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.
VIAVI 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, CEoP, 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: seminars.europe@viavisolutions.com
Lab and Manufacturing Test

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

- 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 for remote control application allows multiple users and multiple applications at the same mainframe.

New: ONT-800 High-Performance Tester

The 800G FLEX Module includes these interfaces:
- 2 x QSFP-DD
- 6 x QSFP56
- 8 x QSFP28

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

VIAVI 400G

High Speed
Made in Germany

Product Information 2019 | Network and Service Enablement
The VIAVI™ ONT-600 CFP2 test modules address all second-generation 4 x 25G/28G based 100G challenges as well as 25G and 40G applications. A wide range of transponders, such as CFP2, CFP4, QSFP28 and SFP28, is supported. Its unique applications probe deep into the physical layer. The available electrical adapters enable troubleshooting and service verification test on board level in labs.

Key Features
- Supports wide range of transport bit rates, from 25G to 112G
- Native support for CFP2 and QSFP+.
- SFP28, CFP4, QSFP28 form factors and electrical access supported by adapters
- Physical test features, dynamic skew variation, jitter insertion, advanced error analysis, MDIO/I²C access
- Comprehensive troubleshooting tools at PCS/Ethernet and multiplexed OTN signals and their clients
- Fully independent dual-port test with Ethernet/OTN drop-and-insertion functionality

ONT-600 N-PORT Test Module

This 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 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 1.9, infiniband 2.5, 5, and 10 Gbps rates and 1.485, 1.484, 2.970, and 2.967 Gbps SDI rates

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.
New: MAP-300 Multiple Application Platform

3 or 8 slot chassis

The approved 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
- Use of all our previous modules
- SCPI backward compatible for our automation install base
- Improved processor for hungry applications
- Fundamental re-casting of the user interface with HD-touch screen or remote
- With exchangeable adapter for access to the control interface

New modules

- 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 70dB attenuator
- O-band Semiconductor Optical Amplifier

MAP Multiport Tunable Filter Module (mTFX-C1)

Key Features

- Tunable filter with bandwidth adjustment from 16 to 5100 GHz with 0.5 GHz resolution
- Low loss (<5.5 dB), continuous extended C-band coverage with ±3.5 GHz wavelength accuracy
- Up to 80 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-202 and 204 chassis, depending on the switch size.
- Optional Power Trim/Power Measurement on singlemode switches
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.

Service Assurance Solutions

- NITRO™: Network Integrated Test, Real-time analytics and Optimization for Mobile, Fiber, Cable, Cloud and Enterprise Networks
- NITRO will be the foundation for four distinct solution sets:
  - NITRO vNet — Virtual Service Activation and Performance
  - NITRO Enterprise — Enterprise and Cloud Network Performance
  - NITRO Mobile — Mobile Intelligence, Assurance and Optimization
  - NITRO TechFlow — Automated Technician Workflow

TrueSpeed VNF

Throughput testing as a virtual network function based on RFC 6349. TrueSpeed™ VNF provides network operators and enterprise users with a repeatable, standards-based test methodology to resolve complaints about poor network performance faster than ever before. > More information on page 16
Service Assurance Solutions

QT-200 Copper and xDSL Probe for Service Level Testing

- NetAnalyst test management software allows for comprehensive test scheduling and results management.
- Fault diagnosis and finding, between the CPE, access network, central office (CO), core network and ISPs.

PacketInsight™

PacketInsight™ offers the unique ability to rewind time on your network enabling the industry’s fastest troubleshooting solution in the market place.

- Record all network traffic – capture traffic on network with probes intelligently store all of it to disk.
- Search and retrieve relevant data – industry’s fastest flexible search – all data retrieved in seconds.
- Troubleshoot efficiently 40, 80, or 130 Terabyte.

Signaling Analyzer Real Time

- High performance tracing solution for system verification, troubleshooting and RAN optimization.
- Offers fully correlated end-2-end control & user plane analysis for 2G/3G/4G & IMS.
- Best Interface coverage and correlation in the industry.
- Real time Iub, NAS & Gm Deciphering.
- Fully Compliant to the latest 3GPP specifications.
- Integrated with PacketInsight for historical analysis.
MTS-4000 V2 Multiple Services Test Platform

The MTS-4000 is the multi-test platform that address the requirements of field service technicians entrusted with installation and maintenance.

