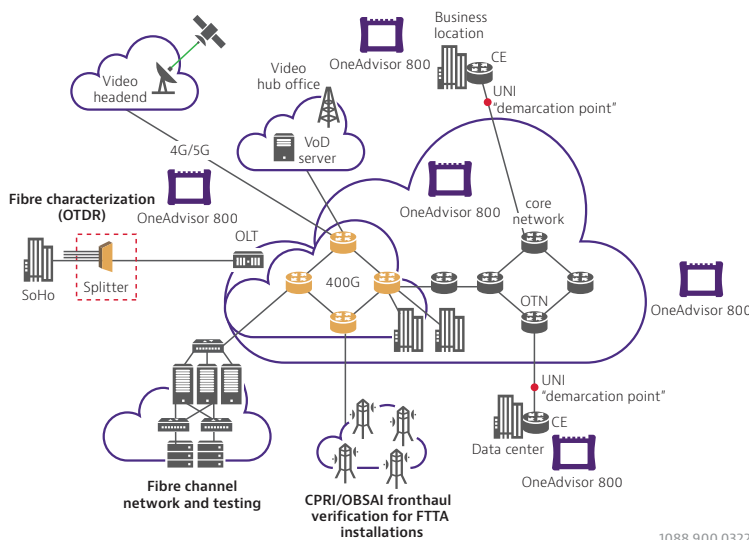# VIAVI
OneAdvisor 800 Transport
Field-Optimized Network Test Tool Up to 400G

The OneAdvisor 800 delivers all the test capabilities technicians and engineers need to install and maintain high-capacity networks up to 400G. Its portability and modularity make OneAdvisor 800 perfectly suited for metro/core, data center interconnect, and business services testing. The OneAdvisor 800 features the same user interface as all in the T-BERD/MTS Family.

The OneAdvisor 800 is designed to meet the challenges that network operators and datacenters face now that 400GE technology has made its way downstream from the lab to field deployments. No longer in temperature-controlled, laboratory environments, 400GE test devices in the field must be rugged and portable and run cool without sacrificing key test features and measurement accuracy.

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Key Benefits

- **Conveniently Portable**. One of the smallest 400G test devices available

- **Unmatched Cooling**. Best in class for 400G portables – easy to cool ZR pluggables

- **Superior Battery Life**. Scalable to multiple batteries which enables hours of unconnected use

- **Broad Test Coverage**. Modularity delivers all-in-one solution across lines rates and protocols

- **Flexible**. Tests fiber (OTDR, OSA) and all Ethernet rates (400, 200, 100, 50, 40, 25, 10, and 1)

- **Multiple Optics Support**. QSFP-DD/QSFPx, OSFP, SFP-DD/SFPx enabled, and full coherent optic support

Features

- **Future-Proofed.** Test new and future technology including PAM4, NRZ and Forward Error Correction. Covers unique rates such as 50GE on SFP56 optics

- **Consistent Results**. Scripted workflows that drive test consistency across users; QuickCheck, RFC 2544, OTN Check Optics Self-Test

- **Expandable**. Pairs with the VIAVI 4100-Series OTDR and WDM Channel Checker/OSA modules. Combines with 5G Radio Frequency analysis.

The OneAdvisor 800 with 400G Transport Module is the industry's most integrated and compact tool for up to 400Gbps testing. This solution provides full rate coverage to address service activation, troubleshooting, and maintenance. The 400G Transport Module provides optics coverage for QSFP-DD/QSFPx, OSFP and SFP-DD/SFPx. In addition, the OneAdvisor 800 integrates fiber optic testing with OTDRs, OSAs and can also be combined with 5G RF testing in one.

Comprehensive Coverage

The OneAdvisor 800 provides modularity with the following attributes:

- Modular base unit with large 8-inch, multi-touch display

- Integrated WiFi, and Bluetooth to wirelessly transfer results. For secure environments, units are available without any WiFi/BT

- Expandable with full-sized test modules such and expansion modules on the back of the unit.

- Scalable battery support which includes a battery in the base

- SmartAccess Anywhere provides easy device access from an Android device, IOS or PC

- Cloud-base StrataSync™ for results collection, data management, and device tracking

- Support of VIAVI Fiber inspection tools and USB power meters

400G Transport Module

This module provides broad support of multiple interface types with a built-in GNSS receiver for future expansion. The test interfaces include a QSFP-DD, an OSFP, and two SFP-DD physical ports. The reporting of full power consumption is available for all optics types. Capabilities feature native PAM4 and NRZ with electrical pre-emphasis support. Superior cooling capabilities enable the support of 400GE ZR/ZR+ pluggable optics.

