

JDSU

E4146QUAD

The JDSU E4146QUAD is a high-performance Quad (Multimode and Single-mode) Optical Time Domain Reflectometer (OTDR) module designed for the modular T-BERD/MTS-4000 platform. Operating at 850/1300/1310/1550 nm wavelengths, it provides an all-in-one fiber optic certification and diagnostic tool for both local enterprise (MM) and metro/telecom (SM) networks. It combines a highly accurate OTDR engine with an integrated continuous wave light source and power meter, and supports advanced automated analysis features like macrobend detection.

SPECIFICATIONS

General

Interfaces	USB ports (for storage, keyboard/mouse, fiber inspection probe) and RJ45 Ethernet port (via host mainframe)
Display	7-inch TFT color touchscreen (on T-BERD/MTS-4000 host mainframe)
Compatible Platforms	JDSU / Viavi MTS-2000, MTS-4000, T-BERD 2000, T-BERD 4000

Physical

Power Supply	Powered via host mainframe (100-240 V AC, 50-60 Hz adapter or Li-ion rechargeable battery)
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	128 x 134 x 40 mm mm
Weight	0.35 kg kg

Optical Specifications

Wavelengths	850/1300/1310/1550 nm
Fiber Type	Multimode (MM) and Single-mode (SM)
Dynamic Range	26/24 dB (MM), 37/35 dB (SM)
Event Dead Zone	< 1 m
Pulse Widths (MM)	2 ns to 1 μs
Pulse Widths (SM)	2 ns to 20 μs
Distance Ranges (MM)	Up to 40 km
Distance Ranges (SM)	Up to 260 km
Sampling Resolution	From 4 cm
Sampling Points	Up to 128,000
Loss Resolution	0.001 dB
Loss Measurement Accuracy	±0.03 dB/dB
Group Refractive Index Settings Range	1.30000 to 1.70000 (steps of 0.00001)
Optical Port Connector Type	Interchangeable (SC, FC, ST, etc.)

Integrated Optical Options (VFL / OPM / SLS)

Integrated Light Source Wavelengths	850/1300/1310/1550 nm (continuous wave)
Integrated Light Source Output Power	-3 dBm (MM, typical) / -3.5 dBm (SM, typical)
Integrated Power Meter Wavelength Range	800 to 1650 nm
Integrated Power Meter Measurement Accuracy	±0.5 dB

Test Management and Analysis

Measurement Modes	Real-time, Auto, Manual
Macrobend Detection	Automated bend detection
Propagation Delay Measurement	Yes (in Multimode)
Trace File Format	Bellcore/Telcordia GR-196-CORE OTDR data format (.SOR)
Automated Pass/Fail Analysis	Yes (fiber connector inspection based on IEC standards)
Link Characterization / Schematic View Option	Smart Link Mapper (SLM) compatible

Environmental and Compliance

Storage Temperature	-20 to +60 °C
Relative Humidity Range	0% to 95% non-condensing
Laser Safety Classification	Class 1 (21 CFR 1040.10 and IEC 60825-1)

Performance

Linearity	±0.03 dB/dB
Distance Accuracy	±(1 m + 10 ⁻⁵ × distance + sampling resolution)

Integrated Light Source

Integrated Light Source Modulation	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz
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TECHNOLOGY

Optical Time Domain Reflectometry (OTDR)

APPLICATIONS

Fiber optic network certification, troubleshooting, and link analysis

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.