T-BERD®/MTS-6000A MSAM

The Industry's Most Complete Multitechnology Service Activation and Troubleshooting Test Tool
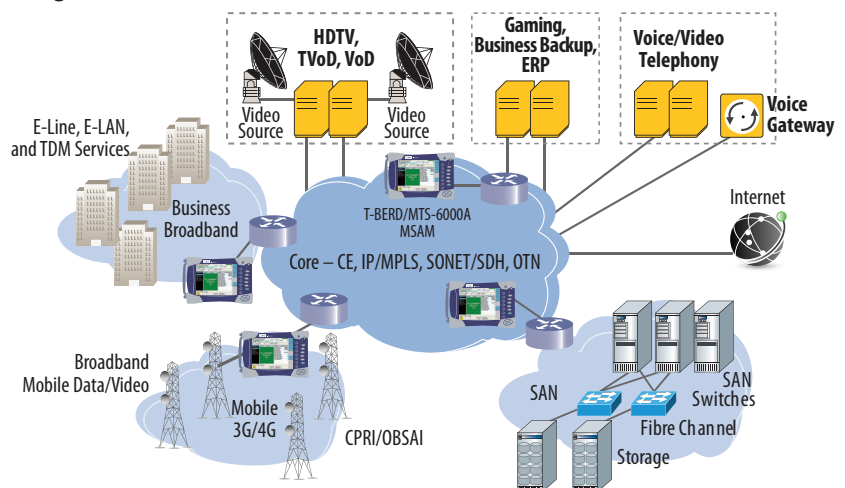
Key Benefits

- Maximizes ROI with modular, field-upgradeable tester that seamlessly expands into future technologies and interfaces

- Provides industry-leading multiport 10 G modular platform for network field installation, advanced troubleshooting, and lab-based network validation

- Guarantees end-customer satisfaction with deep application layer testing for data (TrueSpeed™ per RFC 6349), voice (VoIP), and video (IPTV)

- Speeds service activation and troubleshooting with TrueSAM™, the ultimate installation tool, and J-Complete that both follow best practices and provide repeatable methods and procedures with easy-to-understand results

- Improves OpEx and field productivity when combined with StrataSync™, a cloud-based solution that displays assets, modules, versions, and locations; maintains accurate instrument configuration and setup; and, provides visibility into instrument utilization and test-data management.

Applications

- Tests and troubleshoots converged Ethernet/IP networks at 10 Mbps to 10 G interfaces
  - Tests Layer 1-3 Ethernet/IP SLAs with an automated, enhanced RFC 2544/SAMComplete per ITU-T Y.1564
  - Integrated approach to burst testing including CBS verifies buffer settings and TrueSpeed per RFC 6349 for performance testing so you can experience your network the way your customers do
  - Robust troubleshooting capabilities including network discovery, top talker analysis, deep packet capture, packet analysis, and expert guidance
- Tests TDM/PDH to SONET/SDH at OC-3/STM-1 to OC-192/STM-64, including service disruption measurements and path overhead (POH) capture with triggers
- Install and maintain OTN networks up to 11.1 G interfaces with ODU-0/ODUFlex support for Ethernet/IP client interfaces
- Tests dual FC (1, 2, 4, 8, 10 G) for service activation and maintenance of SANs and low-latency circuits
- Verifies network synchronization
  - Emulates a 1588v2 master clock/slave recovery for proper point-to-point (PTP) message propagation and verification of packet-delay variation (PDV)
  - Verifies SyncE frequency synchronization accuracy and Ethernet synchronization message channel (ESMC) message propagation
  - Measures wander for 1 pps and SyncE
- Supports SFP and XFP pluggable optics, including 50 GHz C-band tunable XFPs

