

## T-BERD 6000

### Compact Optical Test Platform



#### Highlights

- Superior value for the money
- Higher return on investment
- More flexibility for future testing needs
- Unprecedented speed and power
- Greater productivity

#### Key Features

- Compact, lightweight, and highly integrated
- Over 40 application modules already supported
- Choose from IL/ORL, OTDR, PMD, CD, or WDM plug-in modules
- Compatible with plug-in modules from the MTS-5100<sup>1</sup> and T-BERD 8000
- Comprehensive connection checker functionality with built-in VFL, power meter, LTS, and video inspection scope options
- Built-in optical talkset option for communicating along the fiber
- Data mode on the talkset allows for the configuration, testing, and results collecting of two remote units
- Exceeds Telcordia specifications for ruggedness, drop testing, and extended battery life

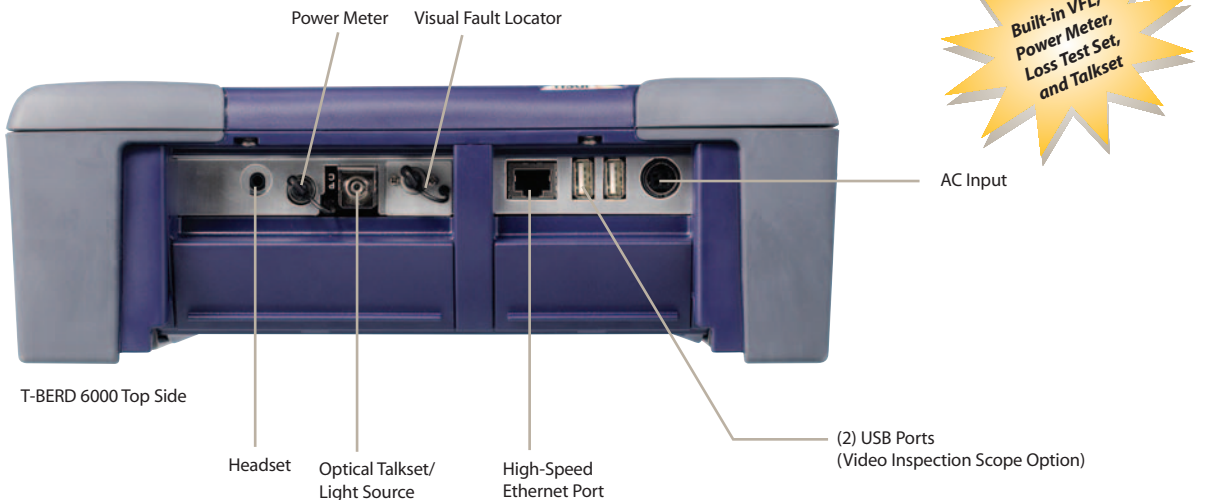
JDSU's T-BERD 6000 is a compact and lightweight test platform designed for the installation and maintenance of fiber networks. It provides field service technicians with the highest levels of performance and upgradeability on the market today.

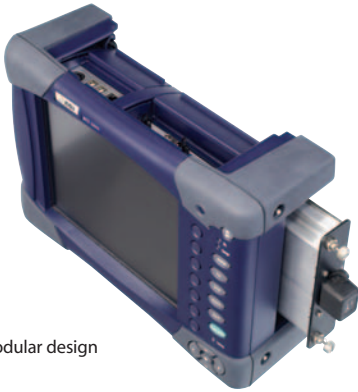
Modular in design, the T-BERD 6000 offers an extensive portfolio of test functionality with over forty different fiber modules supporting a wide range of applications. The versatility of the T-BERD 6000 allows technicians to standardize using one type of test equipment and then introduce new testing capabilities in the field without incurring additional costs.

Since the T-BERD 6000 is compatible with our existing fiber module product line, technicians can exchange plug-in modules between the T-BERD 8000 Multiple Network Test Platform and the T-BERD 6000, in the field and without the need for additional tools. To ensure the highest level of return on your test equipment capital investment, existing OTDR modules from the MTS-5100 can be transformed (with an extension) for use with the T-BERD 6000.

<sup>1</sup> Compatible with the MTS-5100 line of MM, SR, DR, HD, and VHD OTDR modules

The T-BERD 6000 is a highly integrated platform that features a single module slot, a large high-visibility color screen (with an optional touchscreen display), a high-capacity Lithium ion battery, an optional video inspection scope (via a USB port), and optional built-in optical test functions, such as a visual fault locator (VFL), power meter, and loss test set (LTS).





