VIAVI Solutions | SAVITRI TELECOM SERVICES

T-BERD/MTS-6000A Compact Network Test Platform

Multilayer Solution for Network Installation and Maintenance

The highly integrated, modular VIAVI Solutions T-BERD®/MTS-6000A (V2) test platform can be used during all fiber network life-cycle phases. It offers field service technicians the greatest performance and versatile field upgradeability available today. The platform can be equipped with various options, such as a SATA hard disk, WiFi, Bluetooth, 3G/4G, LTE connectivity, and VFL/power meter/talk set, or other useful capabilities.

The flexibility of interchangeable module carriers and various plug-in modules let users create a platform that meets today's specific testing needs and yet it can evolve seamlessly to meet tomorrow's ever-changing network requirements.

Portable and upgradeable platform with interchangeable test modules increases technician productivity

KEY BENEFITS

- Scalable multitest platform evolves with your network and associated test requirements (physical to service layer)
- Optimized for workflow and cloud integration (Ethernet, WiFi, Bluetooth, 3G/4G, LTE, and beyond)
- Future-proofed, highly modular platform with field-upgradeable options and modules increases productivity
- StrataSync™ cloud-enabled software option increases field productivity

KEY FEATURES

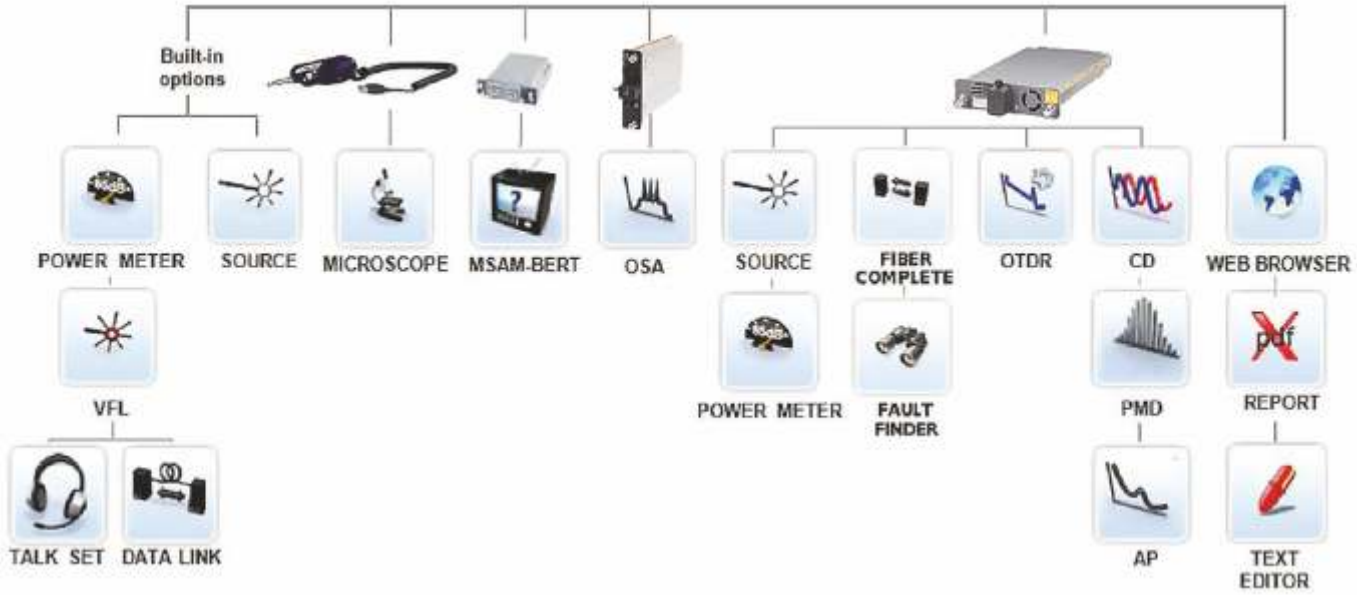
- Compact, lightweight, modular, and highly integrated platform
- Multilayer network solution for testing the physical through services layers
- Field-upgradeable VFL, power meter, talk set, and video inspection scope options
- Over 40 physical single-mode or multimode fiber test application modules available
- Multiservice capability for Ethernet and SONET/SDH tests
- Upgrade testing capabilities for this highly modular two-dimensional form factor with interchangeable module carriers, application modules, and platform options

