μs	26/24 dB	0.8 m	4 m

Multimode/Singlemode (Quad) OTDR Module (Typical at 25°C)

Central Wavelength ²	Pulse Width	RMS Dynamic Range ³	Event Dead Zone ⁴	Attenuation Dead Zone ⁵
850/1300 nm $\pm 30 \text{ nm}$	3 ns to 1 μs	26/24 dB	0.8 m	4 m
1310/1550 nm $\pm 20 \text{ nm}$	3 ns to 20 μs	37/35 dB	0.9 m	4 m

(2) Laser at 25°C.

(3) The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS noise level, after 3 minutes averaging, with the largest pulse width.

(4) Measured at $\pm 1.5 \text{ dB}$ down from the peak of an unsaturated reflective event, at shortest pulse width.

(5) Measured at $\pm 0.5 \text{ dB}$ from the linear regression using a typical FC/UPC reflectance, at shortest pulse width.

Basic Ordering Information (contact JDSU for additional references)

Multimode 850/1300 OTDR Module	E4123MM
Multimode/Single-mode 850/1300/1310/1550 nm OTDR Module	E4146QUAD
EF Modal Controller for 50 μm MM Fiber—SC/PC	EFJEF50CONSCPC
EF Modal Controller for 50 μm MM Fiber—FC/PC	EFJEF50CONFCPC
Continuous and Modulated Source Option	E410TDRLS
Broadband Power Meter Option	E410TDRPM

Universal optical connectors

Straight connectors (Single-mode port)	EUNIPCFC, EUNIPCSC, EUNIPCST, EUNIPCDIN, EUNIPCLC
8° angled connectors (Single-mode port)	EUNIAPCFC, EUNIAPCSC, EUNIAPCDIN, EUNIAPCLC
Straight connectors (Multimode port)	EUNIPCFM, EUNIPCSCMM, EUNIPCSTMM, EUNIPCDINMM, EUNIPCLCMM

For more information on the T-BERD/MTS-2000 and T-BERD/MTS-4000 test platforms, please refer to the separate data sheets and brochure.

Test & Measurement Regional Sales

NORTH AMERICA	LATIN AMERICA	ASIA PACIFIC	EMEA	WEBSITE: www.jdsu.com/test
TEL: 1 866 228 3762 FAX: +1 301 353 9216	TEL: +1 954 688 5660 FAX: +1 954 345 4668	TEL: +852 2892 0990 FAX: +852 2892 0770	TEL: +49 7121 86 2222 FAX: +49 7121 86 1222	