JDSU

T-BERD/MTS-4000 FiberComplete

The JDSU T-BERD/MTS-4000 FiberComplete is an all-in-one fiber optic testing solution designed for characterization of fiber links. It is the first platform to integrate automated bi-directional insertion loss (IL), bi-directional optical return loss (ORL), distance, and OTDR or Fault Finder capabilities using a single fiber connection and one-button operation. Configured as a modular handheld platform, it is highly optimized for Metro-Access (MA) and Metro-PON (MP) testing workflows.

SPECIFICATIONS

General

Interfaces	USB 2.0 (2× Host, 1× Device), RJ-45 Ethernet (10/100 Mbps)
Display	7-inch color TFT touchscreen (800 × 480 WVGA)

Physical

Power Supply	100-240 V AC, 50-60 Hz (via external AC/DC adapter, 19 V DC output)
Operating Temperature	-20 to 50 °C
Dimensions (W×H×D)	220 × 150 × 70 mm
Weight	1.7 kg

FiberComplete System Performance

Integrated Measurements	Bi-directional Insertion Loss (IL), bi-directional Optical Return Loss (ORL), distance, and OTDR/Fault Finder
Test Automation	One connection, one-touch automated measurements
Continuity Check	Real-time continuity check and product pairing using the fiber under test
Troubleshooting Mode	Fault Finder mode for immediate troubleshooting
Workflow Analysis	Pass/Fail indications and direct report generation
Threshold Configurations	Predefined and user-defined thresholds
Initial Referencing	Step-by-step wizard for initial IL/ORL test referencing

Optical Return Loss (ORL) Specifications

ORL Measurement Method	Optical Continuous Wave Reflectometry (OCWR)
ORL Measurement Range	0 to 55 dB
ORL Measurement Accuracy	±0.5 dB
IL Measurement Accuracy	±0.15 dB

Metro-Access (MA) OTDR Module (TB4T-FCOMP2-MA / MTS4T-FCOMP2-MA)

Metro-Access (MA) OTDR Wavelengths	1310 nm, 1550 nm
Metro-Access (MA) Dynamic Range	37 dB (1310 nm), 35 dB (1550 nm)
Metro-Access (MA) FiberComplete Wavelengths	1310 nm, 1550 nm

Metro-PON (MP) OTDR Module (TB4T-FCOMP3-MP49 / MTS4T-FCOMP3-MP49)

Metro-PON (MP) OTDR Wavelengths	1310 nm, 1490 nm, 1550 nm
Metro-PON (MP) FiberComplete Wavelengths	1310 nm, 1490 nm, 1550 nm

Optical Source & Power Meter (Integrated)

Integrated Power Meter	Broadband power meter included
Integrated Light Source	Continuous Wave (CW) light source
Fiber Type Compatibility	Single-mode (SM)

Fiber Inspection Probe Interface

Fiber Connector Inspection	Pass/Fail connector inspection software (digital probe available separately)

Package-Specific Adapters & Accessories (North American - TB4T)

North American Package Optical Adapter	SC/PC interchangeable adapter
North American Package Standard Accessories	Non-reflective terminations for zero ORL referencing, SC mating sleeves, SC/PC to SC/APC 3 m SM jumper, SC/PC to SC/PC 3 m SM jumper, Glove carrying case

Package-Specific Adapters & Accessories (Global - MTS4T)

Global Package Optical Adapter	FC/PC interchangeable adapter
Global Package Standard Accessories	Non-reflective terminations for zero ORL referencing, FC mating sleeves, FC/PC to FC/APC 3 m SM jumper, FC/PC to FC/PC 3 m SM jumper, Glove carrying case

Software & Data Management

Results Management	Fiber or Cable results management structure
PC Post-Processing Software	FiberTrace (OFS-100) and FiberCable (OFS-200) compatible

Platform General Specifications

Display Size	7 in (178 mm) diagonal
Battery Operating Life	Up to 8 hours under typical operating conditions
Battery Type	Rechargeable Lithium-ion (Li-ion)
Storage Temperature Range	-20 to +60 °C

FiberComplete Module Performance

Bidirectional Test Time	< 40 s

General / Safety

Laser Safety Class	Class 1 (IEC 60825-1)

OTDR Performance

Metro-Access (MA) Event Dead Zone	0.9 m typical
Metro-Access (MA) Attenuation Dead Zone	4 m typical
Metro-PON (MP) Event Dead Zone	0.8 m typical
Metro-PON (MP) Attenuation Dead Zone	4 m typical
Distance Accuracy	±(1 m + 10^-5 × distance + sampling resolution)
Sampling Resolution	4 cm minimum
Number of Data Points	Up to 128,000
Metro-Access (MA) Pulse Widths	3 ns to 20 µs
Metro-PON (MP) Pulse Widths	3 ns to 20 µs
Metro-Access (MA) Distance Range	0.1 to 260 km
Metro-PON (MP) Distance Range	0.1 to 260 km

Integrated Power Meter

Integrated Power Meter Calibrated Wavelengths	1310, 1490, 1550, 1625, 1650 nm
Integrated Power Meter Measurement Range	-2 to -50 dBm
Integrated Power Meter Accuracy	±0.25 dB

Integrated Light Source

Integrated Light Source Output Power	-3.5 dBm typical
Integrated Light Source Stability (24 h)	±0.1 dB

Insertion Loss (IL) Performance

IL Measurement Resolution	0.01 dB

Optical Return Loss (ORL) Performance

ORL Display Resolution	0.01 dB

Visual Fault Locator (VFL)

Visual Fault Locator (VFL) Wavelength	650 nm
Visual Fault Locator (VFL) Output Power	1 mW (0 dBm)
Visual Fault Locator (VFL) Laser Class	Class 2 (IEC 60825-1)

Environmental

Operating Humidity	95% non-condensing

Data & Results Management

Data Saving Formats	Bellcore/Telcordia GR-196-CORE OTDR (.sor), PDF, TXT

Talk Set Option

Talk Set Wavelength	1550 nm or 1625 nm (option dependent)
Talk Set Dynamic Range	45 dB

TECHNOLOGY

Fiber Optic Testing Platform

APPLICATIONS

Fiber Optic Network Installation, Commissioning, and Maintenance

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