APPLICATIONS

- Perform bidirectional OTDR and loss test set measurements
- Perform 10 G, 10 GE, and 40 G fiber dispersion testing (PMD/CD/AP)
- Optical spectrum analyzers for use installing and maintaining CWDM/DWDM networks
- Test 10 GE LAN- and WAN-PHY at 850, 1310, and 1550 nm

Scalable Equipment is Ideal for Field Testing

The test applications in the highly integrated, compact, modular T-BERD/MTS-6000A (V2) platform's scalable, single-module carrier can expand easily to add new capabilities for current and future network testing needs. The platform's 8-inch color touch screen display and intuitive graphical user interface (GUI) improves viewing in any conditions. Its high-capacity Lithium-ion (LiON) battery extends life when used with high-powered modules. Other features include a video inspection scope (via USB port) and fieldupgradeable optical test functions, such as visual fault locator (VFL), power meter, and optical talk set.



Boost Productivity with Seamless Data Workflow

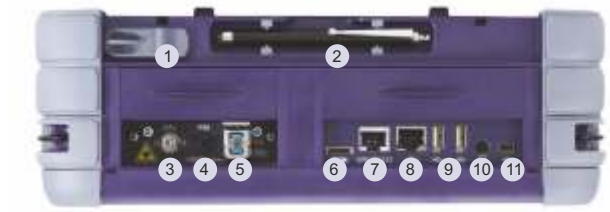
The T-BERD/MTS-6000A V2 can store media to its internal memory, SD card, USB dongle, or an optional 100 GB SATA hard disk. Users in secure environments can also store data/setups to a removable hard disk.

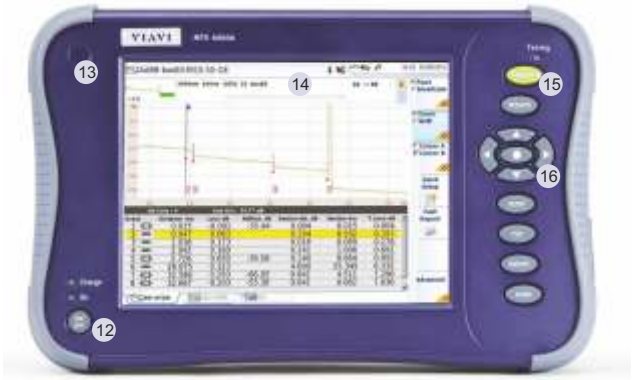
The platform also has field-upgradeable options for quick and easy remote control, as well as data/reports and setup upload/downloads using USB, Bluetooth, or via WiFi, Ethernet, or 3G/4G/LTE networks.

SmartAccessAnywhere offers technical support with remote access from anywhere.

Designed for Modularity and Connectivity

1. AC/DC input
2. Stylus
3. Visual fault locator (VFL) option
4. Power meter option
5. Optical talk set option
6. SD card
7. RS422/GPS
8. 1 GE port
9. Two USB 2.0 ports
10. Headset jack
11. Mini USB 2.0 port
12. On/Off
13. Loudspeaker
14. 8-inch indoor/outdoor color TFT touch screen display
15. Direct access keys and Start/Stop
16. Navigation keypad
17. Plug-in module
18. E6100 complete carrier module
19. Hard disk drive option (built-in)
20. WiFi/Bluetooth option (built-in)
21. Battery door





A Module Carrier for Every Testing Need

The multidimensional design of the T-BERD/MTS-6000A (V2) provides optimal configuration flexibility with extended battery life. The E6100 module carrier is best suited for fiber applications; whereas, the high-powered battery in the E6200 module carrier extends battery life when used with the carrier Ethernet (MSAM) or other intensive fiber applications.

Back of the module carrier where other modules are attached

E6100 fiber module carrier

E6300 transport and fiber module carrier

Empower Your Assets with StrataSync

StrataSync is a hosted, cloud-based solution that lets providers manage assets, configurations, and test data for VIAVI instruments to ensure that all instruments have the latest software and options installed. StrataSync manages inventory, test results, and performance data anywhere with browser-based ease to improve technician and instrument efficiency. StrataSync manages and tracks test instruments, collects and analyzes results from the entire network, and informs and trains the workforce.

