

OTDR Modules for the T-BERD®/MTS-4000 Platform



Key Features

- Field installable single-slot OTDR plug-in modules for the T-BERD/MTS-4000 platforms
- Optimized OTDR plug-ins for Enterprise, FTTH, Access, Metro, and Long-Haul applications
- Highest OTDR performance with up to 42 dB dynamic range and 256,000 acquisition points
- Single connector port configuration on 1310/1550/1625 nm OTDR with in-service features at 1625 nm
- Instantaneous traffic detection when connecting live fiber
- Integrated source and power meter under OTDR port

Applications

- Used to install, maintain, and troubleshoot Metro, Access, and FTTH networks
- Provides a fiber qualification solution for current and future Access/FTTH networks (Ethernet, PON, and NG-PON)

Testing Metro, Cable TV (CATV), Access, and Fiber-to-the Home (FTTH) networks with larger crews calls for using high-performance handheld test equipment, which is both cost-effective and versatile. Whatever your needs, the T-BERD/MTS-4000 can provide an optimized OTDR plug-in option.

The OTDR plug-in modules together with the T-BERD/MTS-4000 family of products provide a rugged, battery-operated handheld test solution. The large display combined with a comprehensive user interface make it the ideal OTDR to respond to any test scenario.



Specifications
General (Typical at 25°C)

| | |
|------------------------|--------------------------------|
| Weight | 0.35 kg (0.77 lb) |
| Dimensions (w × h × d) | 128x134x40 mm (5x5.28x1.58 in) |

Optical Interfaces

| | |
|------------------------------------|---|
| Applicable fiber | SMF 9/125 μm |
| Interchangeable optical connectors | FC, SC, DIN, LC (PC or APC) and ST (PC) |

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 or 256,000 data points |

| | |
|----------------------|---|
| Distance measurement | Automatic or dual cursor |
| Display range | 0.5 to 160 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 (±0.04 for LM) |
| 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 and Broadband Power Meter (optional)

| | |
|------------------------------|-------------------------------------|
| CW Source output power level | -3.5 dBm (SM) |
| Power level range | 0 to -55 dBm |
| Measurement wavelengths | 1310, 1490, 1550, 1625, and 1650 nm |
| Calibrated wavelengths | 1310, 1490, 1550, 1625, and 1650 nm |
| Measurement accuracy | ±0.5 dB |

OTDR Module (Typical at 25°C)

These are standard specifications, representing only a selection of the JDSU offerings. For specific requirements, please contact your local JDSU representative.

| | Central Wavelength ¹ | RMS Dynamic Range ² | Event Dead Zone ³ | Attenuation Dead Zone ⁴ | Application | Key Benefits |
|--|---|---|------------------------------|------------------------------------|----------------------------------|--|
| Short-range multimode (MM) | 850/1300±20 nm | 27/25 dB | 0.8 m | 4 m | LAN/Enterprise | Multimode network qualification |
| Short range multimode and single-mode (Quad) | 850/1300 1310/1550 ±20 nm | 27/25 dB 37/35 dB | 0.8 m 0.9 m | 2.5 m 4 m | LAN/Enterprise/ Access/ Metro | Universal test solution for both multimode and single-mode networks |
| Short-range single-mode (LM) | 1310 ±20 nm 1550 ±20 nm 1625 ±20 nm 1650 ±20 nm | 34 dB 32 dB 32 dB 30 dB | 1 m | 4 m | FTTH/Access | Short-haul qualification FTTH distribution qualification |
| Medium-range single-mode (MA) | 1310 ±20 nm 1550 ±20 nm 1625 ±20 nm 1650 ±20 nm | 37 dB 35 dB 35 dB 33 dB | 0.9 m | 4 m | FTTH/Access/ Metro | Short-/Medium-haul qualification FTTH test up to 1x32 splitter |
| Long-range single-mode (MP) | 1310 ±20 nm 1490 ±20 nm 1550 ±20 nm 1625 ±20 nm 1650 ±20 nm | 42 dB 40 dB 40 dB 40 dB 40 dB | 0.8 m | 4 m | FTTH/Access/ Metro/Long Haul | Short-/Medium-/Long-haul qualification FTTH test up to 1x128 splitter |

(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 1310 nm and ± 0.5 dB from the linear regression using a FC/PC- type reflectance.

Basic ordering information (contact JDSU for additional references)

| | |
|---|------------|
| Multimode 850/1300 OTDR Module | E4123MM |
| Multimode/Single-mode 850/1300/1310/1550 nm OTDR Module | E4146QUAD |
| Last Mile 1310/1550 nm OTDR Module | E4126LM |
| Metro Access 1310/1550 nm OTDR Module | E4126MA |
| Metro PON 1310/1550 nm OTDR Module | E4126MP |
| Metro PON Filtered 1650 nm OTDR Module | E4118RMP65 |

Universal optical connectors

Straight connectors EUNIPCFC, EUNIPCSC, EUNIPCST, EUNIPCIN, EUNIPCLC

8° angled connectors EUNIAPCFC, EUNIAPCSC, EUNIAPCDIN, EUNIAPCLC

For more information on the T-BERD/MTS 4000 test platform or individual modules, please refer to the separate data sheets and brochure.

Test & Measurement Regional Sales

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|---|--|---|---|--|
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