Modular design

#### LAN/FTTx/Access Networks

#### Metro/Core Networks

#### Ultra Long-Haul Networks

#### 10G/40G: Fiber Characterization

#### System Upgrade for CWDM/DWDM

#### Future-Proof Modular Platform

### Compact and Highly Integrated

The versatility of the T-BERD 6000 allows it to address either FTTx/access/metro networks or long-haul/agile networks with speeds of 10 Gb/s and 40 Gb/s.

- Built-in VFL, power meter, LTS, talkset/data, and video inspection scope options (simultaneously)
- Insertion loss (IL) and optical return loss (ORL) capabilities combined in one module (bi-directional)
- Optical time domain reflectometry (OTDR) and chromatic dispersion (CD) capabilities combined in one module
- Polarization mode dispersion (PMD), wave division multiplexing (WDM), and spectral attenuation (SA) capabilities combined in one module

### Wide Range of Test Applications

- End-to-end connectivity on point-to-point networks, including sectionalized testing on a PON (without a splitter)

*Solution:* T-BERD 6000 with the MM, SRe, DR, or HD OTDR module at 1310/1550 nm

- End-to-end connectivity on PONs, including splitter qualification

*Solution:* T-BERD 6000 with the VLR OTDR module at 1310/1490/1550 nm

Add optional VFL, power meter, and video inspection scope

- In-service maintenance and troubleshooting without service disruption

*Solution:* T-BERD 6000 with the OTDR module at 1625 nm

- End-to-end connectivity and fiber splice qualification

*Solution:* T-BERD 6000 with the HD or VLR OTDR module at 1310/1550/1625 nm

Add optional VFL, power meter, and video inspection scope

- End-to-end connectivity and fiber splice qualification

*Solution:* T-BERD 6000 with the UHD OTDR module at 1310/1550/1625 nm

Dynamic range of 50 dB available at 1550 nm

- Characterize fiber in high-speed transmission systems for loss/dispersion

*Solution:* T-BERD 6000 with the PMD, CD/ODTR, or OFI module

- Characterize fiber and prove suitability to carry multiple channels (water peak)

*Solution:* T-BERD 6000 with the VLR OTDR module at 1383 nm

Use the combined PMD/WDM/SA module

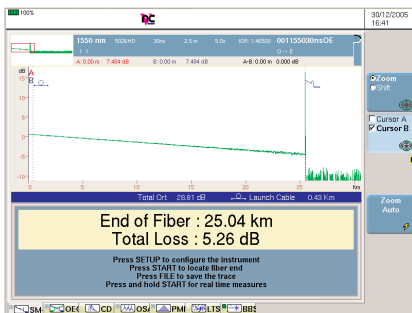
- New technologies developed in the future

*Solution:* T-BERD 6000 with JDSU's new application module

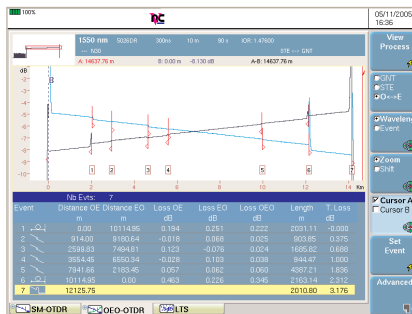
# 4 The T-BERD 6000 Covers All OTDR Applications

**Industry leader for dynamic range with 50 dB**

**Revolutionary 80 cm dead zone**



**Unique to the market: Automatic bi-directional acquisition and analysis**



## A Wide Range of OTDR Modules

JDSU has developed a wide range of field-interchangeable OTDR modules that are suitable for any application on any type of network. JDSU offers over thirty OTDR modules for testing and troubleshooting any multimode or singlemode network. The T-BERD 6000 features JDSU's industry-leading 50 dB UHD OTDR module.

