VIAVI

T-BERD®/MTS-5800

All-in-one handheld network and fiber testing

The T-BERD/MTS-5800 handheld network tester is the one tool that network technicians and engineers need to install, turn-up, and maintain their networks. It supports both the legacy and emerging technologies required to handle various network applications including metro/core, mobile backhaul, and business services installations.

The industry's smallest handheld instrument can test throughout the service life cycle, including fiber characterization, service activation, troubleshooting, and maintenance. Advanced Ethernet test features such as TrueSpeed per RFC 6349, J-Profiler™, Wirespeed capture/decode, and automated J-Mentor, help field technicians test their networks faster and more accurately than ever before.

Figure 1. T-BERD/MTS-5800 in the carrier Ethernet network

Key Benefits

- Simplifies multitechnology testing with an all-in-one dual-10 G handheld
- Optimized for field use with a multitouch screen, scripted workflows, and clear results
- Supports efficient best practices with repeatable methods and procedures
- Speeds fiber characterization, Ethernet service activation, and troubleshooting tests

Key Features

- Fully-loaded TDM/PDH to dual 10 G Ethernet, SONET, SDH, Fibre Channel, and OTN support
- Automated, enhanced RFC 2544 and SAMComplete testing per ITU-T Y.1564
- Integrated burst testing approach per MEF 34 and RFC 6349 TrueSpeed™ TCP throughput testing
- Single- and dual-port versions
- Compatible with Viavi 4100-Series OTDR and COSA modules with Smart Link Mapper™, fiber microscopes, and optical power meters

Applications

- Mobile and backhaul characterization, validation, and troubleshooting
- Converged Ethernet/IP network testing and troubleshooting at 10 Mbps to 10 G interfaces
- Fiber link characterization and troubleshooting
- Installation and maintenance of OTN and legacy SONET/SDH and TDM/PDH networks
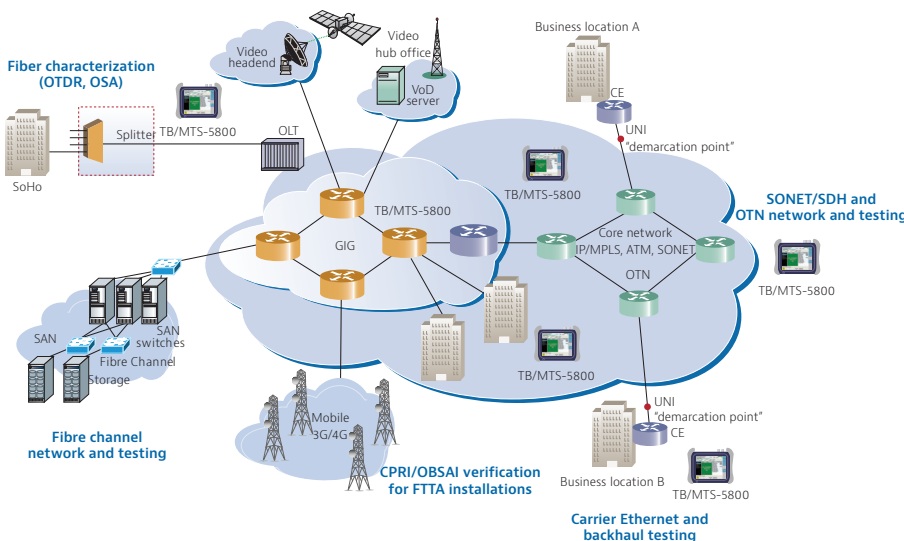- Remote radio head (RRH) testing at the wireless basestation

All-in-One Handheld Tool

The configurable T-BERD/MTS-5800 is the industry's smallest dual 10 G handheld instrument for Ethernet, SONET, SDH, OTN, Fibre Channel, and CPRI/OBSAI testing:

- All test interfaces are readily available
- Compact form factor for easy portability: 7 x 9.5 x 3 in (17.8 x 24.1 x 7.62 cm)
- Large 7 in multi-touch display
- Tablet-like interface for easy navigation through test information and advanced workflows
- Integrated WiFi and Bluetooth lets you easily connect test sets and offload results

