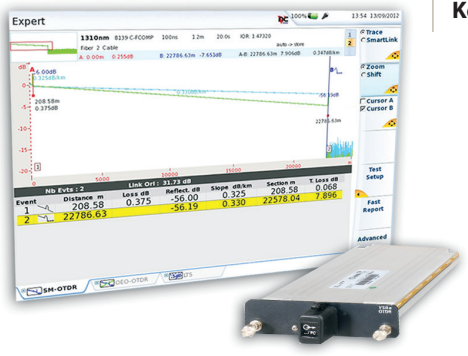
T-BERD®/MTS-6000A and -8000 Platforms

8100-Series OTDR EVO Modules



Key Benefits

- Ideal OTDR test solution for multiple network applications from access/PON FTTH to ultra-long-haul distances
- Industry-leading dead zone performance for full element event characterization on a fiber link 2 m apart
- Includes an integrated power meter, light source, and OTDR in a one-port tool for added flexibility
- Avoids the risk of live signal interference or optical transmitter damage during an OTDR test with instantaneous automatic traffic detection
- Eliminates OTDR interpretation errors with Smart Link Mapper (SLM) without compromising on test time

Key Features

- 2 m attenuation dead zone
- Up to 50 dB dynamic range
- 256,000 acquisition points
- Integrated CW light source and broadband power meter
- PON-optimized to test through 1x128 splitter
- Single connector port for 1310, 1550, and in-service 1650 nm wavelengths
- FiberComplete™ version available for automated bidirectional OTDR, IL, and ORL measurements

Applications

- Metro and ultra-long-haul fiber network characterization
- Advanced FTTH PON network qualification and troubleshooting
- Upgrade core fiber networks to 40 and 100 G
- Remotely monitor fiber while in or out of service

The JDSU 8100-Series OTDR EVO family revolutionizes the challenges of fiber testing for technicians. Connect the OTDR EVO family anywhere on the fiber to characterize single-mode fiber for commissioning, network upgrades, and troubleshooting with the insurance of workflow optimization and accurate fiberlink fingerprinting.

OTDR EVO family optical performance combined with the T-BERD/MTS platforms complete suite of testing features ensure that testing jobs are performed right *the first time*.

Standard testing features include:

- Automatic macrobend detection
- Summary results table with PASS/FAIL analysis
- Bidirectional OTDR analysis
- FastReport — onboard report generation

Platform Compatibility

T-BERD/MTS-6000A

Compact multilayer platform for network installation and maintenance

T-BERD/MTS-8000 (V2)

Scalable platform for multiple-layer and multiple-protocol testing

Specifications (Typical at 25°C)

General

Weight	Approx. 500 g (1.1 lb)
Dimensions (W x H x D)	213 x 124 x 32 mm (8.38 x 4.88 x 1.26 in)
Laser safety class (21 CFR)	Class 1
Distance units	Kilometer, meter, 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 Measurements

Mode	Automatic or dual cursor
Display range	0.5 to 320 km
Display resolution	1 cm
Cursor resolution	From 1 cm
Sampling resolution	From 4 cm
Accuracy	±0.75 m ±sampling resolution ±1.10^{-5} * x distance (excluding group index uncertainties)

Attenuation Measurements

Mode	Automatic, manual, 2-point, 5-point, and LSA
Display range	1.25 to 55 dB
Display resolution	0.001 dB
Cursor resolution	From 0.001 dB
Linearity	±0.03 dB/dB
Threshold	0.01 to 5.99 dB in 0.01 dB steps

Reflectance/ORL Measurements

Mode	Automatic or manual
Reflectance accuracy	±2 dB
Display resolution	0.01 dB
Threshold	–11 to –99 dB in 1 dB steps

*Time-based controller/clock accuracy

OTDR Modules	8100B	8100C	8100D
Central wavelength[1]	1310 ±20 nm; 1550 ±20 nm; 1625 ±20 nm	1310 ±20 nm; 1490 ±20 nm; 1550 ±20 nm; 1625 ±10 nm; 1650 +15/–5 nm	1310 ±20 nm; 1550 ±20 nm; 1625 +15/–5 nm; 1650 ±1 nm
Dynamic range[2]	41/40/40 dB	45/44.5/45/44/43 dB	50/50/50/48 dB
Pulse width	5 ns to 20 µs	2 ns to 20 µs	2 ns to 20 µs
Event dead zone[3]	0.65 m	0.6 m	0.5 m
Attenuation dead zone[4]	2 m	2 m	2.5 m
Splitter attenuation dead zone	25 m after a 15 dB splitter loss	25 m after a 15 dB splitter loss/60 m after a 18 dB splitter loss	15 m after a 15 dB splitter loss
Power meter			
Calibrated wavelengths[5]	1310, 1490, 1550, 1625 nm	1310, 1490, 1550, 1625 nm	1310, 1490, 1550, 1625 nm
Power range	–3 to –55 dBm	–3 to –55 dBm	–5 to –55 dBm
Accuracy[6]	±0.5 dB at –30 dBm	±0.5 dB at –30 dBm	±0.5 dB at –30 dBm
Continuous wave light source[7]			
Wavelengths	1310, 1550, 1625 nm	1310, 1490, 1550, 1625 nm	1310, 1550, 1625 nm
Output power	–3.5 dBm	–3.5 dBm	0 dBm
Stability	±0.1 dB at 25°C over 1 hour	±0.1 dB at 25°C over 1 hour	±0.1 dB at 25°C over 1 hour
Operating modes[8]	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINtest	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINtest	270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINtest

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 (SNR=1) noise level, after 3 minutes averaging using the largest pulse width.
3. Measured at ±1.5 dB below the peak of an unsaturated reflective event using the shortest pulse width.
4. Measured ±0.5 dB from the linear regression using an FC/UPC reflectance and the shortest pulse width.
5. 1625 nm is not available on the 8138C-65 version.
6. At calibrated wavelengths.
7. At OTDR wavelengths.
8. Subtract 3 dB when in modulation mode (270 Hz/330 Hz/1 kHz/2 Khz).

Ordering Information*

8100B Modules

Description	*Part Number*
1310/1550 nm OTDR module	E8126B
1310/1550/1625 nm OTDR module	E8136B
1310/1550/1625 nm OTDR module	E8136C
1310/1490/1550 nm OTDR module	E8139C
1310/1550 and in-service 1650 nm OTDR module	E8138C-65

8100C Modules

Description	*Part Number*
1550 nm OTDR module[1]	E8115C
In-service 1625 nm OTDR module[1]	E81162C
In-service 1650 nm OTDR module[1]	E81165C
1310/1550 nm OTDR module	E8126C

8100D Modules

Description	*Part Number*
1550 nm OTDR module[1]	E8115D
In-service 1625 nm OTDR module[1]	E81162D
In-service 1650 nm OTDR module[1]	E81165D
1310/1550 nm OTDR module	E8126D
1550/1625 nm OTDR module[1]	E8129D-62
1310/1550/1625 nm OTDR module	E8136D

Universal Optical Connectors

Description	*Part Number*
Straight connectors	EUNIPCFC, EUNIPCSC, EUNIPCST, EUNIPCDIN
8° angled connectors	EUNIAPCFC, EUNIAPCSC, EUNIAPCDIN, ENIAPCLC

1. Source and power meter not available on these versions.

* Contact JDSU for additional references.
For more information about the T-BERD/MTS-6000A and -8000 test platforms, refer to their respective data sheets.

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