## High Performance

The JDSU OTDR module product line is the industry's reference for performance. The T-BERD 6000 features both the new VLR and UHD OTDR modules and offers:

- Best-in-industry optical specifications
- Highest dynamic range (50 dB at 1550 nm)
- Shortest event dead zones (80 cm for the VLR module)
- Best-in-industry data acquisition speeds

## Fast and Precise Troubleshooting

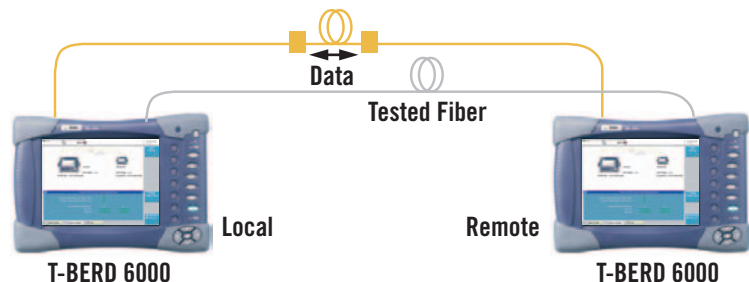


- Fast detection
- Precise fault location
- One button automation
- No specific settings required
- Distance, loss, and ORL measurements

## Ideal for End-to-End Commissioning

OTDR bi-directional testing is required in order to obtain true and accurate splice loss readings. JDSU has developed an innovative automatic bi-directional analysis function that is integrated directly into the T-BERD 6000 platform, saving at least 50% of the time required for traditional bi-directional analysis.

- True splice loss measurement
- Reveals events that are hidden by dead zones in one direction
- Eliminates operator error by using the same setup
- Automatic fiber continuity check
- Immediate trace alignment with the correct parameters



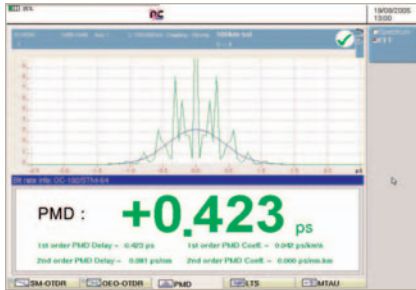
T-BERD 6000

Local

Remote

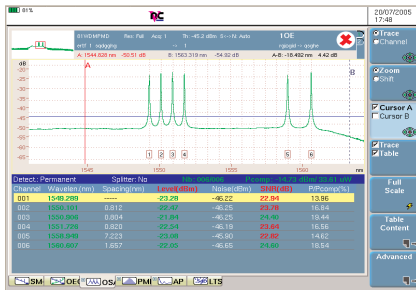
T-BERD 6000

## 5 The Right Tool for Any Optical Test



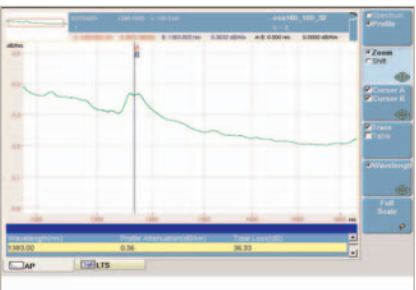
### Polarization Mode Dispersion (PMD) Testing

- Fast and accurate measuring of PMD delay, PMD coefficient, and second order values
- An approved and standardized method
- The most compact PMD test solution
- Shock-proof and vibration-proof design (with no moving parts)
- Allows for measurement through multiple amplifiers
- Provides statistics and long-term monitoring



### DWDM Maintenance Testing

- Measures channel level, power, and wavelength in the S, C, and L bands
- The most compact DWDM test solution
- 1485 nm to 1640 nm wavelength testing
- High wavelength accuracy
- Shock-proof and vibration-proof design (with no moving parts)
- Provides statistics and long-term monitoring



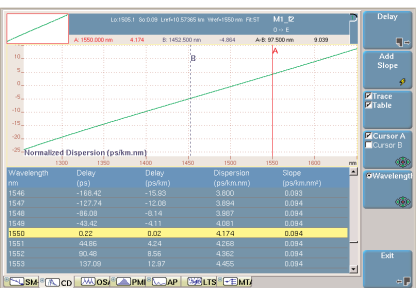
### Combined PMD, WDM, and Spectral Attenuation (SA) Testing

- Supports the qualification of CWDM and DWDM systems, including fiber attenuation across the full bandwidth spectrum
- The most compact PMD/WDM/SA test solution
- 1260 nm to 1640 nm WDM testing over the full bandwidth spectrum
- A high-performance PMD module
- Obtains 1260 nm to 1640 nm total loss and dB/km values with SA testing
- Shock-proof and vibration-proof design (with no moving parts)