The T-BERD/MTS-6000A Multi-Service Application Module (MSAM), the industry's most complete multitechnology service activation and troubleshooting test tool, continues to dominate the installation and troubleshooting market with its evolutionary hardware design that addresses the challenges of converged IP networks with ever-growing 10 G core and edge networks. It also aids in service activation and troubleshooting of storage area networks (SANs), including 8 G Fibre Channel (FC) to enable data center redundancies, low-latency trading, and backup processing. Its network synchronization testing capabilities and its support for CPRI/OBSAI are perfectly suited for mobile front and backhaul testing for LTE and small and macro cell rollouts.
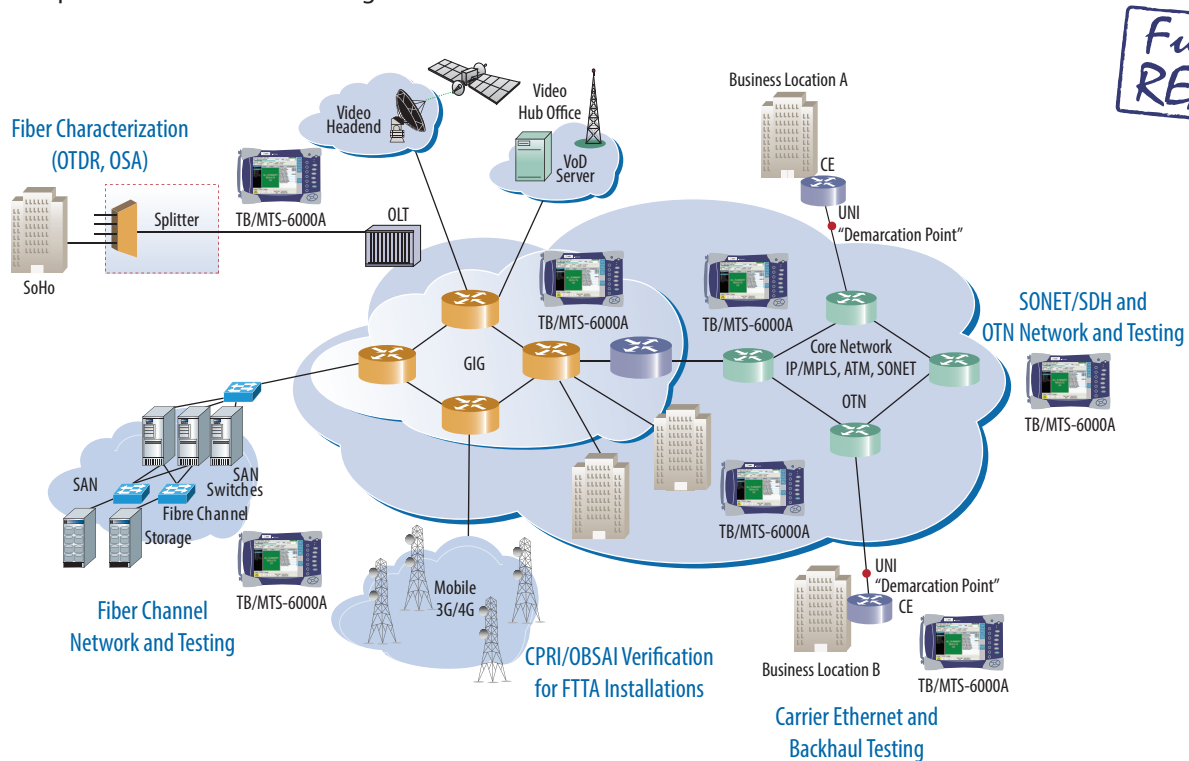
This flagship T-BERD/MTS platform continues to focus on the entire service life cycle, including installation, troubleshooting, and maintenance. T-BERD/MTS-6000A MSAM is the leading multiport 10 G product designed for field and central office (CO) technicians who must verify transport technologies from time-division multiplexing/plesiosynchronous digital hierarchy (TDM/PDH) up to 10 G optical transport networks (OTN), including 8 G FC, and who must assure end-customer service level agreements (SLAs).

Converged IP network with SAN extensions

JDSU

Maximizes ROI

The modular, field-upgradeable JDSU tester maximizes ROI with coverage for every testing need (DS1 to 10 G) and seamless expansion for future technologies and interfaces.
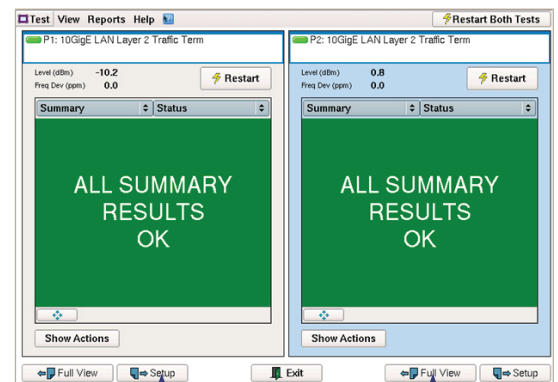

Future READY

T-BERD/MTS-6000A Platform covers all testing needs

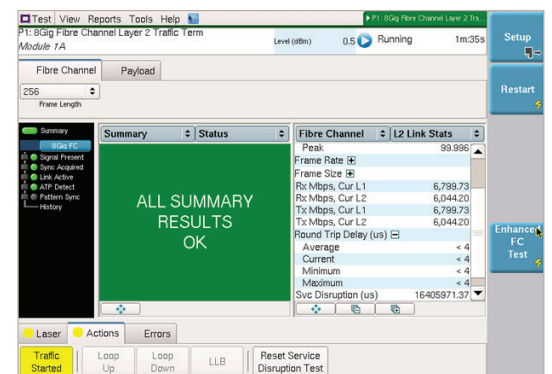## Industry-Leading Multiport 10 G Modular Platform

