



Network and Service Enablement

Instruments, Systems, Software,
and Services that Enable
Broadband Communications

VIAVI, formerly JDSU, offers instruments, systems, software, services, and integrated solutions that help communications services providers, equipment manufacturers, and major communications users maintain their competitive advantage at each stage of the network life cycle.



Since 1923

97 years of
dedication to our
customers

VIAMI Solutions Global Services EMEA Trainings, Workshops and Seminars

- Designed to support
- Show best practice
- Transfer know-how
- On-site or in training center
- Standard or customized contents
- Open classroom small groups = intensive learning
- Exclusive sessions
- Web-based virtual classroom or self-paced
- Lab sessions, live test, live measurements

Some topics – a sample list

- PON, GPON & FTTx - Passive Optical Networks
- High Speed Telephone Line Access – Principles, Qualification Tests of DSL Transmission
- Basics of WDM Systems and Technologies for New Optical, High-Speed Networks with Bit Rates of 10/40/100 Gbps
- Frequency- and Time-Synchronization in Packet Networks: Synchronization methods SyncE, IEEE1588v2, CCoP, NTP
- Voice- and Video-Quality Measurements (VQA)
- Fiber to the Antenna
- Characterization and troubleshooting of fiber optic paths (OTDR, CD, PMD) using MTS-xxx & Optical handhelds. Splicing & Cleaning
- Experience the network as your customers do: OSI-L4 testing based on standards Y.1564 & RFC 6349

Interested? Great!

Just contact us - it is our pleasure to advise you!

Contact: **Please address to VIAMI sales**
Phone: **+49 7121 86 2222**



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Lab and Manufacturing Test

ONT-Family Testing – Ethernet and OTN up to 800G in Lab, Production and Service Validation

- High-End test solutions with a long history
- Mainframe types:
 - ONT-804/812 (four and twelve slots)
 - ONT-804 – No display, with rack-mount kit
 - ONT-804D – With display
- Clearly structured concept allows multiple GUI and Automation users at the same mainframe.



Ready for the Future: 800G FLEX Module

Accelerate development for PAM-4 based products and flexible services up to 800G

Key Features

- 400GE and 200GE IEEE 802.3bs
- 4 x 100GE breakout IEEE 802.3cd via QSFP-DD
- FEC Stress Testing for PAM-4 coded signals
- Multi-user support and independent ports
- Test Automation

Applications

- System development
- Ethernet traffic load
- Transponder hardware validation
- FEC compliance validation
- IC development and validation test
- System Verification Testing (SVT)
- Manufacturing test



Supported Interfaces:

- 2 x QSFP-DD
- 6 x QSFP56
- 8 x QSFP28
- Electrical (via adapters)

ONT-800 with Module 400G CFP8

The VIAVI™ 400G CFP8 Module is a scalable test solution based on the latest standard for 400G and 200G Ethernet (IEEE 802.3 bs) and ready for OTUCn. It boasts a CFP8 slot to host the first-generation 400G pluggables, support for upcoming QSFP-DD and OSFP available via adapters. FlexE and FlexO applications are addressed via 5 QSFP28 slots.



Key Features

- 400GE and 200GE Signal Integrity Testing
- CFP8 Transponder Test (16x25G NRZ)
- QSFP-DD and OSFP Transponder Test (8x50G PAM-4)
- Evaluation Board Access via PAM-4 and NRZ adapters
- Addresses Physical Layer, PCS/FEC, Ethernet and OTN
- Comprehensive Applications for Troubleshooting from Physical Layer up to 400GE/OTUC4
- Future-proof by design, prepared for in-depth FlexE/FlexO Testing

ONT N-Port Test Module

The VIAVI ONT N-PORT module is a 4-port solution for test and system verification of 100G-class products. It supports four native, fully independent QSFP28 or SFP28 ports. Test applications include Ethernet, OTN, and Fiber Channel.



Covering All Bit Rates from 155M to 12.5G ONT-601 with Multiport Test Module (MTM)

The MTM provides high density 155M to 12.5G testing at layers 1 through 3. Concurrent users can control a broad protocol range including OTN, GigE/10GigE LAN, SONET/SDH, and Fibre Channel.



Key Benefits

- All-in-one solution tests Layers 1 to 3 at 155 Mbps to 12.5 Gbps rates
- Maximizes value with broad Ethernet, OTN, GFP, Fibre Channel, and SONET/SDH protocol coverage
- Complex traffic generation, deep analysis, and advanced error/alarm insertion ensures optimal system performance
- For OTN, it supports both Enhanced (ITU-T G.975 I.4 and I.7) and Generic (ITU-T G.709) FEC for complete FEC test coverage
- Unframed 600 Mbps and 1.2, 2.4, 3, 4.9, 6.1, 9.8, and 10 Gbps CPRI rates, inband 2.5, 5, and 10 Gbps rates and 1.485, 1.484, 2.970, and 2.967 Gbps SDI rates

NEW: MAP-300 Multiple Application Platform

MAP Multiport Tunable Filter Module (mTFX-C1)



3 or 8 slot chassis

The proven platform ... different modules and an even easier-to-use user interface, customizable control interface and much more:

- Multi user environment
- Host all of our LightTest and LightDirect applications and modules
- Backwards compatible with MAP-200 modules
- SCPI backward compatible for our automation installed base
- Improved processor for hungry applications
- Fundamental re-casting of the user interface with HD-touch screen or remote
- Standard Ethernet interface with option GPIB and Trigger interfaces

New C and L broadband sources

- mBBS, including L band
- Ultra-Performance mOPM power meter
- Range of mSRC optical sources
- mTFX "Wavelength management module" rather than filter
- mPCX High Speed Polarisation Controller/ Scrambler
- Range of mEDFAs, including dual EDFA
- mVOA – variable optical 70 dB attenuator
- O-band Semiconductor Optical Amplifier

Key Features

- Complete wavelength management module with bandwidth adjustment from 16 to 5100GHz
- Low loss (<5.5 dB), continuous extended C-band coverage with ± 3.5 GHz wavelength accuracy
- Up to 120 independent filters, each with independent attenuation and output port assignment
- Fast, simple GUI and SCPI control interfaces for filter generation

Applications

- Photonic communication test automation
- 100 G+ coherent interface testing
- ROADM node emulation
- Signal extraction or insertion during DWDM system testing

MAP-220 slot chassis and MAP-202/204 Switch

- The optical switch, mOSW, fits in the MAP-220, 230B and 280 chassis
- The optical switch tray, mISW, fits in the MAP-330 and 380 chassis, depending on the switch size
- Optional Power Trim/Power Measurement on single-mode switches

Service Assurance Solutions

Mobile Assurance

ariesoGEO Platform Location Intelligence

The heart of ariesoGEO is the GEO platform, which connects to the Network OSS to collect customer generated trace data. Using patented methods, the billions of events per day are geolocated, analyzed and loaded into the intelligence store.