SPECIFICATIONS (TYPICAL AT 25°C)

Platform	Description
Display	8 in TFT color touch screen, LCD 800x600, with high-visibility option
I/O interfaces	2 USB 2.0 ports 1 mini-USB 2.0 port RJ45 LAN 10/100/1000 Mbps 1 RS422 interface Built-in Bluetooth (optional) Built-in WiFi 802.11 b/g/n (optional) 1 audio jack 1 micro SD interface
Internal memory	2GB (128MB for storage)
Power Supplies	
Battery type	Standard removable LiON batteries
AC/DC adapter	Input 100–240 V, 50–60 Hz, Output 19 V DC/4.7 A
Size	
Mainframe with one 6100 module carrier and battery (LxHxW)	290 x 188 x 97 mm (11.5 x 7.4 x 3.8 in)
Weight	
Mainframe only (without battery and module)	2.4 kg (5.3 lb)
Mainframe with one 6100 module carrier and battery	3.4 kg (7.5 lb)
Environmental	
Operating temperature range (no options)	–20 to +50°C (–4 to 122°F)
Operating temperature range (all options)	0 to +40°C (32 to 104°F)
Storage temperature	–20 to +60°C (–4 to 140°F)
Humidity	0 to 95% noncondensing
Base Unit Optical Interfaces (optional)	
Power Meter[1]	
Calibrated wavelengths	850, 1310, 1490, 1550, 1625 nm
Wavelength range	800 to 1650 nm in 1 nm increments
Accuracy[2]	±0.2 dB
Measurement range[3]	+10 to –60 dBm
Maximum resolution	0.01 dB/0.01 nW
Maximum resolution	0.01 dB/0.01 nW

Talk Set	
Dynamic range	45 dB
Function	Telephone, data transfer
Laser class	Class 1
Connector type	Universal push/pull (UPP)
Visual Fault Locator	
Wavelength	650 nm
Emission mode	CW, 1 Hz
Laser class	Class 2 as per standards EN60825-1 and FDA21 CFR Part 1040.10

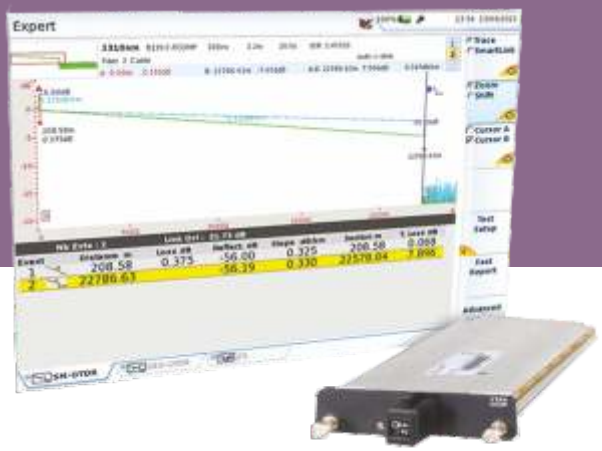
ORDERING INFORMATION

Base Instrument	
Description	**Part Number**
T-BERD/MTS-6000A V2 platform with color touchscreen display	ETB6000AV2S/ EM6000AV2S
T-BERD/MTS-6000A V2 platform with high visibility color touch screen display	ETB6000AV2M/ EM60000AV2M
Single fiber optic module carrier	E6100
High power fiber optic and transport module carrier	E6300
Built-in optical power meter and VFL with 2.5 mm UPP connectors	E80EPMVFL
Built-in optical talk set (adapter to be configured)	E80ETS
Built-in optical talk set (adapter to be configured) and optical power meter (2.5 mm UPP connector)	E80ETSPM
Built-in optical talk set (adapter to be configured), optical power meter, and VFL (2.5 mm UPP connectors)	E80ETSPMVFL
Built-in WiFi option	E60V2WIFI
Built-in Bluetooth option	E60V2BLUE
Additional high-power LiON rechargeable battery	E60LIHP1
100 GB SATA hard disk option (required for Transport applications)	E60V2HDISK
Accessories	
Description	**Part Number**
Cigarette lighter power adapter	E80lighter
Wrap-around carrying case for 6000A (V2)	ESCASE6KV2
Soft case	E40SCASE1
Optical FiberTrace 2 software	EOFS100
Optical FiberCable 2 software	EOFS200
Optical Connectors*	
Field-replaceable connectors: EUNIPCFC, EUNIPCSC, EUNIPCST, EUNIPCDIN, EUNIPCLC, EUNIAPCFC, EUNIAPCSC, EUNIAPCST, EUNIAPCDIN, and EUNIAPCLC	

* Connectors for the loss test set and talk set options must be the same type.