- 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.
- PON Power meter for turn up FTTx networks.
- 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 CWDM OTDR Module

To Mainframe MTS-2000, -4000 and-5800

- 18 CWDM wavelengths with only two OTDR modules.
- Multiplexer and Demultiplexer testing CWDM systems.
- PON-optimized splitter test up to 1x128.
- Integrated CW light source with modulation capability.
- Instantaneous traffic detection.
MTS-6000A (V2) Fiber Characterization Mini-Platform

One-slot solution.

MTS-8000E Fiber Characterization Platform

Two-slot solution for OTDR and more...
- 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.
- New 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.

OSA-110/110R Compact Full-Band Optical Spectrum Analyzer for MTS-6000, -6000A, -6000A (V2), -8000E Platform

- 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.
- Suited for all DWDM systems (50 to 200 GHz channel spacing grid).
- 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 WDM 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.

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-QAM 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.
- Measure 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 web based system for monitoring of fiber optic networks around the clock and to the automatic error detection and localization.

- Flexible domain architecture allows to create different ONMSi objects such as OTU, P2P network, PON, fiber link, fiber section and subdomains.
- Performs wide range of applications from Metro to ultra-long-haul network monitoring.
- Integrates state-of-art OTDR functionality via OTU-8000 or compact OTU-5000.
- Scalable system from one up to hundreds of OTUs.
- Easy integration with legacy systems. SNMP and WEB services ensure integration with OSS, GIS and other IT back-office systems.
- Unique FTTx solution for PON Networks.
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
- Highest fiber fault accuracy with Industry’s 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

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.
- Switch scalability up to 1080 ports
- E-mail, SMS and SNMP alert messages.

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.
- TDM/PDH interfaces, CPRI/OBSAI layer 1 and layer 2 test capabilities.
- Ethernet 10G, 25G, 40GE, 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 all 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.
- IEEE 1588v2 PTP Slave/Master emulation and 1 pps Wander analysis.
- 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.

MAP-2100

- Rack mounted, 1U 19" wide, kits available for 21"
- Features like MTS-5800-100G
- Optional optical switch 2 x 8 ports
MTS-6000AV2 – Testing 10M up to 100G Transport Networks and Services

- CSAM module with CFP2 for 100 G Ethernet, Client Interface LR4, SR4 and SR10, OTU4, and also QSFP+ for 40 G Ethernet, OTU3 and STM-256, and SFP/SFP+ for 10M to 10G Ethernet.
- Data capture on all Ethernet test interfaces.
- CFP4 and QSFP28 support via adapter.
- 1/2/4/8/10G Fiber Channel.

MTS-8000 World’s Most Compact Quad 10GE Tester

- DMC Module – Quad 10G Tester with 2 x MSAM functionality.

MTS-8000 Platform for All Needs

Market leading platform in Field Testing.
- 2 slot unit for CSAM and optical test modules.
- For 40/100G and OC-768/STM-256 testing.
- CFP1, CFP2 and QSFP+ physical slots for optics.
- Fiber Characterization
TrueSpeed VNF

Throughput testing as a virtual network function based on RFC 6349.

TrueSpeed™ VNF provides network operators and enterprise users with a repeatable, standards-based test methodology to resolve complaints about poor network performance faster than ever before.

- 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 1000 - Fiber Channel and Ethernet Analyzer

Xgig analyzer is a versatile solution for monitoring and analyzing of Fibre Channel, SAS/SATA, and Ethernet protocols.

