

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

Key Features

- Single-wavelength version with 1550 nm and dual-wavelength version with 1310 and 1550 nm
- 33/31 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

Display	5-inch TFT color touch screen (12.5 cm)
Resolution	800 x 480 W VGA
Interfaces	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)
Internal memory	1GB (128MB for storage)
Battery	Rechargeable Lithium-polymer battery 8 hours of operation per Telcordia GR-196-CORE
Power supply	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
Size (H x W x D)	175 x 138 x 80 mm (6.9 x 5.4 x 3.2 in)
Weight	1.21 kg (2.67 lb)
Temperature	
Operating	–20 to +50°C (–4 to 122°F)
Storage	–20 to +60°C (–4 to 140°F)
Humidity	
Noncondensing	95%

Built-in Power Meter (PM) Option¹

Calibrated wavelengths	850/1310/1490/1550/1625/1650 nm
Wavelength range	800 to 1650 nm in 1 nm steps
Accuracy ²	±0.2 dB
Measurement range ³	+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 ⁻⁵ 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 ⁴	1310 ±20 nm	1550 ±20 nm
Pulse width	5 ns to 20 µs	5 ns to 20 µs
RMS dynamic range ⁵	33 dB	31 dB
Event dead zone ⁶	1.5 m	1.5 m
Attenuation dead zone ⁷	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

Accessories*

Part Number	Description
EDFSCOPE5Ki	P5000i Digital Analysis Microscope with 7 Tips

Test & Measurement Regional Sales

NORTH AMERICA	LATIN AMERICA	ASIA PACIFIC	EMEA	www.jdsu.com/test
TOLL FREE: 1 855 ASK-JDSU 1 855 275-5378	TEL: +1 954 688 5660 FAX: +1 954 345 4668	TEL: +852 2892 0990 FAX: +852 2892 0770	TEL: +49 7121 86 2222 FAX: +49 7121 86 1222	