

## SmartOTDR™ Testing Solution



### Key Benefits

- Streamlined display interface shows setup, test, storage, and results data on one screen for simplified fiber installation and fault location
- Predefined SmartConfig™ eliminates complex OTDR setup errors
- Software upgrade options to accommodate future needs
- Light, compact, hands-free design optimizes productivity for task that are up poles or down holes
- Smart Link Mapper (SLM) eliminates OTDR interpretation errors without compromising on test time

### Key Features

- Single-wavelength version with 1550 nm and dual-wavelength version with 1310 and 1550 nm
- 35/33 dB dynamic range at 1310/1550 nm
- Integrated CW light source on OTDR port
- Built-in optical power meter and visual fault locator options
- Large 5-inch touch-screen display
- Comes standard with a special hands-free bag

### Applications

- Characterizing point-to-point Access fiber
- Qualifying FTTH feeder and drop cables
- Troubleshooting FTTH front haul
- Installing and maintaining interbuilding single-mode Enterprise networks

JDSU SmartOTDR is a simple, compact, upgradable OTDR test solution based on the T-BERD®/MTS-2000 platform dedicated to installing and troubleshooting optical fiber across premises, fiber-to-the antenna (FTTA), and fiber-to-the home (FTTH) networks.

The SmartConfig feature guarantees accurate, consistent, and repeatable results every time regardless of the operator's skill level and it eliminates setup errors requiring fiber re-tests and truck re-rolls.

The JDSU SmartOTDR solution optical performance and testing features ensure that testing jobs are done right *the first time*.

Standard testing features include:

- SmartOTDR user interface with SmartConfig error-free setting
- automatic macrobend detection
- summary result table with pass/fail analysis
- FastReport on-board report generation
- automated fiber inspection and pass/fail analysis software

**Specifications (Typical at 25°C)**
**General**

<b>Display</b>	5-inch TFT color touch screen (12.5 cm)
Resolution	800 x 480 W VGA
<b>Interfaces</b>	Two USB2.0 ports One mini-USB2.0 port RJ45 LAN 10/100/1000 Mbps Built-in Bluetooth (optional) Built-in WiFi 802.11 b/g/n (optional)
<b>Internal memory</b>	1GB (128MB for storage)
<b>Battery</b>	Rechargeable Lithium-polymer battery 8 hours of operation per Telcordia GR-196-CORE
<b>Power supply</b>	AC/DC adapter, input 100–250 V AC, 50–60 Hz; 2.5 A max, output 12 V DC, 25 W
Electrical safety	EN60950-compliant
<b>Size (H x W x D)</b>	175 x 138 x 80 mm (6.9 x 5.4 x 3.2 in)
<b>Weight</b>	1.21 kg (2.67 lb)
<b>Temperature</b>	
Operating	–20 to +50°C (–4 to 122°F)
Storage	–20 to +60°C (–4 to 140°F)
<b>Humidity</b>	
Noncondensing	95%

**Built-in Power Meter (PM) Option<sup>1</sup>**

Calibrated wavelengths	850/1310/1490/1550/1625/1650 nm
Wavelength range	800 to 1650 nm in 1 nm steps
Accuracy <sup>2</sup>	±0.2 dB
Measurement range <sup>3</sup>	+5 to –50 dBm
Maximum resolution	0.01 dB/0.01 nW

**Built-in Visual Fault Locator (VFL) Option**

Wavelength	650 nm
Emission mode	CW, 1 Hz
Laser class	Class 2 per EN60825-1 and FDA21 CFR Part 1040.10 standards

**OTDR 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 128,000

**Distance Measurement**

Mode	Automatic or dual cursor
Display range	0.1 km to 260 km
Cursor resolution	1 cm
Sampling resolution	4 cm

Accuracy	±1 m ±sampling resolution ±1.10 <sup>-5</sup> x distance (Excluding group index uncertainties)
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**Attenuation Measurement**

Mode	Automatic, manual, 2-point, 5-point, and LSA
Display range	1.25 to 55 dB
Display resolution	0.001 dB
Cursor resolution	0.001 dB
Linearity	±0.05 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**

Output power level	–3.5 dBm
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- At 25°C, after 20-minute stabilization time and after zero setting
- At calibrated wavelength (except 1650 nm)
- 45 dBm from 800 to 1250 nm

**OTDR Specifications (Typical at 25°C)**

Central wavelength <sup>4</sup>	1310 ±20 nm	1550 ±20 nm
Pulse width	5 ns to 20 µs	5 ns to 20 µs
RMS dynamic range <sup>5</sup>	35 dB	33 dB
Event dead zone <sup>6</sup>	1.5 m	1.5 m
Attenuation dead zone <sup>7</sup>	6 m	6 m

4. Laser at 25°C

5. The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS noise level, after 3-minutes averaging

6. Measured at ±1.5 dB down from the peak of an unsaturated reflective event

7. Measured at ±0.5 dB from the linear regression using a typical FC/UPC reflectance

**Ordering Information**
**SmartOTDR Test Kits\***

Part Number	Description
SMARTOTDR-MTS2-2W	MTS-2000 1310/1550 nm SmartOTDR Kit
SMARTOTDR-MTS2-2W-PMVFL	MTS-2000 1310/1550 nm SmartOTDR Kit with PM/VFL options
SMARTOTDR-TB2-1W	T-BERD 2000 1550 nm SmartOTDR Kit**
SMARTOTDR-TB2-2W	T-BERD 2000 1310/1550 nm SmartOTDR Kit**
SMARTOTDR-TB2-2W-PMVFL	T-BERD 2000 1310/1550 nm SmartOTDR Kit with PM/VFL options**

\* Contact your JDSU representative for additional SmartOTDR kits.

\*\* Available only in North America.

**Software Options**

Part Number	Description
EXPERTOTDR2KUPG	Expert OTDR Mode License
ESMARTLINK-2K	SLM Software License
ESMARTFITA-2K	FTTA-SLM Software License

**Accessories**

Part Number	Description
EDFSCOPE5Ki	P5000i Digital Analysis Microscope with 7 Tips

**Test & Measurement Regional Sales**

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