### Insertion Loss (IL) and Optical Return Loss (ORL) Testing

- Measures bi-directional insertion loss, optical return loss, and fiber length
- One button automated testing
- Choose three wavelengths from 1310 nm, 1490 nm, 1550 nm, and 1625 nm
- Bi-directional testing capability
- Compatible with the OFI-2000 Multifunction Loss Test Set



### Chromatic Dispersion (CD) Testing

- Includes acquisition points around 1310 nm, 1480 nm, 1550 nm, and 1625 nm for accurate chromatic dispersion from 1260 nm to 1650 nm
- The most compact CD test solution
- Shock-proof and vibration-proof (with no moving parts)
- Access to only one end of the fiber is required
- Sectional analysis capability for troubleshooting
- Integrates a four-wavelength OTDR and a light source

### Greater Productivity with Communications

With limited telephone line and cell phone coverage during fiber testing, the T-BERD 6000 offers a built-in optical talkset option for permanent communication between test technicians. Near end and far end technicians can communicate with each other, avoiding many of the testing mistakes that can prove costly if another truck roll is required to fix a problem.

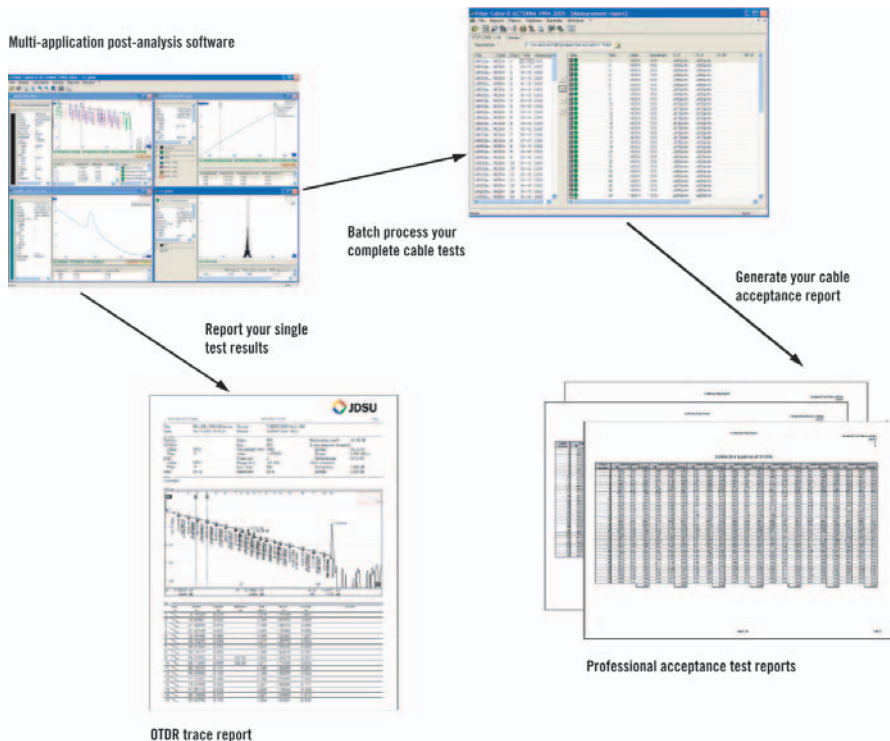
For bi-directional testing that requires both the near end and far end units to acquire data, the Data mode on the optional talkset enables both units to synchronize data acquisition during OTDR testing and to retrieve test results for pass/fail analysis.

- 45 dB optical talkset
- File transfer capability through the fiber
- Remote control of the far end unit
- Talkset is compatible with the OFI-2000 and with the OTS-55 Optical Talkset standalone unit

### Effective Test Report Generation

Transfer data and generate comprehensive reports using JDSU's FiberTrace and FiberCable analysis software.

- Generate proof-of-performance reports with a high degree of customization
- Dedicated tables are created for each test result (OTDR, CD, PMD, ORL, etc.)
- Pass/fail indicators for quick analysis of problem areas
- Macro bend identification and fault report summary capabilities



### Comprehensive Line of Accessories

A wide range of accessories are available that will provide technicians with everything they need to take advantage of the T-BERD 6000's complete testing capabilities.