- Including FCoE, FIP, data center bridging (DCB), IEEE802.1Qx, TCP/IP, iSCSI, RPC/NFS, SMB/CIFS, AoE, iWARP, and RoCE.
- Up to 16 Gbps Fibre Channel; up to 6 Gbps SAS/SATA; 1 Gbps, 10 Gbps, and 40 GE, incl. FCoE and iSCSI.
- Using a QSFP+ to SFP+ fan-out cable, the 40GBase-SR4 QSFP+ interface can be fanned out to 8 SFP+ simplex interfaces.
- TraceView — to view the frames, idles, ordered sets, and any other transmission word captured.
- TraceControl — to capture trace files and trigger on specific conditions.
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

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 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 Multiple Services 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 1/256.
- 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).
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 2.4/5, Ethernet 1Gbps capable and TrueSpeed™ option.
- AutoChannel™ – Automatically identifies channel plan
- Downstream scan including MER/Ber in about 60 sec.
- Dual GigE Ethernet with optional TrueSpeed™ for testing at ONT or CM
- 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.
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
- Troubleshoot home coaxial network issues quickly, without trial-and-error process

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
- Advanced, yet simple testing and troubleshooting with channel plan auto discovery
- 1.25 GHz Frequency range
- Meters with DOCSIS® 3.1 RF measurements and with cable modem service tests
- Auto-discovery of channel plans
- NEW! TDR for coax cable, > 4000 m, accuracy +/- 30 cm

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 FTT 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.
- Portable MACTrak™ demodulates US signals to detect CWE & linear distortions.
- MPEG error visibility with live transport-stream display and post-capture analysis helps troubleshoot difficult video issues. TR101-290/DOCSIS verification test.
PathTrak Return Path Monitoring System

Provide clear visibility of nodes with service impacting issues and enable troubleshooting of cable modem upstream service performance more efficiently, with fewer tech hours.

- Simplified system access, fully web based user interface, plus iOS and Android app.
- Effective alarming and intelligent alarm management.
- Node ranking based on upstream health – spectral and data.
- Demodulates and monitors live DOCSIS upstream carriers.
- Remote MACTrak, QAMTrak and Spectrum displays on DSAM field units to quickly locate ingress the most common impairment.
- Historical node performance data – spectrum and upstream DOCSIS carriers.
- API and open MySQL database for creation of custom node certification and performance history reports.
- NEW PathTrak PNM – Proactive Network Maintenance to leveraging pre-eq data from cable modems spread across your plant, PathTrak detects and localizes plant weaknesses within a few meters.
- Confidence – over 700,000 PathTrak monitored HFC nodes world-wide.

VSA, Video Service Assurance - NEW

Monitor and troubleshoot Multiscreen, IPTV, Cable, and Satellite Services

- Targets the lack of visibility at the head end and network edge and extends support for real-time cost-efficient monitoring and troubleshooting of services.
- VSA Monitor: Web-based access to live and historical RF, MPEG and ABR measurements.
- VSA Agent: Family of Active SW test agents for Multiscreen video that checks, measures and verify Authorization, Authentication and accountability, Availability, Manifest files, Service Tier conformance and Video MOScore.
- VSA Embedded: Software compiled with Video player used by the operator running on tablets or Smartphones to measure the real customer video experience (Video MOScore: ABR and TR101 290 Analysis).

XPERTrak

XPERTrak is the next step in industry-leading systems from VIAVI designed with an enhanced focus on at-risk subscribers.

- Know where to go and what to do to fix identified issues before customers churn
- Reduce MTTR and OPEX by optimizing every truck roll
- Monitor performance of new network technology rollouts (Remote PHY, DOCSIS 3.1)
Access Wireless and IP Video Testing

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.

CellAdvisor 5G

It’s the ideal field portable solution for validating all aspects of 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-6GHz) 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

Comprehensive Test Solution for Cable & Antenna Analysis

The majority of problems in mobile networks occur in the cell site infrastructure, consisting of the antenna system, RF and fiber cables, and connectors. Properly servicing and installing cell sites requires suitable test equipment.

VIAVI CellAdvisor JD720C analyzers are portable solutions with everything you need to characterize cell site cable and antenna system:

- Three different zoom zones for detailed analysis on multi-frequency bands
- Perform self-guided systematic test procedures with TestWizard
- Up to 40 dBm (10 W) RF port protection
- Free application software for post-analysis (JDViewer)
- Remote control (JDRemote) via WiFi or Bluetooth
- Easy PDF/HTML report generation
- Time-saving dual measurement mode
- Manage assets and reduce costs with cloud-enabled StrataSync™ Core at no charge

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
- Standard 3-year hardware warranty included
Premises & Enterprise Test

MTS-2000 Testing Fiber Networks

Compact, easy, upgradable OTDR kit for installing and troubleshooting optical fibers for premises and enterprise networks.

