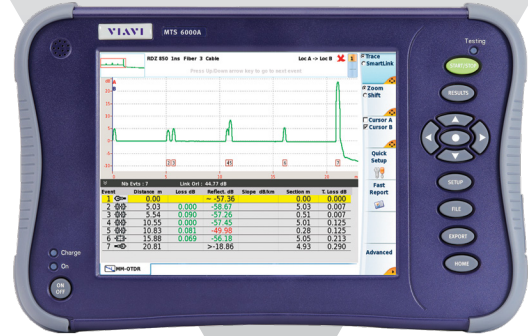# Hi-Res Multimode OTDR Solution

T-BERD®/MTS-6000A with EVO AV high-resolution multimode OTDR module

The Viavi Solutions® Hi-Res multimode OTDR solution characterizes and locates faults on very short multimode fiber runs deployed in aircraft, spacecraft, submarines, and ships. It is the industry's most compact, lightweight, and portable unit, enabling testing in areas where access to fiber is difficult or limited. The solution also characterizes fibers during the manufacturing process.

The RDZ-SLM software application's streamlined user interface takes the complexity out of OTDR testing. Technicians at any skill level can easily and quickly perform error-free tests. The enhanced OTDR test mode includes the following important features:

- SmartLink provides a simple, icon-based map view of a fiber link and its passive elements (connectors, splices, and bends) — it immediately diagnoses potential problems when pass/fail thresholds are set up

- The OTDR trace overlay function compares maintenance results to a reference trace — it clearly shows differences for locating potential issues

- SmartConfigs are generic and user-defined setup configurations — they help eliminate OTDR setup errors and keep results consistent across all users

Key Benefits

- Compact, lightweight, and field portable
- Smarter and faster field testing
- Precise event characterization

Key Features

- Industry-leading dead-zone performance
- Streamlined and error-free setup
- Connector end-face inspection and automated pass/fail analysis
- FastReport onboard PDF report generation
- TIA/IEC pass/fail thresholds for Tier-2 certification
- Battery operated

RDZ-SLM apps

Data Sheet

Specifications (typical at 25°C)

General	
Weight	3.8 kg (8.5 lb)
Dimensions	290 x 188 x 97 mm (11.5 x 7.4 x 3.8 in)
Display	8" TFT high-visibility color touch screen, 800 x 600 LCD
Internal memory	2 GB (128 MB for storage)
I/O interfaces	2 USB 2.0 ports 1 mini-USB 2.0 port RJ45 LAN 10/100/1000 Mbps 1 RS422 interface

Environmental	
Operating temperature range	−10 to +45°C (14 to 113°F)
Humidity	0 to 95% non-condensing

Optical Power Meter	
Calibrated wavelengths	850/1310/1490/1550/1625 nm
Measurement range[1]	+10 to −60 dBm
Optical interfaces	2.5 mm universal push/pull (UPP)

Visual Fault Locator	
Wavelength	650 nm
Emission Mode	CW, 1 Hz
Laser safety class (21 CFR)	Class 2
Optical interfaces	2.5 mm universal push/pull (UPP)

OTDR	
Optical interfaces	PC connector with FC and SC adapters (ST and DIN also available)
Laser safety class (21 CFR)	Class 1
Distance units	Kilometer, meter, feet, miles, inches
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	From 0.05 to 10 km
Cursor resolution	1 cm
Sampling resolution	2 cm
Distance accuracy (relative)	±0.1 m ±sampling resolution ±1.10^{-5} x distance (excluding group index uncertainties)

Attenuation Measurement	
Automatic, manual, 2-point, 5-point, and LSA	
Display resolution	0.001 dB
Cursor resolution	0.001 dB
Linearity	±0.05 dB/dB
Threshold	0.01 to 1.99 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

RDZ-SLM OTDR Application	
Central wavelength[2]	850 +10/−30 nm
Dynamic range[3]	16 dB
Pulse widths	1 ns
Event dead zone[4]	0.2 m
Attenuation dead zone[5]	0.4 m

Expert OTDR Application	
Central wavelength[2]	850 +10/−30 nm; 1300 ±20 nm
Dynamic range[3]	24/24 dB
Pulse widths	1 ns to 50 ns
Event dead zone[4]	0.2/0.25 m
Attenuation dead zone[5]	1.5/2.1 m

1. At 25°C after 20 minutes for stabilization and after zero setting.
2. Laser at 25°C and measured at 10 µs.
3. The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS (SNR = 1) noise level, after 30 seconds averaging using the largest pulse width.
4. Measured at ±1.5 dB below the peak of an unsaturated reflective event using the shortest pulse width.
5. Measured at ±0.5 dB from the linear regression using a −35 dB reflectance and the shortest pulse width.

Ordering Information

Description	Part Number
T-BERD 6000A Hi-Res multimode OTDR solution	TB6000AV2-OTDR-RDZMM*
MTS-6000A Hi-Res multimode OTDR solution	MTS6000AV2-OTDR-RDZMM*
EVO AV high-resolution multimode OTDR module for T-BERD/MTS-6000A (v2) and T-BERD/MTS-8000 (v2)	E8123AV

* Included items: T-BERD/MTS-6000A v2 mainframe with high-visibility touchscreen
Built-in optical power meter and visual fault locator
Module carrier
High-resolution multimode OTDR module with PC connector
SC and FC optical adapters
Soft carrying case

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