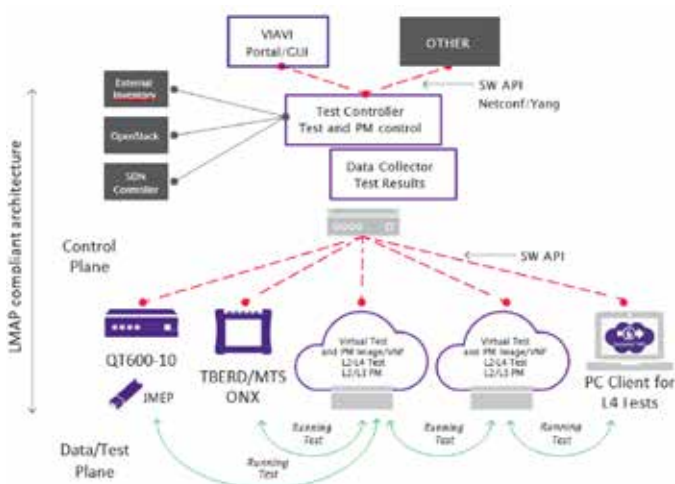
- **GEOanalytics** delivers a sophisticated API to allow third party applications to make direct use of the location intelligence
- **GEOinsights** unlocks the power of the location intelligence
- **GEOperformance** uses location intelligence to transform RAN planning and Performance engineering increasing operational efficiency
- **GEOson** brings the power of location intelligence to automated network performance optimization

Transport Assurance

VIAVI NITRO™ vNet Fusion

Virtual Service Activation and Performance Management

Provides software-based lifecycle management for test, service activation, performance monitoring and troubleshooting on all network layers.



Key Features

- RFC7594 (LMAP) compliant architecture with NetConf/Yang I/F
- Virtual probes running standards-based, repeatable tests:
 - L2 - Y.1564 SAMComplete
 - L3 - Y.1564 SAMComplete
 - L3 - PM TWAMP
 - L4 - UDP throughput (Y.1564)
 - L4 - TCP throughput (RFC 6349 - TrueSpeed)
- Solution combines/supports virtual probes, PC SW clients, legacy test instruments and HW probes, and pluggable optics probes
- Performance optimization through use of packet acceleration, DPDK and SRIOV
- KVM, VMWare and OpenStack compatible

Metro Network – C/DWDM Optical Field Test

MTS-4000 V2 Optical Test Platform

A Modular Test Platform designed for the installation, turn-up and maintenance of fiber optic networks. All-in-one integrated dual bay solution automating fiber/optical test and certification.

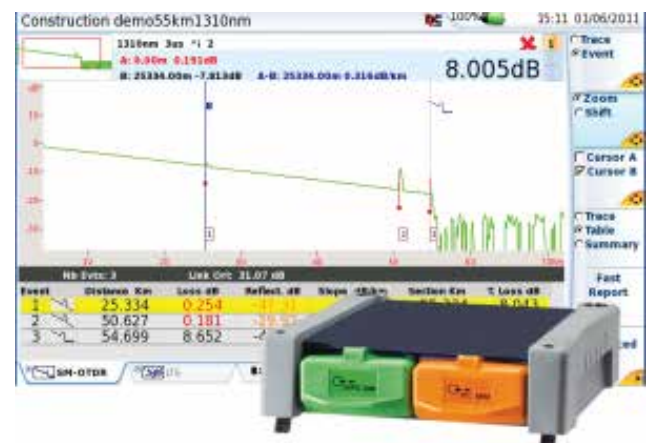


- Easy-to-use solution with intuitive icon-based graphical user interface (GUI) and 9-inch multi-touch screen requiring minimal training
- OTDR modules enabling through PON splitter in FTTx
- Smart Link Mapper – provides an icon-based map view of a fiber link
- Remotely coach and support field techs with Smart Access Anywhere (SAA)
- PON Power meter for turn up FTTx networks (1260–1630 nm)
- CWDM spectrum analyzer COSA – with SFP interface
- Video inspection scope, laser source, power meter and VFL
- FiberComplete – Automated bidirectional IL-ORL and OTDR – One connection – One touch!

4100-Series WDM OTDR Modules

To Mainframe MTS-2000, -4000, -5800, OneAdvisor-800 and CellAdvisor 5G

- 18 CWDM wavelengths with only two OTDR modules
- Multiplexer and Demultiplexer testing CWDM systems
- PON-optimized splitter test up to 1x128
- Tunable DWDM OTDR in the C-band, C62 to C12 (1527.99nm – 1567.95nm / 196.20 – 191.20 THz)
- Integrated CW light source with modulation capability
- Instantaneous traffic detection



MTS-6000A (V2) Fiber Characterization Mini-Platform

Platform for 1 optical module, OTDR, OSA and more ...



MTS-8000E Fiber Characterization Platform

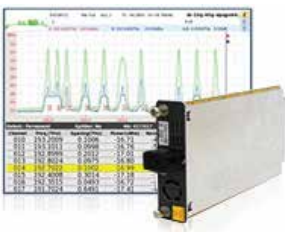
Two-slot solution for OTDR and more ...



Functions for MTS-6000A (V2) and MTS-8000E:

- OTDR-modules (EVO) up to 5 wavelengths and 50 dB dynamics
- Shortest dead zones: EDZ; MM 0.25 m, SM 0.6 m; ADZ; 2 m
- Hi-Res Multimode OTDR-module; EDZ 0.20 m; ADZ: 0.40 m
- I-PMD™ in service testing of 10|40|100G DWDM channels, w/o shutdown
- ODM module for PMD, CD and attenuation profile
- CWDM, DWDM OSA
- Bi-directional OTDR and loss test
- Script for link characterization
- NEW B-OTDR (**Brillouin OTDR**) Distributed Fiber Optic Sensing of Strain, Temperature and Optical Loss, e.g. pipeline monitoring

OSA-110-Series for MTS-6000, -8000 Platforms



Full band optical spectrum analyzers for CWDM, DWDM and ROADM systems testing.