- Smart Link Mapper – provides an icon-based map view.
- Simple interface and one-touch button operation ensures straightforward use of the instrument.
- Results are displayed on a large high resolution 5” color touchscreen.
- 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

Easy-to-use solution with intuitive icon-based graphical user interface (GUI) and 9-inch multi-touch screen requiring minimal training.

- First-to-market handheld OTDR module with more than 40 dB dynamic range and very high resolution.
- Event Dead Zone: < 1 m.
- Wavelength: 850, 1300, 1310, 1550, 1625, and 1650 nm.
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.

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. As a part of investigative workflows, engineers can quickly solve any issue and provide filtered wire-data evidence to IT teams.
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. Navigate to the exact moment of the service anomaly to see detailed, packet-level views before, during, and after the occurrence.

GigaStor Portable

Transportable design, 8 TB capacity. 1, 10 and 40 Gb networks.

Observer Optical nTAPs

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

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.

Observer Apex

Observer Apex integrates end-user scoring, geolocation site clarity, and three-steps-to-resolution workflows providing the performance monitoring intelligence IT teams need to achieve optimal service goals.
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-adapter (universal push pull) for all 2.5mm and optional for all 1.25 mm adapters. HighPower version +26 dBm.

OLP-37 Wavelength-selective RFoG and PON Power Meter

- Tests B-PON, E-PON, G-PON downstream at 1490 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**: 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.
Fiber Optic Test - Inspection and Cleaning

**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) FBP Probe – over 200 precision tip adapters.
- Fits for the following VIAVI units: MTS-2000/-4000/-5800/-6000, HST-3000, OLP-8x, CellAdvisor, OneExpert, and Laptop PC.

**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.

- Easily identifies the optical signal without having to disconnect the fiber or disrupt network traffic. FI-60 also converts to an Optical Power Meter.
- Visual Fault Locator – Red Light
- FI-60 Detection –20 dBm @ 1310 nm; –30 dBm @ 1550 nm Detected wavelength: 850 to 1700 nm; optical power range: –65 to +10 dBm.
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- FI-11 additional to FI-10 – Core power measurement: 0 to –40 dBm
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.
- Bluetooth, WiFi, and USB connection capabilities.
- Compatible with P5000i tip adapters incl. MPO/MPT.

FiberChek™ Mobile for Android, iOS, and Windows

- Supports inspection with pass/fail.
- Supports MP-60/-80 USB power meter.

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
Wireless Repeater Module for P5000i

- WiFi connection to mobile device (iOS, Android, Windows).
- 2 xUSB-A port for: P5000i and MP-60
- Micro-USB port for charging.
- Order no: FBPP-WIFI

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 FCL-P1100

CleanBlast System – 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.
Maintenance program for your measuring equipment

Having calibration and repair carried out by the instrument manufacturer is the foundation of performance management; it guarantees both functionality and measuring precision for your instruments.

Only the manufacturer has the in-depth knowledge and the necessary expertise to perform a qualified service. With access to all resources available in development and production, our maintenance centers can implement all relevant updates and improvements when they service customer equipment.

We offer a complete maintenance portfolio for your instruments, including

- Calibration & Repair.
- Updates & Upgrades (hardware / software).
- Support for Accessories.
- Hotline Technical Support Service & Training.
- Asset Management and Logistical Support.
- Each service can be tailored to meet individual customer requirements.

With VIAVI support plans, you get the peace of mind that your hardware investment will be well protected, available, functional and up-to-date.

PLUS Support plans streamline the repair, calibration and loaner processes - making support costs predictable and cost-effective, while greatly alleviating your support administrative burden.

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

EMEA Customer Care Center
Tel: +49 7121 86 2273
Tel: +43 1 311 9420,
E-mail: emea.customercare@viavisolutions.com

We look forward to receiving your call!
Secure Your Network Performance With VIAVI Test Technique – At Bit Rates of 2 Mbps up to 400 Gbps

**MTS Family** – For Turn-up and Maintenance: Cu + LWL + VDSL + Ethernet up to 100 Gbps + PDH/SDH + OTN + FibreChannel + IPTV + VoIP

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