8100-Series OTDR EVO Modules

For T-BERD/MTS-6000A and -8000 platforms



The Viavi Solutions® 8100-Series OTDR EVO family transforms fiber testing. Connect the OTDR EVO family anywhere on the fiber to characterize single-mode and multimode fibers for commissioning, network upgrades, and troubleshooting with the added insurance of workflow optimization and accurate fiber-link fingerprinting.

The OTDR EVO family's optical performance combined with the T-BERD/MTS platform's complete suite of testing features ensures that testing jobs are performed right—the first time.

Standard testing features include:

- Automatic macrobend detection
- Summary results table with pass/fail analysis
- Bidirectional OTDR analysis
- FastReport onboard report generation

T-BERD/MTS-6000A

Compact multilayer platform for network installation and maintenance

T-BERD/MTS-8000 (V2)

Scalable platform for multilayer and multiple-protocol testing

KEY BENEFITS

- Industry-leading dead zone performance for full element event characterization on fiber links 2 m apart
- Includes an integrated power meter, light source, and OTDR in a one-port tool for added flexibility
- Instantaneous, automatic traffic detection avoids risking live signal interference or optical transmitter damage during an OTDR test
- Eliminates OTDR interpretation errors with Smart Link Mapper (SLM) without compromising on test time
- Reduces event loss measurement uncertainty and improves measurement repeatability

KEY FEATURES

- Up to 50 dB dynamic range
- Integrated CW light source and broadband power meter (single-mode wavelengths)
- PON-optimized to test through a 1x128 splitter
- Single connector port for 1310, 1550, and inservice 1650 nm wavelengths
- FiberComplete™ version available for automated bidirectional OTDR, IL, and ORL measurements
- Built-in encircled flux multimode source compliant with IEC 61280-1-4 and TIA-526-14-B

APPLICATIONS

- Metro and ultra-long-haul fiber network characterization
- Advanced FTTH PON network qualification and troubleshooting
- Upgrading core fiber networks to 40 and 100 G
- Remotely monitoring fiber while in or out of service
- Advanced Tier-2 certification for enterprise and data center networks

SPECIFICATIONS (TYPICAL AT 25°C)

General	
Weight	approx. 500 g (1.1 lb)
Dimensions (W x H x D)	213 x 124 x 32 mm (8.38 x 4.88 x 1.26 in)
Laser safety class (21 CFR)	Class 1
Distance units	Kilometer, meter, feet, and miles
Group index range	1.30000 to 1.70000 in 0.00001 steps
Number of data points	Up to 256,000 data points
Distance Measurements	
Mode	Automatic or dual cursor
Display range	Single-mode: 0.1 – 320 km Multimode: 0.05 – 10 km
Display resolution	1 cm
Cursor resolution	From 1 cm
Sampling resolution	From 4 cm
Accuracy	Single-mode: ±0.75 m ±sampling resolution ±1.10^{-5} x distance (excluding group index uncertainties)

ATTENUATION MEASUREMENTS	
Mode	Automatic, manual, 2-point, 5-point, and LSA
Display resolution	0.001 dB
Linearity	Single-mode: ±0.03 dB/dB Multimode: ±0.05 dB/dB
Threshold	0.01 to 4.99 dB in 0.01 dB steps
Reflectance/ORL Measurements	
Mode	Automatic or manual
Reflectance accuracy	±2 dB
Display resolution	0.01 dB
Threshold	–11 to –99 dB in 1 dB steps