- OSA-110R now for measurement in ROADM-networks (I-OSNR)
- CWDM + DWDM testing in Metro Access, CATV, mobile backhaul and LTE.
- Smallest full-band (1250 to 1650 nm) monochromator OSA worldwide.
- One-touch Pass/Fail application
- Suitable for all CWDM to DWDM applications down to 33GHz channel spacing
- Scanning time <1 s in fast mode
- ORR values up to 40 dBc suited for field use
- Dynamic range from -60 to +23 dBm without external attenuator
- Supports all modulation formats, even 40G/100G (important for channel detection).

OSA-500/500RS Full-band Optical Spectrum Analyzer

- OSA-module for MTS-8000E platform
- For testing CWDM and ROADM-based systems up to 100 Gbps
- Smallest and lightest high performance field OSA
- Highest measurement speed and outstanding wavelength accuracy
- Built-in wavelength calibrator – needs no recalibration over lifetime
- Full band operation (1250 to 1650 nm) for CWDM and DWDM
- Option for PMD measurement
- New Optical Polarization Splitting method (OPS-method) for measuring the true in-band OSNR in ROADM based networks



MTS-8000 with OSCA-710 and UTM-710

First In-Service Pol-Mux Optical Spectrum Analyzer.

- First optical correlation Analyzer for in-service, in-band OSNR measurements of 40G, 100G, 200G, and 400G systems utilizing polarization multiplexing (PM), or dual polarization (DP), transmission formats in ROADM networks
- Works with PM-BPSK, PM-QPSK, and PM-xQAM modulation formats
- Supports Nyquist-filtered signals
- First instrument that measures in service chromatic dispersion (CD)
- Independent of baud rate and FEC overhead
- UTM-710: Utility Module (optional) includes optical preamplifier for low channel power applications and optical prefilter for high channel count applications



OCC-55 CWDM / OCC-56C DWDM Channel Checker

- Low-cost alternative to an OSA for applications which do not require OSNR measurements
- Troubleshooting in CWDM networks
- Small and lightweight ruggedized design optimized for highly mobile field networkers
- Graphical/tabular display mode
- Measure up to 18 CWDM wavelengths specified by ITU-T G 694.2
- 50/100/200 GHz DWDM channels ITU-T G 694.1



OBS-550 Optical Broadband Source

- One handheld source for Chromatic Dispersion, PMD, and attenuation profile
- CWDM, DWDM and very high speed network characterization
- Water peak (OH around 1383 nm) and component qualification
- Metro, long-haul and very long haul
- OBS-500; 1460 to 1625 nm; 0 dBm; polarized or unpolarized
- OBS-550; 1460 to 1625 nm; 0 dBm; 1530 to 1610 nm; +15 dBm; pol or unp
- BBS2A; 1260 to 1640 nm; Full band AP test; water peak qualification; > 8 dBm



Optical Network Management System (ONMSi)

ONMSi is a remote fiber test system that scans the fiber network 24/7 and automatically detects and locates faults without having to dispatch technicians in the field.

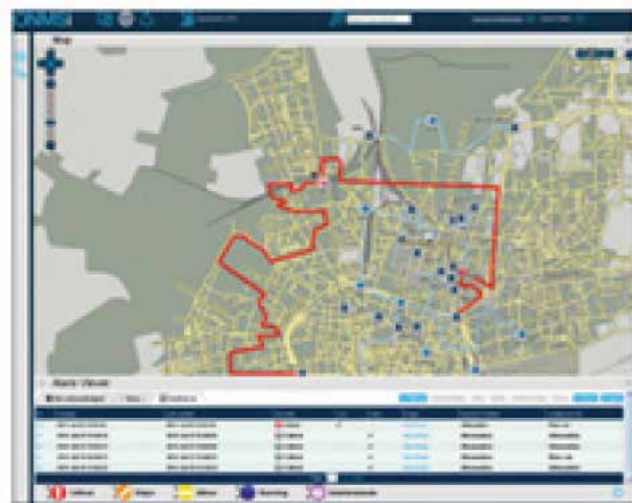
- Optical Network Troubleshooting for both P2P and P2MP networks
- SLA management (improves MTTR and proves results)
- Network security (detects intrusion)

Network construction (reduces test time & staff, keeps track of test records)

- Instant view of optical network performance
- Fiber health (temperature and strain with **Brillouin OTDR**) and optical performance monitoring, e.g. Submarine Cable Networks

PON Network Construction – reduces test time & staff, keeps track of test records

- Record the network signature at different points in time such as during network construction, provisioning, and troubleshooting.
- A single person can test the network during installation



SmartOTU – A Plug and Play Remote Fiber Testing Solution

The SmartOTU is a stand-alone online test solution for the automatic detection and localization of defects on fibers. SmartOTU is an innovative solution for monitoring critical fiber in small private networks. It can be connected and put into service immediately without any special technical training or IT configuration.

The OTDR Test Units OTU-xx for the ONMSi and SmartOTU Application

Automate optical network monitoring with the most compact rack-mounted, remote OTDR test unit on the market.

- User-friendly web-based software interface
- High precision fiber fault location through industry-leading OTDR series
- Switch scalability up to 1080 ports
- E-mail, SMS and SNMP notifications

OTU-5000 Optical Test Unit

- Fixed OTDR unit, modular switch design
- Small size: 72 ports in 1RU



OTU-8000 Optical Test Unit

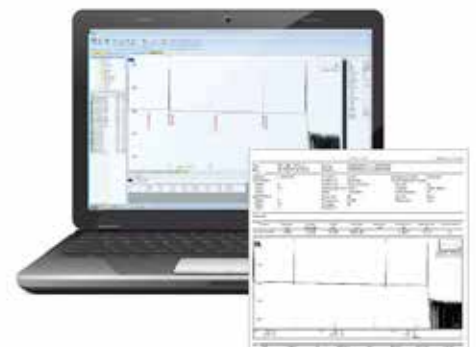
- Modular OTDR and switch design
- Highly integrated 2U units
- Width: 19"



OFS-100 Optical FiberTrace 2 Software and OFS-200 Optical FiberCable 2 Software

Post-processing PC software offers fast and efficient viewing, editing, analyzing, and reporting of optical fiber test data.

- Web-enabled software interface for ease of use
- Highest fiber fault accuracy with Industry's leading OTDR series
- Highly integrated 2RU unit with no local PC required
- Modular OTDR and Switch design for multiple applications



FiberTrace 2 - Ideal for small fiber orders
FiberCable 2 - Ideal for the analysis and characterization of large groups of fibers.

