VIAVI
T-BERD/MTS Quad OTDR Module

For T-BERD®/MTS-2000, –4000 V2, –5800,
CellAdvisor 5G and OneAdvisor-800 Platforms

VIAVI Solutions

The VIAVI 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, CellAdvisor 5G and OneAdvisor-800 platform's complete suite of features ensures that testing is done right—the first time.
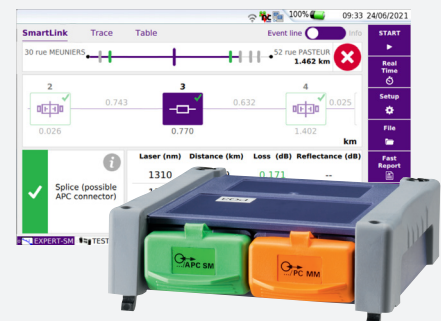
Standard test features include:
- Automatic macrobend detection
- Summary results table with pass/fail analysis
- Bidirectional OTDR analysis
- FastReport on-board report generation

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

*Compatible with models –5811P/L and –5822P.
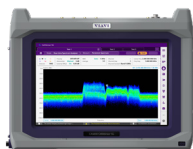**For Tier 1 certification, see the VIAVI Certifier40G

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

T-BERD/MTS-4000 V2
Two-slot handheld modular platform for testing fiber networks

OneAdvisor-800
All-in-One Cell-site Installation and Maintenance Test Solution

CellAdvisor 5G
Cell site test solution

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

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 ±1.10^{-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	E41OTDRLS
Power Meter option	E41OTDRPM
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 V2, -5800, CellAdvisor 5G and OneAdvisor-800 test platforms, please refer to their respective data sheets and brochures.

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

VIAVI Care Support Plans

Increase your productivity for up to 5 years with optional VIAVI Care Support Plans:

- Maximize your time with on-demand training, priority technical application support and rapid service.
- Maintain your equipment for peak performance at a low, predictable cost.

Plan availability depends on product and region. Not all plans are available for each product or in every region. To find out which VIAVI Care Support Plan options are available for this product in your region, contact your local representative or visit: viavisolutions.com/viavicareplan

Features

*5-year plans only

Plan	Objective	Technical Assistance	Factory Repair	Priority Service	Self-paced Training	5 Year Battery and Bag Coverage	Factory Calibration	Accessory Coverage	Express Loaner
BronzeCare	Technician Efficiency	Premium	✓	✓	✓				
SilverCare	Maintenance & Measurement Accuracy	Premium	✓	✓	✓	✓*	✓		
MaxCare	High Availability	Premium	✓	✓	✓	✓*	✓	✓	✓