OTDR Modules	8100A	8100B	8100C	8100D
Central wavelength[1]	850 +10/-30 nm; 1300 ±20 nm; 1310 ±20 nm; 1550 ±20 nm; 1625 ±20 nm	1310 ±20 nm; 1550 ±20 nm; 1625 ±20 nm	1310 ±20 nm; 1550 ±20 nm; 1625 ±10 nm; 1650 +15/–5 nm	1310 ±20 nm; 1550 ±20 nm; 1625 +15/–5 nm; 1650 ±1 nm
Dynamic range[2]	Multimode: 24/24 Single-mode: 40/40/40 dB	41/40/40 dB	47.5/47/47.5/46 dB	50/50/50/48 dB
Pulse width	Multimode: 1 ns to 20 µs Single-mode: 3 ns to 20 µs	5 ns to 20 µs	2 ns to 20 µs	2 ns to 20 µs
Event dead zone[3]	Multimode: 0.25 m Single-mode: 0.60 m	0.65 m	0.5 m[9]	0.5 m
Attenuation dead zone[4]	2 m	2 m	2 m	2.5 m
Splitter attenuation dead zone	25 m after a 15 dB splitter loss (single-mode only)	25 m after a 15 dB splitter loss	25 m after a 15 dB splitter loss/60 m after a 18 dB splitter loss	15 m after a 15 dB splitter loss
Power meter				
Calibrated wavelengths[5]	N/A	1310/1490/1550/1625 nm	1310/1490/1550/1625 nm	1310/1490/1550/1625 nm
Power range		–3 to –55 dBm	–3 to –55 dBm	–5 to –55 dBm
Accuracy[6]		±0.5 dB at –30 dBm	±0.5 dB at –30 dBm	±0.5 dB at –30 dBm
Continuous wave light source7				
Wavelengths	850/1300/1310/1550/1625 nm	1310/1550/1625 nm	1310/1490/1550/1625 nm	1310/1550/1625 nm
Output power	0 dBm	–3.5 dBm	–3.5 dBm	0 dBm
Stability	±0.2 dB @25°C over 1 hr	±0.1 dB at 25°C over 1 hr	±0.1 dB at 25°C over 1 hr	±0.1 dB at 25°C over 1 hr
Operating modes[8]	CW (single-mode only), 270 Hz, 330 Hz, 1 kHz, 2 kHz, Twintest	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINtest	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINtest	270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINtest

1. Laser at 25°C and measured at 10 µs.
2. The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS (SNR=1) noise level, after 3 minutes averaging using the largest pulse width.
3. Measured at ±1.5 dB below the peak of an unsaturated reflective event using the shortest pulse width.
4. Measured ±0.5 dB from the linear regression using an FC/UPC reflectance and the shortest pulse width.
5. 1625 nm is not available on the 8138C-65 version.
6. At calibrated wavelengths.
7. At calibrated wavelengths; multimode source (850 nm) is compliant to the IEC 61280-1-4 standard related to the encircled flux.
8. Subtract 3 dB when in modulation mode (270 Hz/330 Hz/1 kHz/2 Khz).

ORDERING INFORMATION

Description	Part Number
8100A Modules	
850/1300/1310/1550 nm OTDR module	E8146A
850/1300/1310/1550/1625 nm OTDR module	E8156A
8100B Modules	
1310/1550 nm OTDR module	E8126B
1310/1550/1625 nm OTDR module	E8136B
8100C Modules	
1550 nm OTDR module[1]	E8115C
In-service 1625 nm OTDR module1	E81162C
In-service 1650 nm OTDR module1	E81165C
1310/1550 nm OTDR module	E8126C
1310/1550/1625 nm OTDR module	E8136C
1310/1490/1550 nm OTDR module	E8139C
1310/1550 and in-service 1650 nm OTDR module	E8138C-65

8100D Modules	Part Number
1550 nm OTDR module[1]	E8115D
In-service 1625 nm OTDR module[1]	E81162D
In-service 1650 nm OTDR module[1]	E81165D
1310/1550 nm OTDR module	E8126D
1550/1625 nm OTDR module1	E8129D-62
1310/1550/1625 nm OTDR module	E8136D
Universal Optical Connectors	
Straight connectors	EUNIPCFC, EUNIPCSC, EUNIPCST, EUNIPCDIN
8° angled connectors	EUNIAPCFC, EUNIAPCSC, EUNIAPCDIN

1. Source and power meter not available on these versions.

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