Core IP Network

MTS-5800-100G – Handheld Network Tester for Dual 100G Ethernet

Supports comprehensive rate testing from 1.5M/2M to 112G with the latest technology interfaces including SFP/SFP+/SFP28 and QSFP+/QSFP28/CFP4.

- Remote access with Ethernet, Bluetooth and WiFi
- Remotely coach and support field techs with Smart Access Anywhere (SAA)
- TDM/PDH interfaces, CPRI/OBSAI layer 1 and layer 2 test capabilities
- Ethernet 10GE, 25GE, 40GE, 50GE, 100GE
- Fibre Channel 1G, 2G, 4G, 8G, 10G, 16G, 32G.
- OTN (G.709), 2.7G, 10.7G, 11.xG , 112G OTU4
- Layer 1–4 Ethernet w. RFC 2544, SAMComplete Y.1564, TrueSpeed™ RFC 6349 based TCP test, VLAN, Q-in-Q, OAM, VPLS, MPLS, MPLS-TP TCP at 10 Mbps to 10 Gbps with stateful emulation
- Data capture on Ethernet test interfaces
- AOC/DAC cable test function
- IP Video and VoIP analysis and test application
- SyncE and capture on all Ethernet test ports
- Wander analysis for E1, SyncE, 2/10 MHz, 1 pps
- GPS receiver kit with Rubidium oscillator to have portable reference source. Also used for OWD measurements
- OTDR modules for fiber link characterization and fault finding
- TEM Timing Expansion Module – Performs 1588v2 (PTP) measurements including nanosecond-accurate PDV and time error (TE) measurements
- DEM – Datacom Extension Module Supported Serial Interfaces – RS232 / V.28, RS530, RS449, V.35, RS-485, X.21



Multiple Class of Service (COS) Workflow



MAP-2100

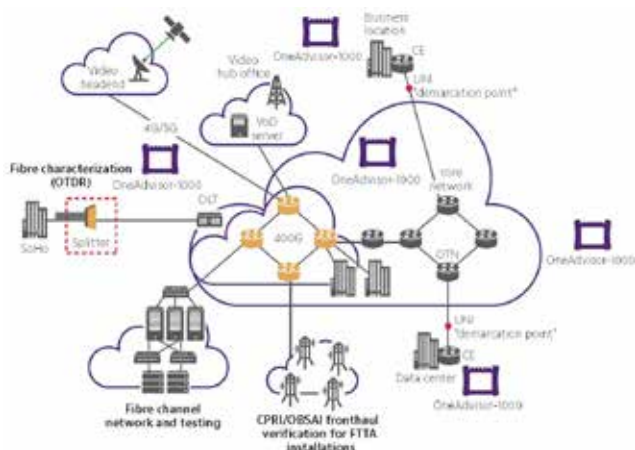
- Rack mounted, 1U 19" wide, kits available for 21"
- Features like MTS-5800-100G
- Optional optical switch 2 x 8 ports



OneAdvisor-1000

400G Portable Network Tester

Delivers all the test capabilities technicians and engineers need to install and maintain high-capacity networks.



Benefits

- Optimized for central office use with a 10-inch multi-touch screen, scripted workflows, and clear pass/fail results
- PAM4 native support provided via connectors and interfaces to test 400GE
- Simplifies multi-technology testing via modularity to provide an all-in-one solution
- Compatible with fiber optics test modules such as OTDR

Features

- Tests new technology including PAM4 and KP4 FEC at 400GE
- Strong battery life (beyond 1.5 hours) running 400GE with QSFP-DD optics
- Scripted workflows that drive test consistency across users; QuickCheck, RFC 2544, Y.1564, SAMComplete™, OTN Check, and Optics Self-Test
- Pairs with the VIAVI 4100-Series OTDR and WDM Channel Checker modules with Smart Link Mapper
- Comprehensive rate testing from 400GE down to DSx PDH (1.5M/2M) including all intermediate Ethernet rates
- Optics Self-Test for QSFP-DD devices. Includes pre-FEC and post-FEC BER results with pass/fail results based on BER theory, PPM offset testing, and temperature monitoring

TrueSpeed VNF

TrueSpeed™

RFC 6349-compliant TCP test for MTS-Ethernet testers

- TCP throughput testing following IETF best practices
- 10 Mbps to 10 GE TCP testing
- Advanced traffic shaping tests
- Increase customer satisfaction with Ethernet and IP services
- Reduce technician coordination for RFC 6349-compliant TrueSpeed tests
- Mobility backhaul qualification and troubleshooting
- Residential ISP installation testing
- Metro and core network mesh testing



Xgig 5P8 Platform for PCI Express® 5.0

Supports link speeds up to 32 GT/s, and connects with other analyzers for multiprotocol functionality

- Fully compatible with other PCIe data rates of 2.5, 5.0, 8.0 and 16.0GTps
- Link widths up to 8-lanes
- Memory segmentation for capture of multiple traces
- Host-Client connection for remote debugging using Ethernet or local debugging using USB
- Decodes all PCIe and NVMe traffic at all layers of the stack including the TLP, DLLP, and PHY layer logic sub-blocks
- Trigger and Search events include training sequences, ordered sets, queue pairs, PRPs, Scatter/ Gather Lists (SGL) etc.



Access Network

SmartOTDR™ Testing Solution

- Compact, easy, upgradable OTDR kit for installing and troubleshooting optical fibers across premises, FTTA, and FTTH networks.
- We provide one, two or three wavelength and dynamic range versions: 1310/1550 and filtered 1625/1650 nm; Type for last mile "100A" 37/35 dB – for Metro/PON "100B" 40/41 dB.
- PON optimized to test through a 1x128 splitter (B version)
- Integrated CW light source on OTDR port
- Built-in optical power meter and VFL options
- Automated pass/fail fiber inspection analysis with optional P5000i microscope
- Smart Link Mapper (SLM) eliminates OTDR interpretation errors without impacting test times



VIAVI StrataSync enabled

MTS-2000 Handheld Modular Test Set

- LAN/WAN/Metro/Access/PON OTDR applications.
- Smart Link Mapper – provides an icon-based map view of a fiber link
- FiberComplete™ application for automated bidirectional OTDR, Insertion Loss and ORL testing – One connection – One touch!
- CWDM optical spectrum analyzer and NEW! CWDM OTDR modules with 8 and 10 wavelengths
- PON/FTTH selective power meter application.
- Digital analysis microscope to inspect connectors end faces and perform IEC pass/fail analysis
- Tunable DWDM OTDR module, C-band 1528 nm to 1568 nm



MTS-4000 V2 Optical Test Platform

- Easy-to-use solution with intuitive icon-based graphical user interface (GUI) and 9-inch multi-touch screen requiring minimal training
- Highly scalable with up to 2 field-replaceable modules
- Fiber test applications include OTDR, PON meter, video inspection scope, laser source/power meter, and VFL FTTx PON OTDR. Optimized dynamic range and dead zones for test through splitters up to 1/128
- Scripting, Internet access, remote control, HTML, PDF reader



OneExpert DSL Modular Field Test Platform

A multitouch, user-friendly interface and OneCheck™ automated tests ease complex tasks with clear pass/fail results.