Compatible with Viavi Solutions Fiber Test Tools

Mobility, business services, and metro technicians can now test virtually any interface in their network as well as qualify fiber plant with one ultra-portable instrument. The T-BERD/MTS-5800 is compatible with:
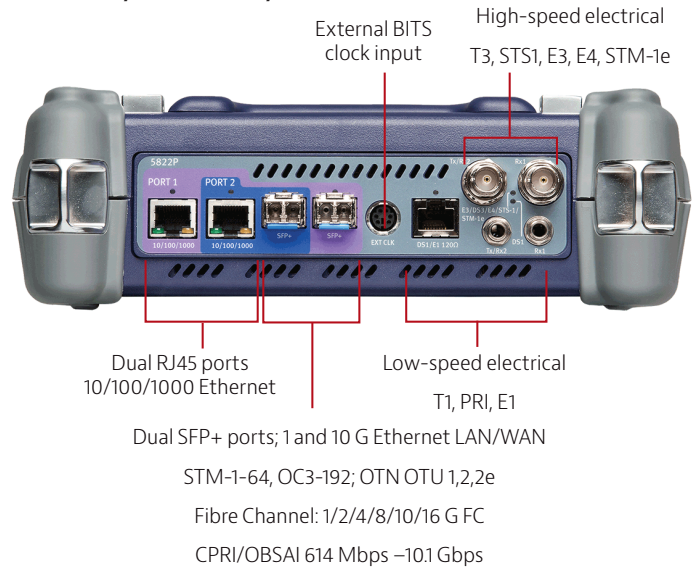
- The P5000i fiber microscope for connector end-face inspection and analysis
- MP-Series optical power meters for optical power and loss measurements
- OTDR modules for fiber link characterization and fault finding
- Smart Link Mapper optical analysis software that displays OTDR results in a simple, icon-based map view for clear diagnostics of detected issues

Optimized for Easy Field Use

- Fixed test interfaces eliminate loose pluggable modules
- LEDs indicate plug-ins for tests
- A streamlined user interface provides simple pass/fail, green/red results
- Extended battery life enables longer test times
- Boots up rapidly from power-on to test start
- Dual-port operation runs two tests simultaneously, including 10 G/high-speed tests

Test every interface in your network!

External BITS clock input

High-speed electrical
T3, STS1, E3, E4, STM-1e

Dual RJ45 ports
10/100/1000 Ethernet

Low-speed electrical
T1, PRI, E1

Dual SFP+ ports; 1 and 10 G Ethernet LAN/WAN

STM-1-64, OC3-192; OTN OTU 1,2,2e

Fibre Channel: 1/2/4/8/10/16 G FC

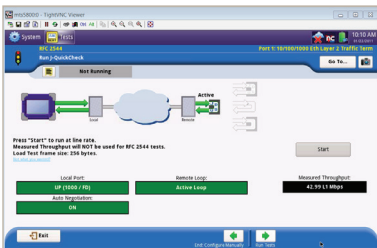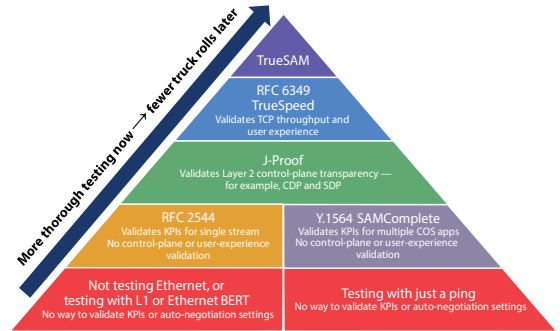CPRI/OBSAI 614 Mbps –10.1 Gbps
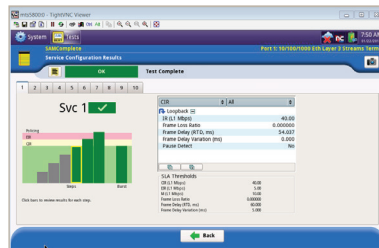

Compatible with Viavi FiberScope

TrueSAM Saves Valuable Service Activation Time

Test better and quicker with automated tests combined into one ultimate installation tool:
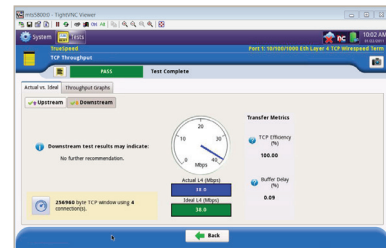
- J-QuickCheck — a fast, automated test (RFC 2544, Y.1564) for validating end-to-end and auto-negotiation configuration

- Enhanced RFC 2544 — an automated turn-up test for validating key performance indicators (KPIs)/concurrently measuring SLAs such as throughput, frame delay, delay variation, frame loss, and committed burst size (CBS) — optional

- Y.1564 SAMComplete — an automated service verification test that speeds the installation of multiple classes of services (COS)

- TrueSpeed per RFC 6349 — an automated, standards-based test that can save up to 25% of operating expenses (OpEx) and reveals the reason for slow file downloads, eliminating finger-pointing

- Interoperable with TrueSpeed VNF and QT-600 to speed testing

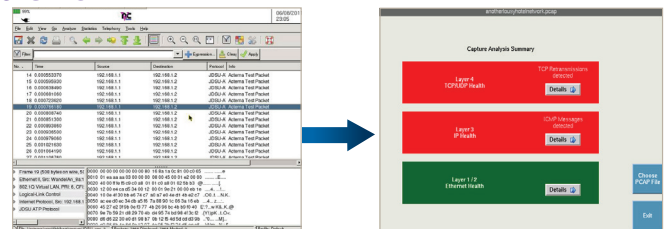Enhanced RFC 2544 with J-QuickCheck

SAMComplete per ITU-T Y.1564

TrueSpeed per RFC 6349

Reduce Mean Time to Repair for Network Problems

Reduce CapEx/OpEx while immediately identifying problems with automated tests — without the need for a field expert or a separate analyzer.