- Twice the testing power cuts test time in half

- Install primary and secondary 10 G circuits simultaneously

- First modular, portable platform to support in-line 10 G through mode capture and decode in both directions

- First dual-port 8 G FC field test set that combines all other transport technologies into a single module
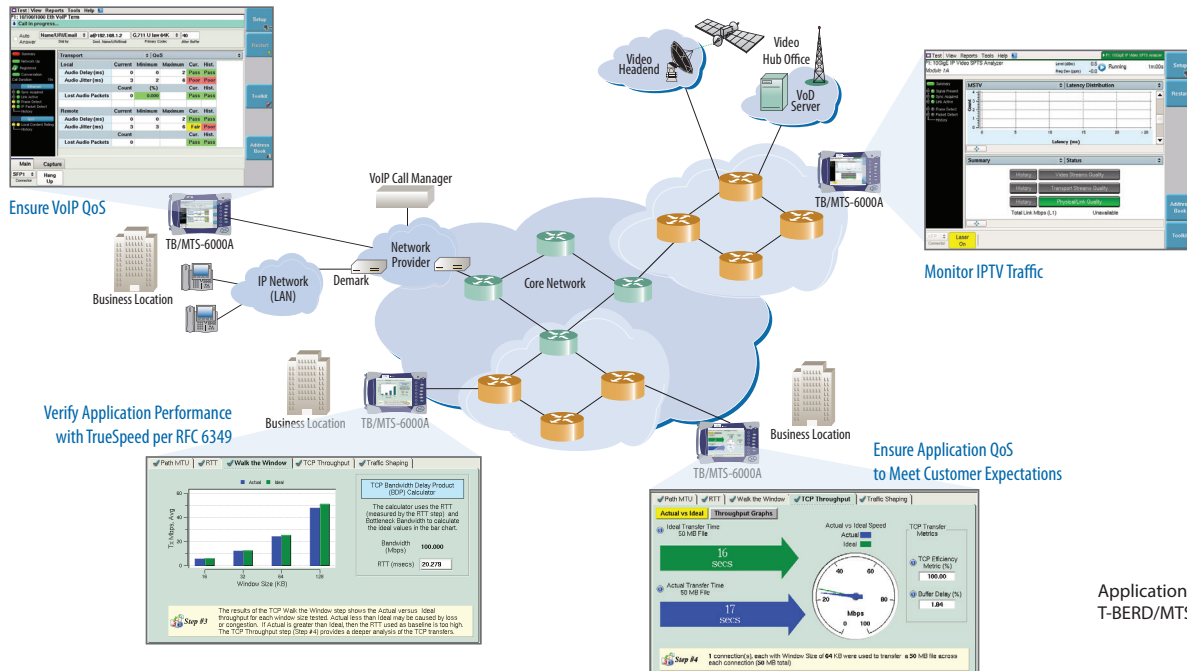

Dual 10 G window

T-BERD/MTS-6000A with MSAM

8 G FC window

Experience Your Network the Way Your Customers Do

- Guarantee end-customer satisfaction with application-layer testing (VoIP, video, and data)
- Improve customer retention with true service testing
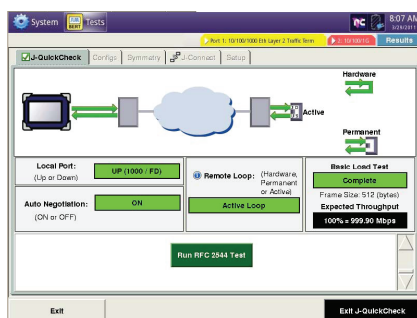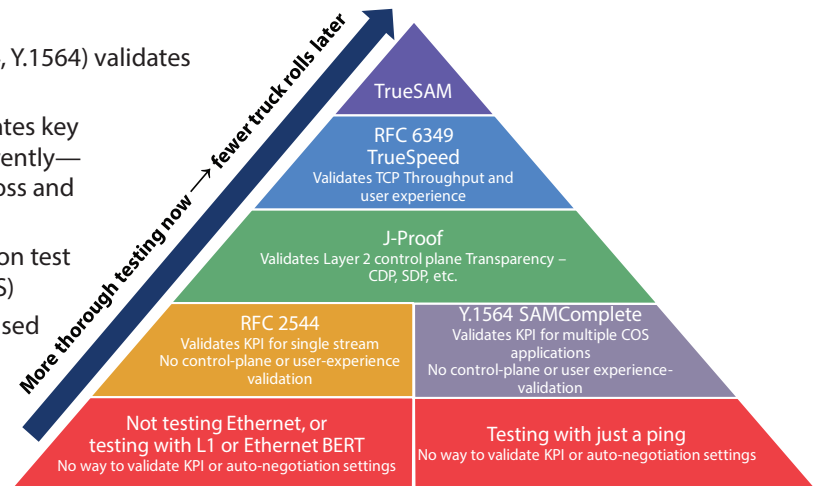- Reduce truck rolls by installing the service correctly the first time