- OneCheck TDR – easy-to-use – ensures every technician can locate copper faults
- Testing of G.fast and ADSL2+/VDSL2, including bonding and vectoring, copper, POTS and coax/HPNA
- Fiber, WiFi, Coax, and Wiring test and installation
- Optical USB power meter MP-60 /-80 and fiber microscope
- Web Video test, verification and troubleshooting
- Mobile-connectivity iOS app for remote control, job management, data enhancements, and technical support content, including tutorials
- StrataSync™ cloud-enabled asset and test data management reduces administrative support time. European cloud center is now based in Frankfurt/M (Germany)



HFC, Video Testing and Monitoring

Installation and Service Testing is Essential

Problem:

- Need to ensure that problems are fixed while technician on-site with comprehensive installation testing
- Common issues: craftsmanship, network and component condition or limitations, damage through changes to home network or in unassociated DIY projects, modem provisioning problems, or other network issues that must be referred to maintenance

Solution:

- Most advanced meters on the market
- For complete home network installation and service testing, with speed, simplicity and power
- Meter for every tech level and application
- Covering all home networking technologies – fiber, RF and WiFi

OneExpert CATV Modular Field Test Platform – DOCSIS 3.1

A multi-touch, user-friendly interface and OneCheck™ automated tests ease complex tasks with clear pass/fail results.

- **ONX-610** with fixed diplexer 48 MHz;
ONX-620 with dual diplexer 48 and 85 MHz.
- 32x8 DOCSIS 3.0, DOCSIS 3.1, WiFi, Ethernet 1Gbps capable and TrueSpeed™ option.
- Channel Plans built by the meter automatically
- Downstream scan including MER/BER in about 60 sec
- Dashboard simplifies and identifies RF issues
- Ingress and Downstream testing performed simultaneously
- Much more Downstream coverage in half the time
- **Session Expert™** Expertise is built-in – helps technicians identify and fix problems
- Connects to the cloud center in Frankfurt/M (Germany) – quickly and easily – ensuring consistency via StrataSync™
- Field exchangeable DOCSIS & RF unit reduces cost of ownership
- Optical USB power meter MP-60 /-80 and fiber microscope
- Add on module capable to support future needs
- **ONX-630** is a powerful meter for maintaining HFC networks, including DOCSIS 3.1 performance analysis, spectrum analyzer and forward reverse sweep measurements
- **SCU-1800** Sweep Control Unit provides downstream sweep to 1.2 GHz and upstream sweep to 204 MHz on up to 16 ports



OneExpert DSP

Fast, simple, versatile, and affordable, the ONX-220 is a powerful installation/service meter.

Applications

- Return spectrum analysis (4 to 110 MHz)
- Level, C/N; QAM and OFDM measurement
- Complete channel plan scan with tilt measurement
- Advanced, yet simple testing and troubleshooting
- Troubleshoot service issues between the TAP, Ground Block and CPE
- Identify and fix intermittent issues related to QAM and OFDM carriers and the home network
- Verify WiFi signal strength and availability in 2.4GHz and 5GHz networks



Seeker Home Leakage Test Kit

- Dual-band leakage receiver for both aeronautical and LTE frequencies
- Audible tone increases proportionally in pitch as technician moves closer to leak source
- Works with option equipped installation and service meter (DSP or ONX)
- Find leaks that may interfere with other over-the-air services within the home



DSP Series Meters

Robust and compact DOCSIS 3.1 installation and service meters for cable service providers and contractors.

- Return spectrum analysis (4 to 110 MHz)
- Level, C/N; QAM and OFDM measurement
- Complete channel plan scan with tilt measurement
- Auto-discovery of channel plans
- NEW! TDR for coax cable, > 4000 m, accuracy +/- 30 cm



PathTrak Return Path Monitoring System

Provides superior spectrum and QAM analysis capabilities enabling the most efficient and effective monitoring and troubleshooting capabilities. Now fully supported by XPERTrak software, PathTrak is an integral part of the VIAVI Solutions overall HFC maintenance, monitoring, and troubleshooting portfolio.

- Reduce churn via faster MTTR for critical issues
- Harden HFC plant for optimal upstream utilization
- Mobile friendly – Android, iOS, Windows
- Spectral and packet-based analysis capabilities, complete picture of upstream health
- Scalable solution minimizes hub space/power/cooling required
- Support field techs with VIAVI FieldView™ and Field View QAM™ for one-person upstream troubleshooting
- Confidence – over 700,000 PathTrak monitored HFC nodes world-wide



VSE-1100 The all-new digital spectrum/video analyzer and noise troubleshooter

Enabling fast and easy maintenance and troubleshooting in the modern digital cable environment like converged cable access platform (CCAP) and remote PHY evolution.

- Hyper-Spectrum™ with real-time overlapping FFT analysis instantly detects any transient interference and noise.
- Single display shows Spectrum/Level/MER/Ingress measurements of all channels.
- AutoChannel™ delivers content-intelligent tuning and channel plan building.
- MPEG error visibility with live transport-stream display and post-capture analysis.



XPERTrak

XPERTrak Customer QoE Assurance and Proactive Network Maintenance System

Key Features

- Comprehensive DOCSIS 3.1 support
- Maintenance prioritization based on churn risk
- Service assurance and field find and fix capabilities in a single solution
- Fully supports PathTrak hardware and network element integration including R-PHY sweep
- Integrated PNM solution to illuminate HFC upstream, downstream, and home issues
- Consistent system-wide network performance assessment, vendor neutral
- Seamless integration of PathTrak HW, PNM, QoE, Leakage, and field meter interaction



Access Wireless Testing

TM-500 Network Tester

It is in use with almost every base station manufacturer across the world, and can be regarded as the de facto standard for network testing via RF.

