VIAVI VIAVI Solutions

4100 Series Quad OTDR Module
For T-BERD®/MTS-2000, -4000 V2, -5800
and OneAdvisor 800 Platforms

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, 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 a complete suite of platform enabled testing and reporting features ensures that testing is done right—the first time.

Standard test features include:

- Automatic macrobend detection
- Summary results table with pass/fail analysis
- Smart Link Mapper: Simple icon-based OTDR results view
- 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
- Integrated continuous wave (CW) light source
- TIA/IEC pass/fail thresholds
- Propagation delay measurement in multimode (TIA-568-C)
- Certifies Tier 2 premises networks
- IEC 61280-4-3-compliant using an external modal controller

T-BERD/MTS-2000 V2 one-slot handheld modular platform for testing fiber networks

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

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

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

Specifications

General (Typical at 25°C)

Weight	0.4 kg (0.88 lb)
Dimensions (w × h × d)	128 x 134 x 40 mm (5 x 5.28 x 1.58 in)

Optical Interfaces

Interchangeable Optical Connectors	FC, SC, 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 256,000 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]	± (0.5 m + sampling resolution + 0.001% x distance)

Attenuation Measurement

Automatic, Manual, 2-point, 5-point, and LSA

Display Range	1.25 dB to 55 dB
Display 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

Optical Light Source

CW Source Output Power Level	−3.5 dBm
Operating Modes	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINTest

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]	0.55 m	0.65 m
Attenuation Dead Zone[5]	3 m	3 m
Distance Display Range	Up to 10 Km	Up to 260 Km

1. Excluding group index uncertainties
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 at 500 ns in multimode and 20 µs in Singlemode
4. Measured at ±1.5 dB down from the peak of an unsaturated reflective event
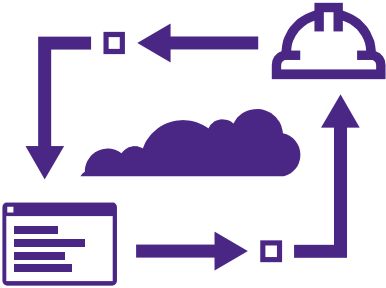5. Measured at ±0.5 dB from the linear regression using an F/UPC-type reflectance

Ordering Information

Modules (all modules are delivered with a SC/PC or SC/APC test port SM adapter and a SC/PC test port MM)	Part Number
Quad OTDR Modules and Options	
MULTIMODE/SINGLEMODE –850/1300/1310/1550 nm – PC	E4146A-PC
MULTIMODE/SINGLEMODE –850/1300/1310/1550 nm – APC	E4146A-APC
Modules Accessories	
SC/PC (Blue), SC/APC (Green) Test Port SM Adapter, screw type	EUSCADS/-APC
LC/PC (Blue), LC/APC (Green) Test Port SM Adapter, screw type	EULCADS/-APC
FC Test Port SM Adapter, screw type	EUFCADS
LC/PC (Blue) Test Port MM Adapter, screw type	EULCADSMM
FC/PC Test Port MM Adapter, screw type	EUFCADSMM
ST Test Port MM Adapter, screw type	EUSTADSMM

Test Process Automation (TPA)

Allows your team to deliver expert-level test results and close projects on the first try, every time. TPA is a closed loop test system that optimizes workflows, eliminates manual, error prone work and automates immediate data reporting for job close out, team progress updates and network health analytics. Execute jobs efficiently to ensure high quality network builds, rapid turn-up/activation and enhanced operational visibility.

Inspect Before You Connect (IBYC)

Contamination is the number 1 reason for troubleshooting optical networks. Proactive inspection and cleaning of fiber connectors can prevent poor signal performance, equipment damage, and network downtime.

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	✓	✓	✓	✓*	✓	✓	✓

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