

# T-BERD®/MTS-2000/4000 Platforms

## OTDR Modules



- Key Benefits**
- Offer ideal test solution for use in the installation, turn-up, and maintenance of FTTx/PON, Access, Metro and Enterprise Networks
  - Provide dedicated wavelengths for in-service troubleshooting and instantaneous traffic detection when connecting live fiber
  - Include bi-directional analysis, macrobend detection, fault locator and multi-pulse acquisition test features

### Key Features

- Up to 42 dB dynamic range and 256,000 acquisition points
- PON-optimized to test up to 1x128 splitter
- Combined single-mode/multimode version (Quad)
- Single-/dual-/tri-wavelength versions with 1310, 1490, 1550, 1625, and 1650 nm
- Single connector port for 1310, 1550, and in-service 1625 nm wavelengths
- Integrated CW light source and Broadband Power Meter

The range of JDSU OTDR modules for the dual-slot T-BERD/MTS-4000 and single-slot T-BERD/MTS-2000 platforms includes Metro-PON (MP), Metro-Access (MA), Last Mile (LM), combined Single-mode/Multimode (Quad), and Multimode (MM) versions.

JDSU OTDR modules enable field technicians to rapidly, reliably, and cost-effectively install, turn up, and troubleshoot any optical network architecture—Enterprise, Metro, and FTTx/Access point-to-point or point-to-multipoint passive optical networks (PONs).

### PLATFORM COMPATIBILITY

T-BERD 2000 / MTS-2000



One-Slot Handheld Modular Platform  
Fiber Networks Testing

T-BERD 4000 / MTS-4000



Two-Slot Handheld Modular Platform  
Fiber/Copper & Multiple Services Testing

**Specifications**
**General (Typical at 25°C)**

Weight	0.35 kg (0.77 lb)
Dimensions (w × h × d)	128x134x40 mm (5x5.28x1.58 in)

**Optical Interfaces**

Applicable fiber	SMF 9/125 μm
Interchangeable optical connectors	FC, SC, DIN, LC (PC or APC) and ST (PC)

**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 or 256,000 data points

- (1) -2 to -50dBm for LM and Quad  
 (2) Available on LM, MA, MP and Quad modules

Distance measurement	Automatic or dual cursor
Display range	0.5 to 260 km
Cursor resolution	1 cm
Sampling resolution	4 cm
Accuracy	±1 m ±sampling resolution ±1.10 <sup>-5</sup> x 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	±0.03 dB/dB (±0.04 for LM)
Threshold	0.01 to 5.99 dB in 0.01 dB steps

- (3) Available on MM and Quad modules  
 (4) Using a mode conditioner

**Reflectance/ORL Measurements**

Reflectance accuracy	±2 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) <sup>1</sup>	-3 to -30 / 0 to -55 dBm
Calibrated wavelengths (SM) <sup>2</sup>	1310, 1490, 1550, 1625, and 1650 nm
Calibrated wavelengths (MM) <sup>3</sup>	850, 1300 nm
Measurement accuracy (SM)	±0.5 dB
Measurement accuracy (MM) <sup>4</sup>	±1dB

**OTDR Modules (Typical at 25°C)**

These are standard specifications, representing only a selection of the JDSU offerings. For specific requirements, please contact your local JDSU representative.

	Central Wavelength <sup>5</sup>	RMS Dynamic Range <sup>6</sup>	Event Dead Zone <sup>7</sup>	Attenuation Dead Zone <sup>8</sup>	Network Type	Applications Key Benefits
Multimode (MM)	850/1300±30 nm	26/24 dB	0.8 m	4 m	LAN/Enterprise	Multimode network qualification
Combined multimode and single-mode (Quad)	850/1300 ± 30 nm 1310/1550 ±20 nm	26/24 dB 37/35 dB	0.8 m 0.9 m	4 m 4 m	LAN/Enterprise/ Access/ Metro	Universal test solution for both multimode and single-mode networks
Last Mile (LM)	1310 ±20 nm	34 dB	1 m	4 m	FTTH/Access	Short-haul qualification FTTH distribution qualification
	1550 ±20 nm	32 dB				
	1625 ±10 nm	32 dB				
	1650 ±20 nm	30 dB				
Metro-Access (MA)	1310 ±20 nm	37 dB	0.9 m	4 m	FTTH/Access/ Metro	Short-/Medium-haul qualification FTTH test up to 1x32 splitter
	1550 ±20 nm	35 dB				
	1625 ±10 nm	35 dB				
	1650 ±20 nm	34 dB				
Metro-PON (MP)	1310 ±20 nm	42 dB	0.8 m	4 m	FTTH/Access/ Metro/Long Haul	Short-/Medium-/Long-haul qualification FTTH test up to 1x128 splitter
	1490 ±20 nm	40 dB				
	1550 ±20 nm	40 dB				
	1625 ±10 nm	40 dB				
	1650 +10/-5 nm	40dB				

- (5) Laser at 25°C and measured at 10 μs.  
 (6) The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS noise level, after 3 minutes averaging.  
 (7) Measured at ±1.5 dB down from the peak of an unsaturated reflective event.  
 (8) Measured at 1310 nm and ±0.5 dB from the linear regression using a FC/PC-type reflectance.

**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
Last Mile 1310/1550 nm OTDR Module	E4126LM
Metro Access 1310/1550 nm OTDR Module	E4126MA
Metro PON 1310/1550 nm OTDR Module	E4126MP
Metro PON 1310/1550/ Filtered 1625 nm OTDR Module	E4136RMP
Metro PON 1310/1550/ Filtered 1650 nm OTDR Module	E4138RMP65

**Universal optical connectors**

Straight connectors	EUNIPCFC, EUNIPCSC, EUNIPCST, EUNIPCDIN, EUNIPCCLC
8° angled connectors	EUNIAPCFC, EUNIAPCSC, EUNIAPCDIN, EUNIAPCLC

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

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