Features

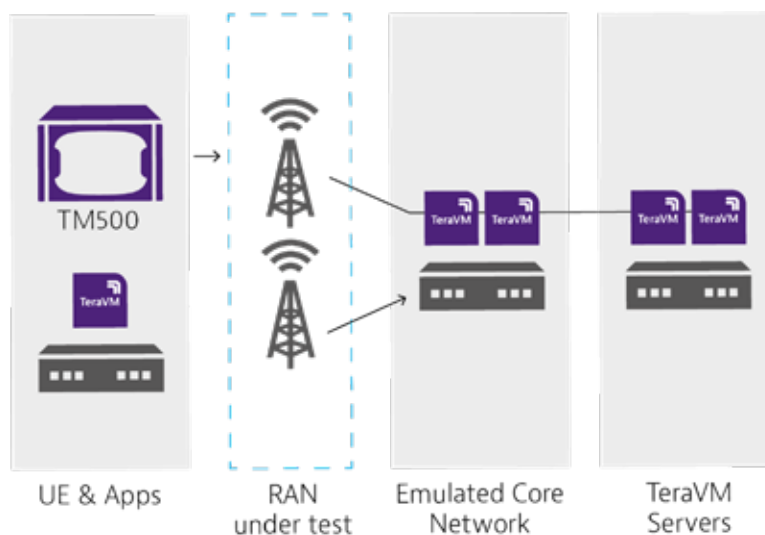
- 3GPP GSM, WCDMA, LTE, LTE-A FDD and TDD, and 5G
- Support of 3GPP LTE and LTE-A Rel-8, Rel-9, Rel-10 and Rel-11, WCDMA up to Rel-10, and pre-3GPP 5G NR
- L1, L2, NAS and full system level modes
- Support of high number of UEs per cell/carrier for capacity testing
- Easy configuration of traffic and channel conditions for multiple UEs

TeraVM – 5G Core Emulator

Removing the pain of Core Network dependencies for 5G, 4G and 3G

One of the biggest challenges facing NEMs and mobile operators as they launch 5G is developing products against constantly changing and maturing 3GPP specs.

- First to market alignment with 3GPP standards
- Runs in lightweight VM on standard x86 hardware
- Standalone, non-standalone 5G plus legacy RATs (2G, 3G, 4G)
- Supports IoT and VoLTE (IMS)
- Automation and scripting tools
- Negative Testing via Error injection on N2 interface
- Test physical or virtual 5G Core Networks
- One-stop test support



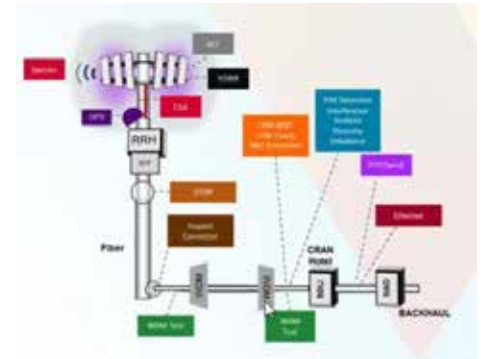
OneAdvisor-800

All-In-One Cell Site Installation and Maintenance Test Tool

- One Solution. One Process. One Report.
- Fiber validation: OTDR, Fiber Inspection, Optical Power
- Coax validation: Reflection tests (VWSR, Return Loss), Cable Loss, Distance to Fault
- RF Spectrum- and Signal Analysis: LTE and 5G Over the Air, RFoCPRI, Interference Analysis
- DWDM verification (Channel Checker)
- CPRI Check, QSFP CPRI Sync

Test Process Automation Benefits

- Greater accuracy. Complete test plans exactly to the specifications of the service provider with precise measurements.
- Consistency. Test processes and workflows are defined centrally and "pushed" to test instruments, eliminating the variability of manual procedures and drives consistent, repeatable results, regardless of technician skill or experience level.
- Lower Training Costs. Training focus shifts to the test process itself, which is faster and easier to learn, rather than on technical information that is generally time-consuming.
- Speed. Job Manager eliminates wasted technician time trying to remember which tests to run and how to run them



CellAdvisor 5G

It's the ideal field portable solution for validating all aspects of 4G and 5G cell site deployment, maintenance, and management.

Benefits

- Validate and deploy all physical interfaces—fiber, coax and RF—with confidence
- Perform PIM detection plus interference analysis and hunting with the same solution

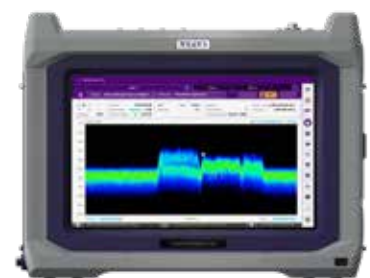
Applications

- 5G cell site installation, commissioning, and maintenance
- Massive MIMO and active antenna beam validation
- Interference analysis and PIM detection over CPRI
- Comprehensive RF signal analysis
- Fronthaul and RRH verification over CPRI

Key Features

Real-time spectrum and interference analysis with persistence display for 5G FR1 (sub-6 GHz) and FR2 (mmWave).

- 5G carrier scanner measuring up to eight wide-band carriers' power as well as strongest beam power level and its corresponding ID
- 5G beam analyzer assessing individual beam's ID, its power level and corresponding signal to noise ratios
- 5G route map for coverage verification, mapping in real-time the beam strength, and making data available for post-processing



Cable and Antenna Analyzers



Key Benefits

- 2.7 GHz, 4 GHz, and 6 GHz options available
- 1-port and 2-port options available
- Coaxial sweeping and fiber inspection all-in-one
- Measures VSWR, Return Loss, DTF, Insertion Loss
- Electronic EZ-Cal fast calibration available
- Fiber microscope and optical meter available
- Multiple RF Power Sensor options available
- 2-year factory calibration cycles supported

3Z RF-Vision Antenna Alignment Tool

Comprehensive Test Solution for Cable & Antenna Analysis

It helps users to easily perform accurate antenna alignment on panel and microwave point-to-point antennas.

