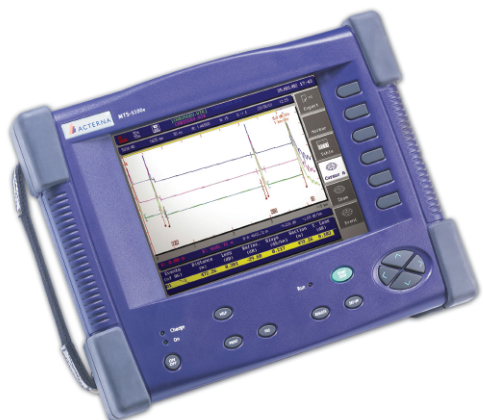


MTS-5100 Optical Time Domain Reflectometer (OTDR) for installation and maintenance of fiber networks



Key Features

- Wide range of OTDR and OLTS modules covering every application with two fast field interchangeable slots for modules
- The ONLY platform highly visible in bright sunlight, this NEW high visibility screen option means the MTS-5100 can be used in any lighting condition
- From LAN (1.5 m event dead zone) to very long haul applications (44 dB dynamic range)
- High performance testing (up to 128,000 acquisition points with 0.1 s real-time sweep)
- Maximum portability (3.5 kg) and up to 16 hours battery operation (Telcordia GR196)
- A complete range of PC software to enhance your OTDR reporting capabilities reducing cable acceptance reporting by up to 70%

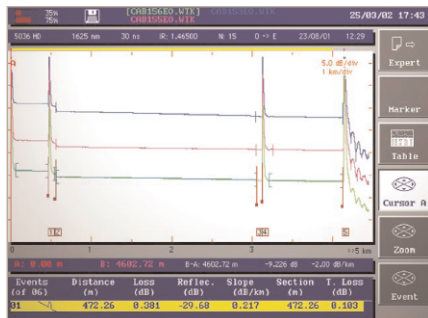
Advanced modular tester for high precision FTTx testing

The unique JDSU MTS-5100 is a fiber tester with a range of plug-in modules providing a comprehensive, integrated solution for OTDR and power meters with talk set option testing in one field-rugged instrument. Powerful, easy to use and highly cost-effective, MTS-5100 is designed to push the boundaries of field test productivity for network installers, operators and maintenance teams.

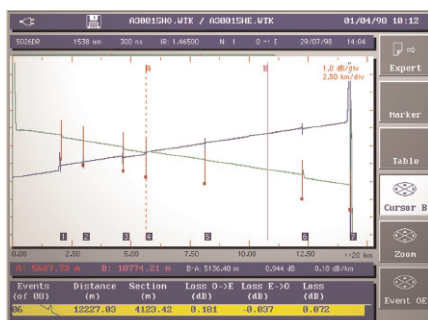
A wide range of field-interchangeable modules are available for the MTS-5100 platform, including OTDRs for multimode (MM), very short haul/FTTx (VSR), short range (SR), medium haul (DR), long haul (HD), very long haul (VHD), and 1625 nm, visual fault locator, and a range of light sources and power meters with talk set option.

JDSU's optical time domain reflectometer (OTDR) and loss test (LTS) plug-in modules are compact, yet powerful additions to the MTS-5100 family of testers.

The MTS-5100 offers the industry's fastest, highest performance solutions of any OTDR field instrument on the market. Both the OTDR and LTS modules deliver high accuracy, cost effective, reliable testing for the installation and maintenance of FTTx networks.



Multiple wavelength display with a single press of a button



Bidirectional trace and table

The MTS-5100 OTDR is the fastest, most reliable and accurate OTDR on the market.

Together, the module's automation and rapid testing features offer impressive time savings for companies involved in commissioning and locating faults in FTTx networks.

Maximizing field productivity

The most important prerequisites for testing in the field are ease-of-use and speed of acquisition. The OTDR module ensures maximum test productivity by providing one-button, automated operation for all of its critical test routines and a very high data acquisition speed of 40 dB in seconds.

Delivering the industry's highest performance OTDR

The MTS-5100 OTDR module is the fastest and most accurate OTDR to-date. It offers a dynamic range of up to 44 dB at 1550 nm and boasts a 0.1 second sweep time. As part of the MTS-5100, the OTDR module has a test capability of more than 200 km and can measure up to 128,000 separate data points with 4 cm sampling resolution. The product's short deadzone enables the user to differentiate events down to 1 meter.

Optimized functions for in-depth analysis/operation

The OTDR's bidirectional analysis capability enables true splice loss measurement with both end traces. Its multiple trace management feature greatly assists the process of proactively managing fiber problems and helps compare different current and stored measurements for in-depth analysis. A powerful macro function enables users to perform a series of tests without ongoing user intervention.

Suitable for every skill level

Whatever the user's skill level, the OTDR module and MTS-5100 instrument combination can rise to the challenge. Direct access keys ensure that users can access all the instrument's sophisticated features via a highly intuitive interface and by a comprehensive set up and results screen. The OTDR module delivers complete trace analysis, with a direct link between trace and table.