Ensure VoIP QoS

Monitor IPTV Traffic

Verify Application Performance with TrueSpeed per RFC 6349

Ensure Application QoS to Meet Customer Expectations

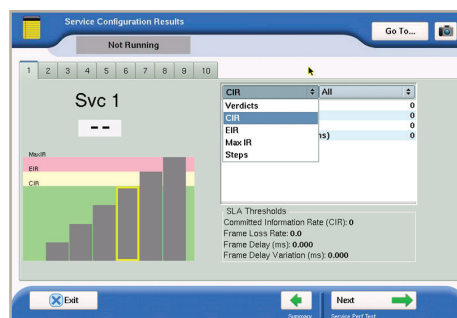Application testing with T-BERD/MTS-6000A MSAM

Save Valuable Time with Service Activation Tests

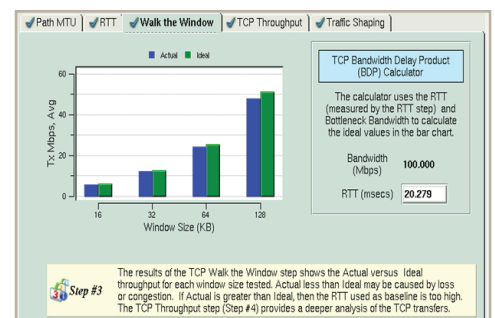## Test better and quicker with automated tests

- J-QuickCheck — Quick pre-automated test (RFC 2544, Y.1564) validates end-to-end and auto-negotiation configuration
- Enhanced RFC 2544 — Automated turn-up test validates key performance indicators (KPIs)/measures SLAs concurrently— throughput, frame delay, and delay variation, frame loss and optionally committed burst size (CBS)
- Y.1564 SAMComplete — Automated service verification test speeds installation of multiple classes of services (COS)
- TrueSpeed per RFC 6349 — Automated, standards-based test saves 20 percent or more in operating expenses (OpEx) and eliminates finger-pointing for slow file downloads
- TrueSAM — Combines these tests into one ultimate installation tool

More thorough testing now → fewer truck rolls later

TrueSAM

RFC 6349 TrueSpeed
Validates TCP Throughput and user experience

J-Proof
Validates Layer 2 control plane Transparency – CDP, SDP, etc.

RFC 2544
Validates KPI for single stream No control-plane or user-experience validation

Y.1564 SAMComplete
Validates KPI for multiple COS applications No control-plane or user experience- validation

Not testing Ethernet, or testing with L1 or Ethernet BERT
No way to validate KPI or auto-negotiation settings

Testing with just a ping
No way to validate KPI or auto-negotiation settings

Enhanced RFC 2544 with J-QuickCheck
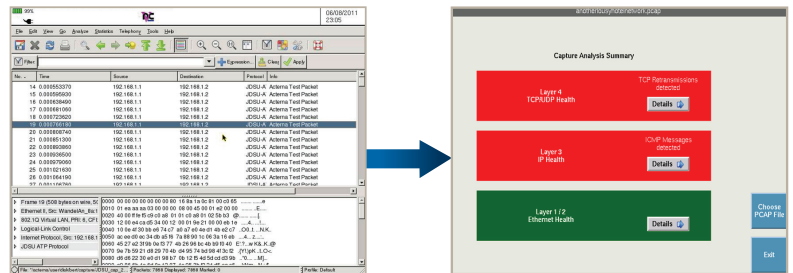
SAMComplete per ITU-T Y.1564

TrueSpeed per RFC 6349

Reduce Mean Time to Repair for Network Problems

Automated tests eliminate the need for a separate analyzer by immediately identifying problems

- Network Discovery — Automatically identify equipment present on the network
- J-Profiler — Discovers live traffic streams for real-time troubleshooting that provides in-service top-talkers analysis
- Integrated Capture/Decode — Provides 10 G line-rate packet capture and analysis in a handheld test tool
- J-Mentor — Provides expert troubleshooting guidance interpreting packet decodes
- Reduces CapEx/OpEx — Eliminates the need for a separate analyzer, immediately identifies problems without the need for a field expert

J-Mentor — Provides expert troubleshooting guidance

Key Module for 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 that provides asset, configuration, and test-data management of JDSU instruments and ensures all instruments have the latest software and options installed. StrataSync manages inventory, test results, and performance data anywhere with browser-based ease and improves technician and instrument efficiency. StrataSync manages and tracks test instruments, collects and analyzes results from the entire network, and informs and trains the workforce.

StrataSync™
E N A B L E D