The T-BERD 6000 with the optional mouse, keyboard, battery, headset, AC/DC adapter charger, and video inspection scope

### Join the T-BERD Family of Optical Test Solutions

Based on the same graphical user interface and file formats, the T-BERD 6000 and the T-BERD 8000 form a family of solutions for high-performance field testing. In addition, the fiber application plug-in modules are field interchangeable between the T-BERD 6000 and the T-BERD 8000, ensuring maximum flexibility.

The T-BERD 6000 can house one fiber application plug-in module. The T-BERD 8000 can house multiple modules simultaneously, enabling the performance of almost any combination of network test functions in a single unit. In addition, the T-BERD 8000 also offers:

- DWDM turn-up testing
- Dual-port optical spectrum analysis
- DWDM channel isolation for BERT analysis
- E1/T1 to 10G BERT analysis
- 10/100/1000/1G/10G Ethernet testing



T-BERD 8000T field-scalable optical test platform

**T-BERD 6000 Technical Specifications  
(Typical 25°C)**
**General specifications**
**Display**

TFT color, 8.4" LCD 800 x 600, high visibility (standard)  
 Touchscreen, TFT color, 8.4" LCD 800 x 600, high visibility  
 (optional)

**Storage and I/O Interfaces**

Internal memory 1000 test results  
 Extended memory (optional) Minimum 1 GB (optional)  
 2x USB V1.1, 1x RJ-45 Ethernet

**Power Supply**

Battery type Standard removable Li ion batteries  
 AC/DC adapter  
 Input 100-240 V, 50-60 Hz, Output 19V DC / 3.1 A

Operation time Up to 11 OTDR hours with standard display,  
 Telcordia GR-196-CORE

**Size and Weight**

Mainframe with one plug-in module  
 and battery (l x h x w) 285 mm x 195 mm x 93 mm  
 (11.2 x 7.7 x 3.7 in)

Mainframe only (without battery and module) 2.4 kg (5.3 lb)

Mainframe with one plug-in module and battery 3.4 kg (7.5 lb)

**Environmental Specifications**

Operating temperature range (no options) -20°C to +50°C  
 (-4°F to 122°F)

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

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

Humidity, non-condensing 95%

**Base Unit Optical Interfaces (optional)**
**Power Meter**

Power level +10 to -55 dBm  
 Calibrated wavelengths 850, 1310, and 1550 nm  
 Connector type Universal push/pull (UPP)

**Talkset**

Wavelength 1550 nm ±20 nm  
 Dynamic range >45 dB range  
 Function With data/file transfer  
 Laser safety Class 1M laser

Connector type Field interchangeable

**Visual Fault Locator (VFL)**

Wavelength 635 nm ±15 nm

Output power level <1 mW  
 Laser safety Class 2 laser  
 Connector type Universal push/pull (UPP)

**Continuous Wave (CW) Light Source**

Wavelengths (selection) 1310, 1550, and 1625 nm

Output power level -3.5 dBm

Stability in 15 min ±0.02 dB

Stability in 8 hrs ±0.2 dB

Laser safety Class 1M laser

Connector type Field interchangeable

**Video Inspection Scope (via USB)**

Magnification 250X or 400X, through the USB port

**Ordering information**
**Base Instrument**

T-BERD 6000 platform with high visibility color display and  
 battery pack ETB6000

T-BERD 6000 platform with high visibility touchscreen color  
 display and battery pack ETB6000T

Extended memory E60EXTMEM

VFL with UPP connector E80VFL

Optical talkset E80TS

Optical power meter with UPP connector  
 (2.5 mm provided as standard) E80PM

Optical loss test set with talkset  
 (1310/1550/1625 nm) E8036LTSTS

**Main Modules (single slot plug-in modules)**

OTDR module E81xxSR, E81xxDR, E81xxHD,  
 E81xxVLR, E81xxUHD, E8123MM

PMD module E81PMD, E81WDMPMD

WDM module E81WDM

CD module E5083CD

OFl module E81xxOFI

(Please refer to the separate module datasheets for detailed  
 specifications.)

**Application Software**

Optical FiberTrace software (for post-analysis) EOF5100

Optical FiberCable software  
 (for acceptance report generation) EOF5200

**Optical connectors for the loss test set and  
 talkset options (connector must be of the  
 same type)**

Field replaceable connectors: EUNIPCFC, EUNIPCSC, EUNIPCST,  
 EUNIPCDIN, EUNIPCCLC, EUNIAPCFC, EUNIAPCSC, EUNIAPCST,  
 EUNIAPCDIN, EUNIAPCLC

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