Enhanced reporting power

Powerful instruments require powerful reporting tools. The OTDR and loss test set come with the most complete analysis and reporting software.

The package supports direct Ethernet transfer to a PC running JDSU's OFS 100 Optical Fiber Trace Software or OFS-200 Optical Fiber Cable Software. This enables users to perform automatic multiple trace analysis and print out cable test results in batches, for fast generation of dedicated acceptance reports.

Technical specifications**Base unit (typical at 25 °C)****Display**

Passive color, 7.8 inches LCD 640 x 480

Active TFT color, 8.4 inches LCD 640 x 480

Languages

English, French, German, Spanish, Portuguese, Italian, Chinese, Taiwanese, Russian, Korean, Japanese, Turkish

WeightMTS-5100 3.5 kg (7.7 lb) including
1 module and 1 battery**Size**MTS-5100 300 x 235 x 90 mm
11.8 x 9.25 x 3.5 in**Input/Output**MTS-5100 RS-232-C, Centronics interface,
external keyboard (optional),
Ethernet interface (optional)**Power supply**

AC or internal removable NiMH batteries

Operation time up to 16 hours with 2 batteries
(Bellcore GR-196)

Internal charger Yes (external charger available)

Charging time < 3 hours per battery

DC input 11 to 14 V

AC adapterMTS-5100 Input 100-250 V, 50-60 Hz,
1.6 A, Output 12 V DC / 4.2 AResults display dBm, dB, nW, μ W, mW**Temperature range**Operating AC Power (no options)
-20 °C to 50 °C (-4 °F to +122 °F)

Operating with all options 0 °C to 40 °C (+32 °F to +104 °F)

Storage -20 °C to 60 °C (-4 °F to +140 °F)

Humidity 95% without condensing

EMI/ESD CE compliant

OTDR characteristics**Distance units**

Kilometers, feet and miles

Group index range

1.30000 to 1.70000 nm in 0.00001 steps

Number of data points

Up to 128 000 data points

Distance measurements

Automatic or dual cursor

Display span From 2.6 m up to maximum range
(380 km for HD and VHD modules)

Display resolution 1 cm

Cursor resolution From 1 cm

Sampling resolution From 4 cm

Accuracy $\pm 1 \text{ m} \pm \text{sampling resolution}$
 $\pm 1.10^{-5} \times \text{distance}$
(excluding group index uncertainties)**Attenuation measurement**

Automatic, manual, 2-point, 5-point and LSA

Display span From 1.25 dB to 55 dB

Display resolution 0.001 dB

Cursor resolution From 0.001 dB

Accuracy $\pm 0.05 \text{ dB} \pm 0.05 \text{ dB/dB}$

Threshold 0.01 to 5.99 dB in 0.01 dB step

Reflectance/ORL measurements

Automatic or manual

Display resolution 0.01 dB

Threshold -11 to -99 dB in 1 dB step

Storage Bellcore/Telcordia compatible
Version 1.1 and Version 2.0Internal memory 400 traces typical in
internal memoryFloppy disk drive 3.5 inches,
MS DOS compatible (optional)

OTDR module technical specifications (typical at 25°C)

| Feature | Description | | | | | |
|--------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|------------------------------------|
| | <i>Multimode modules MM</i> | <i>Very short range modules VSR</i> | <i>Short range modules SRe</i> | <i>Medium range modules DR</i> | <i>Long range modules HD</i> | <i>Very long range modules VHD</i> |
| Central wavelength ⁽¹⁾ | 850/1300 nm ± 20 nm | 1310/1550 nm ± 20 nm | 1310/1550 nm ± 20 nm | 1310/1550 nm ± 20 nm | 1310/1550/1625 nm ± 20 nm | 1310/1550/1625 nm ± 20 nm |
| Laser safety class (21 CFR) | Class 1 | Class 1 | Class 1 | Class 1 | Class 1 | Class 1 |
| Pulse width | 3 ns to 200 ns | 10 ns to 10 µs | 10 ns to 10 µs | 5 ns to 10 µs | 10 ns to 20 µs | 10 ns to 20 µs |
| Distance range | Up to 80 km | Up to 260 km | Up to 260 km | Up to 260 km | Up to 380 km | Up to 380 km |
| RMS dynamic range ⁽²⁾ | 25 dB/23 dB | 31 dB/29 dB | 34 dB/32 dB | 37 dB/35 dB | 42 dB/40 dB/40 dB | 44 dB/44 dB/44 dB |
| Event dead zone ⁽³⁾ | 1.5 m | 3 m | 3 m | 1 m | 4 m | 6 m |
| Attenuation dead zone ⁽⁴⁾ | 5 m | 25 m | 25 m | 8 m | 15 m | 20 m |
| VFL option for OTDR module | 635 nm ± 15 nm Class 2, 21 CFR | 635 nm ± 15 nm Class 2, 21 CFR | 635 nm ± 15 nm Class 2, 21 CFR | 635 nm ± 15 nm Class 2, 21 CFR | 635 nm ± 15 nm Class 2, 21 CFR | 635 nm ± 15 nm Class 2, 21 CFR |

⁽¹⁾ Central wavelength: Laser at 25°C and measured at 10 µs for singlemode and 50 ns for multimode

⁽²⁾ RMS dynamic range: The one way difference between the extrapolated backscattering level at the start of the fiber and the RMS noise level, after 3 minutes averaging.

