



Quad OTDR Module

T-BERD®/MTS-2000, -4000, -5800 Platforms

The Viavi Solutions Quad OTDR module is the ideal test tool for installers/contractors, wireless service providers, or any user dealing with both single-mode and multimode applications every day. It is perfect for use in installing, turning up, and maintaining premises and enterprise, access, metro, and wireless fronthaul/backhaul networks.

The Viavi Quad OTDR module features fast acquisition time, sharp resolution, up to a 26 dB multimode dynamic range, and up to a 37 dB single-mode dynamic range for installing and maintaining fiber links. Its integrated light source and power meter, accessible through both OTDR ports (multimode and single-mode), let users quickly identify fiber without switching ports and conduct a full range of fiber certification tests.

The Quad module's optical performance combined with the T-BERD/MTS platform's complete suite of features ensures that testing is done right—the first time.

Standard test features include:

- Automatic macrobend detection
- Summary results table with pass/fail analysis
- Bidirectional OTDR analysis
- FastReport on-board report generation

Key Features

- Up to 37 dB dynamic range in single-mode and 26 dB in multimode
- Quad-wavelength version with 850, 1300, 1310, and 1550 nm and a dual-wavelength version with 850 and 1300 nm
- Integrated continuous wave (CW) light source and power meter
- TIA/IEC pass/fail thresholds
- Propagation delay measurement in multimode (TIA-568-C)
- Optimized for 10 MB to 40 GE testing
- Certifies Tier 2 premises networks**
- IEC 61280-4-1-compliant using an external modal controller
- Ready for SLM, FTTA-SLM, and FTTH-SLM intelligent optical application software



T-BERD/MTS-2000 one-slot handheld modular platform for testing fiber networks



T-BERD/MTS-5800* handheld test instrument for testing 10 G Ethernet and fiber networks



T-BERD/MTS-4000 two-slot handheld modular platform for testing fiber, copper, and multiple services

*Compatible with models -5811P/L and -5822P.

**For Tier 1 certification, see the Viavi Certifier40G

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	
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	±1 m ±sampling resolution ±110 ⁻⁵ 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	
Threshold	0.01 to 5.99 dB in 0.01 dB steps	
Reflectance/ORL Measurements		
Reflectance accuracy	±2 dB	
Display resolution	0.01 dB	
Threshold	−11 to −99 dB in 1 dB steps	
CW Source Option		
CW Source output power level	−3.5 dBm	
Operating modes	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINTest	
Power Meter Option		
Power level range	MM	−3 to −30 dBm
	SM	−2 to −50 dBm
Calibrated wavelengths	MM	850 and 1300 nm
	SM	1310, 1490, 1550, 1625, and 1650 nm
Measurement accuracy	MM ¹	±1 dB
	SM	±0.5 dB

Multimode and Quad OTDR Modules (Typical at 25°C)		
Central wavelength ²	850/1300 ±30 nm	1310/1550 ±20 nm
Pulse width	3 ns to 1 µs	3 ns to 20 µs
RMS dynamic range ³	26/24 dB	37/35 dB
Event dead zone ⁴	0.8 m	0.9 m
Attenuation dead zone ⁵	4 m	4 m

1. Using a mode conditioner
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
4. Measured at ±1.5 dB down from the peak of an unsaturated reflective event
5. Measured at ±0.5 dB from the linear regression using an F/UPC-type reflectance

Ordering Information

Description	Part Number
Multimode and Quad OTDR Modules and Options	
Multimode 850, 1300 nm OTDR module	E4123MM
Quad 850/1300/1310/1550 nm OTDR module	E4146QUAD
Continuous and Modulated Source option	E410TDRLS
Power Meter option	E410TDRPM
Accessories	
EF modal controller for 50 µm MM fiber-SC/PC	EFJEF50CONSCPC
EF modal controller for 50 µm MM fiber-FC/PC	EFJEF50CONFCPC
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)	EUNIPCFCMM, EUNIPCSCMM, EUNIPCSTMM, EUNIPCDINMM, EUNIPCLCMM

For more information on T-BERD/MTS-2000, -4000, and -5800 test platforms, please refer to their respective data sheets and brochures.

Contact your Viavi representative for additional information regarding your specific needs.



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