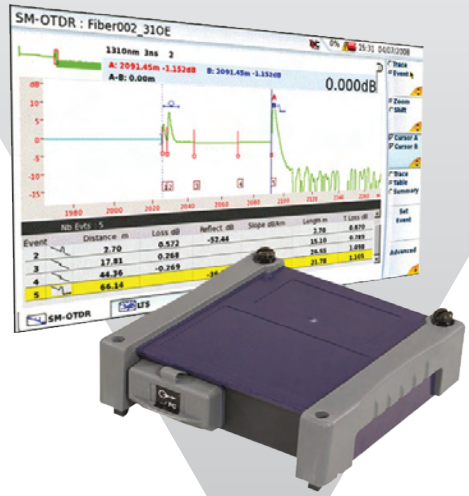


# MP OTDR Module

## T-BERD®/MTS-2000, –4000, –5800 platforms

The Viavi Solutions MP OTDR module provides the optimum performance that fiber installers and service providers need to test metro, cable TV (CATV), and FTTH networks with high-port-count splitters.

With various wavelength combinations including filtered wavelengths for in-service testing, an improved dynamic range, and optimized resolution and dead zones at short pulses, the MP module is the ideal OTDR to test any PON system with up to a 1x128 splitting ratio.

The MP 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 testing features include:**

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

**Key Features**

- Up to 43 dB dynamic range and 256,000 acquisition points
- PON-optimized to test up to a 1x128 splitter
- Single-, dual-, and tri-wavelength versions with 1310/1490/1550/1625/1650 nm
- Single connector port for 1310, 1550, and in-service 1625 nm or 1650 nm wavelengths
- Integrated CW light source and power meter
- FiberComplete™ compatible
- Ready for SLM, FTTA-SLM, and FTTH-SLM intelligent optical application software
- Instantly detects traffic when connected to live fiber

**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 TBERD/MTS-5811P/L, -5822P.

## Specifications

| General (typical at 25°C) | |
|---|---|
| Weight | 0.35 kg (0.77 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, DIN, LC and ST |
| **Technical Characteristics** | |
| Laser safety class (21 CFR) | Class 1 |
| Distance units | Kilometers, feet, and miles |
| Group index range | 1.30000 to 1.70000 in 0.00001 steps |
| Number of data points | Up to 256,000 data points |
| 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<br>$\pm 1.10^{-5}$ x distance<br>(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** | |
| CW Source output power level | –3.5 dBm |
| **Power Meter (optional)** | |
| Power level range | 0 to –55 dBm |
| Calibrated wavelengths | 1310, 1490, 1550, 1625, and 1650 nm |
| Measurement accuracy | ±0.5 dB |

| MP OTDR (typical at 25°C) | | | | | |
|---|---|---|---|---|---|
| Central wavelength[1] | 1310 ±20 nm | 1490 ±20 nm | 1550 ±20 nm | 1625 ±10 nm | 1650 ±20 nm |
| Pulse width | 3 ns to 20 µs | | | | |
| RMS dynamic range[2] | 43 dB | 41 dB | 41 dB | 41 dB | 40 dB |
| Event dead zone[3] | 80 cm | | | | |
| Attenuation dead zone[4] | 4 m | | | | |

1. Laser at 25°C and measured at 10 µs.
2. The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS noise level, after 3 minutes averaging.
3. Measured at ±1.5 dB down from the peak of an unsaturated reflective event.
4. Measured at ±0.5 dB from the linear regression using a FC/UPC-type reflectance.

## Ordering Information

| Description | Part Number |
|---|---|
| MP 1310/1550 nm OTDR module | E4126MP |
| MP 1310/1490/1550 nm OTDR module | E4138MP49 |
| MP 1310/1550/1625 nm OTDR module | E4136MP |
| MP 1310/1550 and filtered 1625 nm OTDR module | E4136RMP |
| MP Filtered 1650 nm OTDR module | E4118RMP65 |
| MP 1310/1550 and filtered 1650 nm OTDR module | E4138RMP65 |
| Power meter option | E41OTDRPM |
| ***Universal Optical Connectors*** | |
| Straight | EUNIPCFC, EUNIPCSC, EUNIPCST, EUNIPCDIN, EUNIPCLC |
| 8° angled | EUNIAPCFC, EUNIAPCSC, EUNIAPCDIN, EUNIAPCLC |

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

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