- Accurately align directional antennas (panel, microwave, and cylindrical/stealth antennas)
- Generate reliable and automated line-of-sight surveys
- Maximize voice quality and data traffic
- Improve data user throughput & KPIs
- Reduce churn



Premises and Enterprise Test

Network & Service Companion NSC-100

A compact instrument for techs and contractors handling installation, activation and troubleshooting of residential broadband, business services and Metro/Enterprise Ethernet services.

Service installation, activation & troubleshooting

Access networks

- PON – for FTTH & 5G x-haul with ONU-/ONT-emulation
- CATV – for DOCSIS 3.1
- Telco – for xDSL & Gfast

Metro/Ethernet

- Enterprise & Data Center
- Business services
- Wireless fronthaul – 4G & 5G
- L2-/L3-Loopback for Y.1564
 - a. RFC-2544 tests
- WLAN-test: 3x3 WLAN-antenna for 2.4 and 5 GHz



MTS-2000 Testing Fiber Networks

- Hands-free test set for the installation, turn-up and maintenance of fiber optic networks.
- High resolution 5" color touchscreen
- One module solution



Functions for MTS-2000 and MTS-4000 V2

- LAN application. OTDR quad-module with 850 & 1300 and 1310 & 1550 nm
- Smart Link Mapper – provides an icon-based map view
- Remotely coach and support field techs with Smart Access Anywhere (SAA)
- Simple interface and one-touch button operation ensures straightforward use of the instrument
- First-to-market handheld OTDR module with more than 40 dB dynamic range and very high resolution
- Event Dead Zone: < 1 m
- Reporting software FiberTrace or FiberCable, Pass/fail function, compatible with Microsoft Excel™
- Digital analysis microscope to inspect connectors end faces

MTS-4000 V2 Multiple Services Test Platform

- Modular Test Platform designed for the installation, turn-up and maintenance of fiber optic networks Large 9" high visibility touch screen with permanent function keys
- Two module solution



Certifier40G for LAN – 1–2500 MHz Testing

Next-Generation Cable Certifier, designed for productivity with tomorrow's testing capability...today.

- Touch two-ended control
- Reduces time walking back and forth.
- Future-proof 2500 MHz tests, CAT 8 draft and Class I & II draft ISO/IEC
- Fastest CAT 6A/Class FA test – 11 s/15 s
- Level V accuracy over the full Class I & II spectrum
- Integrated planning software
- Optional integrated fiber end face inspection with microscope P5000i
- Testing 40/100 G MPO links – MPO transmit and receive modules
- Industry-leading 5-second MPO auto test
- Quickly and easily identifies connection type: A, B, C or custom



Certifier10G for Copper Only

To test and certify copper up to Category 6A, the Certifier10G is the cost-effective solution. Without support for fiber or Class I & II the Certifier10G is an entry-level copper certifier with the same benefits as Certifier40G.

WiFiAdvisor

- First WiFi/wireless LAN analyzer built for installers at all skill levels with intuitive capabilities for rapid characterization, optimization, and troubleshooting of home WiFi networks
- Site performance report educates customers
- TrueMargin™ optimizes WiFi site throughput
- Highly-configurable radio supports 2.4 G 802.11b/g/n and 5 G 802.11a/n/ac up to 3x3 with MIMO



Observer Performance Management Platform

Our latest Observer release flips performance monitoring on its head, by fully integrating intelligent end-user experience scoring with workflows for any transaction. The patent-pending End-User Experience Score uses adaptive machine learning to run hundreds of data sets through an algorithm to output a single score which indicates problem domain with a simple problem explanation along with performance visualizations.



Observer Apex

Observer Apex integrates end-user scoring, geolocation site clarity, and three-steps-to-resolution workflows.

Observer GigaStor

The undisputed leader in back-in-time analysis, Observer GigaStor eliminates the time-consuming task of recreating problems for troubleshooting or investigating security issues. Just hit rewind to go back in time and review past network activity.

Observer Optical nTAPs

Install Observer nTAPs on 1, 10, 40 or 100 Gb single or multi-mode optical links. The High-Density Optical nTAP (HDOT) to mix and match these network speeds in any combination across 24 modules in a 1U rack.

GigaFlow

In an industry first, GigaFlow reimagines flow to deliver its full potential. GigaFlow intelligently stitches and structures multiple sources of data (flow, SNMP, user identity, and session syslog) together into an enriched flow record.

Observer Management Server

The Observer Management Server (OMS) UI features simple navigation to easily authenticate, control user access and passwords, administer upgrades, and streamline management from a single, centralized location.

GigaStor Portable

Transportable design, 8 TB capacity. 1/10 or 40 Gb or 100Gb.



Fiber Optic Test – Inspection and Cleaning

OMK-3x SmartPocket™ Optical Handhelds

Pocket-sized light sources, power meters and kits.

- Ideal for field tests multimode and/or single-mode.
- Sources OLS: 850/1300, 1310/1550, NEW! 850/1300 and 1310/1550 nm with: ST, SC or FC for multimode; FC, SC or LC for single-mode.
- Meter OLP: 780 to 1650 nm with UPP-adaptor (universal push pull) for all 2.5 mm and optional for all 1.25 mm adaptors. HighPower version +26 dBm.



OLP-37X Wavelength-selective RFoG and PON Power Meter

- Tests B-PON, E-PON, G-PON downstream at 1490 nm and XGS-PON at 1577 nm
- Tests RFoG/video at 1550 nm downstream and at 1610 nm return path



SmartClass™ Fiber Handheld Solutions

Integrates optical inspection, test and PASS/FAIL certification together in a single device. For FTTx, CWDM, DWDM, 40 Gbps, Ethernet, and Gigabit Ethernet

- **MPOLS-85** – Laser source with **MPO-Adapter** with 12 fibers
- **MPOLP-85** – Power meter with **MPO-Adapter** with 12 fibers
- **OLS-85**: 4 laser source (SM or MM & SM)
- **OLP-85/P**: optical power meters – with a 100 dB dynamic range are professional, versatile, and compact instruments perfect for any fiber- optic network power or loss test applications
- **OLP-88**: New TruePON Tester – OLT and ONU identification, ONT activation process verification, automatic PON power levels certification, in-service insertion loss test and Alien/Rogue ONUs detection
- **OLA-54/-55**: Variable attenuator for multimode/single-mode, 2.5 to 60 dB
- **OLTS-85**: Optical Loss Test – fastest and easiest solutions for tier 1 fiber certification to TIA/ISO/IEC standards. For MM, SM and a quad-version
- **ORL-85**: 70 dB high precision return loss meter
- **OTS-55**: Optical talkset, for multimode and single-mode ≥ 45 dB



FI-60, FI-10, FI-11 Live Fiber Identifier



Easily identifies the optical signal without having to disconnect the fiber or disrupt network traffic. FI-60 also converts to an Optical Power Meter.