- Network discovery automatically identifies equipment present on the network

- J-Profiler discovers live traffic streams for real-time troubleshooting with in-service top-talkers analysis

- Integrated capture/decode offers 10 G line-rate packet capture and analysis in a handheld

- J-Mentor provides expert troubleshooting guidance and interprets packet decodes
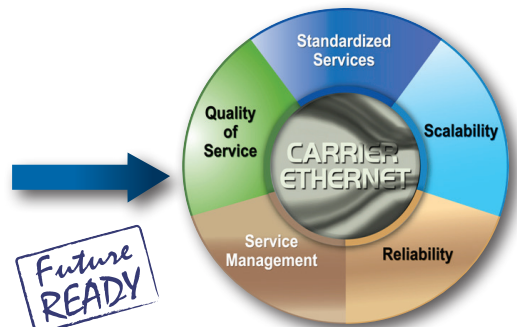
J-Mentor provides expert troubleshooting guidance

Enables Network Evolution — Today and Tomorrow

The 5800 meets leading-edge, carrier-grade Ethernet requirements:

- Ensures reliability with link and service OAM (IEEE 802.3ah, 802.1ag, and ITU-T Y.1731)

- Validates network scalability with VLAN, Q-in-Q, MAC-in-MAC, MPLS, and VPLS tunnelling technologies

- Support for ODU multiplexing including ODU1, ODU0, and ODUflex

- Test Ethernet over SONET/SDH with VCAT, LCAS, and GFP

- Full-featured VoIP and IP video turn-up and troubleshooting tests

- Supports packet transport network (PTN) evolution with MPLS-TP technology

Source: Metro Ethernet Forum (MEF)
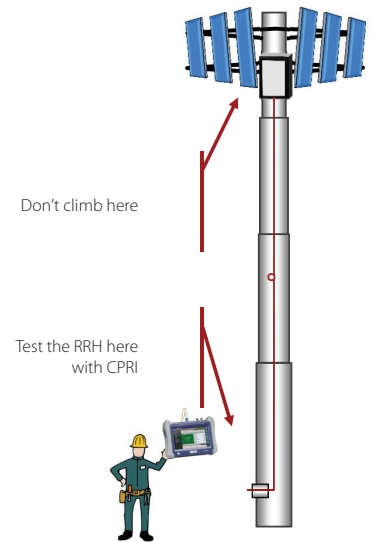
Empower Cell-Site Technicians

T-BERD/MTS-5800 tools let cell-site technicians efficiently install and maintain backhaul and fronthaul networks. They can ensure BBU and RRH connectivity with CPRI and OBSAI tests:

- Validate C-RAN connectivity across CWDM networks
- Test RRH health from the bottom of the tower by emulating a BBU
- Gain crucial visibility into system health with monitoring and inline access

And, they can verify network synchronization:

- Emulate a 1588v2 master clock/slave recovery for proper point-to-point (PTP) message propagation and packet-delay variation (PDV) verification
- Verify SyncE frequency synchronization accuracy and Ethernet synchronization message channel (ESMC) message propagation
- Measure wander on SyncE, 1PPS, T1, E1, and 2 and 10 MHz signals

When equipped with an OTDR module, the T-BERD/MTS-5800 is the perfect solution for mobile network testing, providing easy fibre link characterization and troubleshooting.

Don't climb here

Test the RRH here with CPRI

Part of the Leading T-BERD/MTS Test Portfolio

Activate services more quickly and accurately

Reduce mean time to repair (MTTR) on network problems

Test the widest range of traditional and emerging telecom interfaces

Common Application Base
Same user interface + same results + same methods and procedures

StrataSync

Empower Your Assets

StrataSync is a hosted, cloud-enabled solution for managing assets, configurations, and test data on Viavi instruments. It ensures that all instrument software is current and the latest options are installed. StrataSync lets you manage inventory, test results, and performance data anywhere with browser-based ease while it also improves technician and instrument efficiency. StrataSync manages and tracks test instruments, collects and analyzes results from the entire network, and it informs and trains the workforce.

StrataSync™
E N A B L E D

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