⁽³⁾ Event dead zone: Measured at ± 1.5 dB down from the peak of an unsaturated reflective event.

⁽⁴⁾ Attenuation dead zone: Measured at ± 0.5 dB from the linear regression using a FC/PC type reflectance.

LTS module technical specifications (typical at 25°C)

| Feature | Power meter | |
|-----------------------|--|--|
| | <i>Multimode modules MM</i> | |
| Type of sensor | InGaAs | |
| Spectral range | From 800 to 1650 nm in 1 nm step | |
| Calibrated wavelength | 850 nm, 1310 nm, 1550 nm | |
| Accuracy | ± 0.2 dB | |
| Resolution | 0.01 dBm/0.01 nW | |
| Measurement range | +5 dBm to -65 dBm at 850 nm +5 dBm to -70 dBm at 1310/1550 nm +25 dBm to -50 dBm at 1310/1550 nm with adapter/attenuator | |
| Results display | dBm, dB _r , nW, µW, mW | |
| Tone detection | 270 Hz, 330 Hz, 1 kHz, 2 kHz for fiber identification | |

| Features | Singlemode light source | Multimode light source | |
|-------------------------|---|---|-----------------|
| Calibrated wavelength | 1300/1550 nm ± 30 nm | 850 nm ± 30 nm | 1300 nm ± 30 nm |
| Spectral width | <5 nm | 50 nm | 150 nm |
| Stability (1 hour) | ± 0.05 dB | ± 0.05 dB | |
| Stability (24 hours) | ± 0.15 dB | ± 0.15 dB | |
| Calibrated output power | 0 dBm | -17 (850), -19 (1300) or -18/20 dBm | |
| Modulation | 270 Hz, 330 Hz, 1 kHz, 2 kHz for fiber identification | 270 Hz, 330 Hz, 1 kHz, 2 kHz for fiber identification | |

| Feature | Dynamic range |
|-----------------|---------------|
| Talk Set option | 35 dB |

Ordering information

Base instrument options

| | |
|---|------------|
| Base unit with floppy disk drive and color display | E51000TDR |
| Base unit with floppy disk and high visibility screen | E51000TDRH |
| Hard disk drive | E5000Hdisk |
| Ethernet option | E5000Eth |

Main OTDR modules

(single and dual wavelength versions available)

| | |
|---|------------|
| Multimode 850/1300 nm Module | E5023 MM |
| Singlemode 1310/1550 nm Module | E5026 VSR |
| Short Range Singlemode 1310/1550 nm Module | E5026 SRe |
| Medium Range/High Resolution Singlemode 1310/1550 nm Module | E5026 DR |
| Long Range Singlemode 1310/1550 nm Module | E5026 HD |
| Long Range Singlemode 1625 nm Module | E5027 HD |
| Long Range Singlemode 1310/1550/1625 nm Module | E5036 HD |
| Very Long Range 44 dB 1310/1550 nm Module | E5026 VHD |
| Very Long Range 44 dB 1625 nm Module | E5027 VHD |
| Very Long Range 44 dB 1550/1625 nm Module | E5029 VHD |
| VFL Option for OTDR module | E502X VUPP |

Main LTS modules

(single and dual wavelength versions available)

| | |
|--|--------|
| Power Meter, 800-1650 nm | E50600 |
| Combined singlemode or multimode light source and Power Meter | E506X0 |
| Combined singlemode light source and Power Meter with Talk Set | E506X1 |

Application software

| | |
|--|---------|
| Optical Fiber Trace Software: PC Analysis Software under Windows | E0FS100 |
| Optical Fiber Cable Software: PC Cable Acceptance Software under Windows | E0FS200 |

Main accessories

| | |
|--|-----------|
| RS232 Null modem cable for MTS-5100 | ERS232SK |
| RS232 to USB cable for file transfer to PC | ERS232USB |
| External keyboard | E5000Keyb |
| Additional rechargeable battery | E5001 |
| Soft carrying case | E5004 |
| Hard transit case | E5005 |
| Cigarette lighter power adapter | E5006 |

Optical connectors

| | |
|--|--|
| Universal single and multimode PC connectors | EULCAD, EUNIPCF, EUNIPCLC, EUNIPCSC, EUNIPCST, EUNIPCDIN |
| Universal single mode APC connectors | EUNIAPCF, EUNIAPCSC, EUNIAPCST, EUNIAPCDIN |
| Universal adapters for OTDRs | UFCAD, USCAD, USTAD UDINAD |
| Universal adapters for power meters | UFCAD, USCAD, USTAD UDINAD |

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