- FI-60 Detection -20 dBm @ 1310 nm; -30 dBm @ 1550 nm Detected wavelength: 850 to 1700 nm; optical power range: -65 to $+10$ dBm
- FI-10 Detection -40 dBm @ 1310 nm; Detected wavelength: 800 to 1700 nm ; Bidirectional traffic indication
- FI-11 additional to FI-10 – Core power measurement: 0 to -40 dBm

FFL-050, FFL-100 VFL – Visual Fault Locator – Red Light



Localized bending, breaks, and end-to-end connectivity

- High powered laser (650 nm/1 mW) for single-mode (> 7 km) and multi-mode (> 5 km) connectors
- Equipped with a 2.5 mm interface, for connectors SC, ST, FC, E2000, optional: 1.25 mm adapter for LC and MU connectors

P5000i Microscope & FiberChekPRO™

Automated Analysis Software support IEC 61300-3-35

- Highly repeatable go/no-go analysis of fiber end-face by IEC
- Visually inspect bulkhead and patch cord ends of fiber optic connectors and other optical devices
- DUAL-magnification (200/400x) – over 200 precision tip adapters
- Fits for the following VIAVI units: MTS-2000/-4000/-5800/-6000, OLP-8x, CellAdvisor, OneExpert, OneAdvisor and Laptop PC



New FiberChek Probe Microscope for Fiber End-Face

The "all-in-one" handheld solution for fiber inspection.

- Integrated touch screen with live fiber viewing
- Auto-Center, -Focus and -Pass/Fail analysis by IEC 61300-3-35
- Customized user profile
- Stores results on device or exports to laptop/PC with FiberChek Mobile for Android, iOS and Windows
- Bluetooth, WiFi, and USB connection capabilities
- Compatible with P5000i tip adapters incl. MPO/MPT



FVAm Series Benchtop Microscopes

"All-in-one" benchtop inspection and analysis solution for multifiber connectors such as MPO

- Fully automated inspection and analysis with fast results
- Available with integrated touchscreen
- Stores results on device or export



FiberChek Sidewinder

"All-in-one" handheld inspection and analysis solution for multifiber connectors such as MPO.

- Fully autonomous multifiber inspection
- Automatic test results in less than 12 seconds
- Integrated touchscreen
- Auto-center, Auto-focus
- Audible sounds for Pass/Fail results
- Stores results on device or export
- WiFi, and USB connection to a PC and mobile devices
- All-day battery life



MP-60/-80 Miniature USB 2.0 Power Meters

- Measures optical power with multiple pre-calibrated wavelengths:

MP-60 at 850/1300/1310/1490/1550 nm;
Display range: -65 to +10 dBm

MP-80 at 980/1310/1480/1550 nm;
Display range: -50 to +26 dBm



Cleaning tools

- Optical connector cleaning tape 2.5 mm or 1.25 mm
- Fiber cleaning tool bulkhead 2.5 mm, 1.25 mm or MTP/MPO
- Cleaning sticks and fluid



CleanBlast - Fiber Optic Connector End Face Cleaning System



CleanBlast FCL-P1005: Portable, Digital, Bulkhead Handset Univ. 2.5 mm Tip Clean various types of both male (patch cord) and female (bulkhead) connector ends, including SC, FC, LC, ST, E2000, MPO, MTP®, MPX, MT and SMA.

- With an integrated compressor, a standard umbilical, and an input port for a 6 pin QuickCapture "FBP" style probe
- It is built into a ruggedized Pelican brand case
- It features a built-in USB converter and a USB output port to send the probe image to a PC for display or image capture
- Also includes FiberChek software. Other style probes can be attached using converter cables

CleanBlastPRO™: Fiber Optic End-Face Cleaning Stationary system with external compressed air connection

- Profiles are pre-configured cleaning settings that:
 - Automate the cleaning process
 - Ensure consistency across lines and production locations
 - Reduce consumable costs
 - Optimize cleaning for different connector types
- Dedicated cleaning profiles are optimized for different connector types
- Each profile delivers an automated series of solvent, precision air and vacuum steps



Maintenance program for your measuring equipment




VIAVI Care Support Plans

How much is your time worth when there are always too many problems to solve? We help your team maximize productivity with support and maintenance services! Great service is a critical part of your VIAVI experience. Care Support Plans provide priority service at a low, fixed cost with exclusive benefits. We:

- Maintain your equipment for peak performance and accuracy with calibration and repair.
- Facilitate learning with training and priority technical application support.
- Maximize your time with priority service, fast turn arounds, and express loaners

Features

*5-year plans only

Plan	Objective	Technical Assistance	Factory Repair	Priority Service	Self-paced Training	5 Year Battery and Bag Coverage	Factory Calibration	Accessory Coverage	Express Loaner
Manufacturer Warranty	Repair/ Manufacturer Defects	Standard Plus	✓						
 BronzeCare	Technician Efficiency	Premium	✓	✓	✓				
 SilverCare	Maintenance & Measurement Accuracy	Premium	✓	✓	✓	✓*	✓		
 MaxCare	High Availability	Premium	✓	✓	✓	✓*	✓	✓	✓

Call your VIAVI Solutions Sales Representative or directly VIAVI Solutions at:

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E-mail: emea.customercare@viavisolutions.com

APAC Customer Care Center

E-Mail: APAC.CustomerCare@viavisolutions.com

NAM Customer Care Center

E-Mail: NAM.CustomerCare@viavisolutions.com

Phone: +1-844 GO VIAVI (+1-844-468-4284)

We look forward to receiving your call!

For more information on details regarding any specific product, please see the VIAVI Care Services Site on viavisolutions.com/viavicareplan

Secure Your Network Performance With VIAVI Test Technique – At Bit Rates of 2 Mbps up to 800 Gbps



MTS Family – For Turn-up and Maintenance: LWL + Ethernet up to 400 Gbps + PDH/SDH + OTN + FibreChannel + IPTV + VoIP



ONT Family – Lab and Manufacturing: PDH/SDH + OTN + Ethernet + SyncE, 10G + 40G + 100G + **400G + 800G**

VIAVI

VIAVI Solutions



Network and Service Enablement



Avionic Tests



3D Sensing and Optics - OSP

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