The 400G Transport Module provides the following Ethernet rates: 400GE, 200GE, 100GE with no FEC, RS (528,514) FEC or full RS (544,514) FEC, 50GE on SFP56, 40GE, 25GE (FEC or bypass), 10GE; 1GE is planned. It also supports OTU4, OTU3, OTU2e, OTU1e, and OTU2.

400GE/200GE specific capabilities include:

- Testing using 400GE ZR/ZR+ pluggable modules. Can set the transmitter to different channel/wavelength/ frequency values and optical power levels. Reporting of coherent receiver statistics.

- Support of up to 4 VLAN tags y Full line rate bandwidth including Ethernet burst testing. Support of layer 2 and layer 3 IPv4 testing including ARP, DHCP and IPv6.

- Packet capture and decode

- Selection of frame sizes up to 16,000 bytes including random distribution and EMIX

- RS (544,514) FEC testing for correctable errors up to 15 symbols and uncorrectable errors. Monitoring of high BER rates with a user settable alarm threshold.

- Key Performance Indicator testing using ATPv3 which provides real-time frame loss, out-of-sequence, latency, and packet jitter measurements

- Bit Error Rate testing using PRBS patterns in Ethernet frames. Multi-lane unframed BERT is available as an option.

- Optics Self-Test for QSFP-DD, OSFP, and SFP devices. Includes pre-FEC and post-FEC BER results with pass/fail results based on BER theory, PPM offset testing, and temperature monitoring

- Control of QSFP-DD devices and registers via expert mode. This includes pre-emphasis and per register access. Selection of application codes for CMIS pluggables.

- Ethernet level testing including QuickCheck, RFC 2544, and Y.1564 SAMComplete™

- Support of the Peak IFG feature to report traffic service disruption
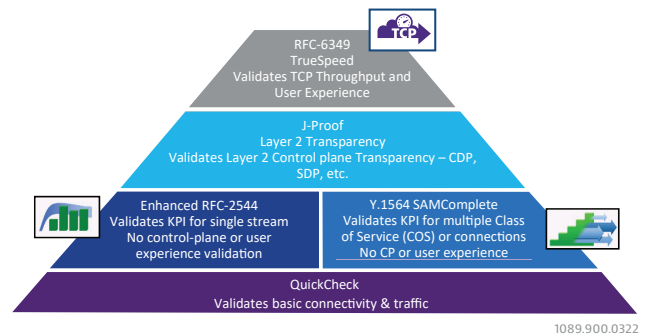
Troubleshooting with Optics Self-Test

Optics Self-Test is a workflow tool to identify and troubleshoot performance issues related to pluggable optics. It is especially well-suited to field environments where pluggable optics issues are difficult to isolate. It is available on QSFP-DD, QSFPx, SFPx. This tool features a recommended test duration calculation based on a target BER. The tool is included with each line rate and monitors information such as optical power and temperature.

Time-Saving Ethernet Service Activation

Test more quickly and efficiently using automated tests on OneAdvisor.

- QuickCheck — a fast, automated test that validates end-to-end configurations; runs as a pre-check test before RFC 2544 or Y.1564 or as a stand-alone test

- Enhanced RFC 2544 — an automated turn-up test with built-in time efficiency for validating key performance indicators (KPIs), concurrently measuring throughput, frame delay, and frame delay variation in addition to frame loss and committed burst size (CBS)

- Y.1564 SAMComplete™ — An automated service verification test that speeds the verification of multiple classes of service (COS) or connections based on SLAs

RFC-6349
TrueSpeed
Validates TCP Throughput and
User Experience

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

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

Y.1564 SAMComplete
Validates KPI for multiple Class
of Service (COS) or connections
No CP or user experience

QuickCheck
Validates basic connectivity & traffic

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OTN Service Activation with OTN Check

The unique VIAVI OTN Check tool greatly simplifies the testing OTN services. This workflow tool automates the process of turning up a new OTN service by integrating key tests like OTN payload verification, round-trip delay, overhead transparency testing and encryption testing. OTN Check streamlines the test process and generates pass/fail results.

Expansion Modules

These modules can perform several additional functions and connect onto the back of the unit.

Modules include:

- An optional expansion battery
- A full family of OTDR modules, with Smart Link Mapper which provides an icon-based map view for clear diagnostics of detected issues
- The OSA-4100 Optical Spectrum Analyzer with full band support and tunable SFP control
- Channel Checkers which display the spectrum of an incoming signal

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, improving instrument efficiency and technician effectiveness. StrataSync enables inventory management, test result consolidation, and performance data distribution with browser-based ease. StrataSync manages and tracks test instruments, collects and analyzes results from the entire network, and helps train and inform the workforce.

VIAVI Solutions

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