

#### Data Sheet

## VIAVI Product Offerings for Federal Government and Defense

## An overview of VIAVI Solutions<sup>™</sup> products and services for tactical, infrastructure, data center, lab, and NOC applications.

The pace of change in the digital world is fast and getting faster. In addition, cyber-attacks and network intrusions are becoming even more common, putting greater importance on network excellence and operational efficiency.

Furthermore, government agencies must address these challenges in a budgetconstrained environment. VIAVI Solutions has a wide range of network tools and solutions that are both high-quality and designed to maximize investment.

#### Portable Test Instruments for Tactical and Campus Environments

#### FiberChek Probe

The FiberChek probe builds on VIAVI industry-leading expertise in fiber inspection to deliver a single "all-in-one" handheld solution that every fiber technician can rely on for all of today's fiber inspection needs in a fully autonomous, handheld device. With built-in capabilities for image viewing, auto-focus, Pass/Fail analysis, storing/recalling results, the FiberChek probe completely automates inspection workflow to ensure fast and accurate performance. The FiberChek probe is an essential fiber tool for every technician.

#### T-BERD<sup>®</sup> 2000

#### Hands-free test set for fiber-optic network installation, turn-up, and maintenance

The VIAVI T-BERD 2000 multitest platform gives field technicians a single handheld unit they can use to install, turn-up, and maintain fiber networks to the highest standards. Its innovative design and hands-free bag ensure that all essential fiber test tools are close at hand for any job anywhere. A large, full-color graphical user interface (GUI) drives simple operation and optimal workflow in the field.

Test components include various OTDR modules for multimode and single-mode testing, as well as a a high-resolution OTDR for shipboard and aircraft applications and FiberComplete<sup>™</sup> modules for automated insertion loss/optical return loss (IL/ORL) and fault finding. Both OTDR and FiberComplete modules are passive optical network (PON) optimized. The unit is also ready for connector end-face pass/fail analysis to IEC standards with a digital analysis microscope.



FiberChek Probe



T-BERD 2000

#### T-BERD 5800 and T-BERD 5800-100G

## Handheld network tester addresses the challenges of supporting legacy and emerging technologies.

The T-BERD 5800 handheld network tester is the one modular tool that network technicians and engineers need to install and maintain their networks. The T-BERD 5800 supports T1/E1, T3/E3, E4, SONET/SDH, Fiber channel to 32 GFC, Ethernet to 100GE, and OTN through OTU4 with multiplexing. With the addition of OTDR, Timing and COSA modules as well as fiber microscopes and power meters, the T-BERD 5800 delivers the flexibility needed to maintain and grow almost any network.

Now with VIAVI award-winning T-BERD 5800 100G platform, agencies and operators can address the emergence of 100G circuits in the network, while continuing to support smaller bandwidths and legacy technologies.



T-BERD 5800

#### T-BERD 6000A

## Compact and highly integrated test platform for fiber and Ethernet/IP-based networks

The VIAVI T-BERD 6000A is designed for all phases of fiber and Ethernet/Internet protocol (IP) and serial datacom network life cycles. It provides field service technicians with the highest levels of performance and upgradeability on the market, providing over 40 different modules supporting a wide range of applications. The versatility of the T-BERD 6000A lets technicians standardize using one type of test equipment and then introduce new testing capabilities in the field without incurring additional training and device costs. The Multi-Service Applications Module (MSAM) can test any interface in a metro network from Ethernet and Fibre Channel business services to backbone OTN, SONET/SDH, T1/E1, serial datacom, and conditioned diphase (CDI). The CSAM module is ideally suited for the pure fiber BERT supporting SONET/SDH, Fibre Channel, Ethernet, and OTN up to 100G.



T-BERD 6000A

#### T-BERD 8000

## Multi-application platform for physical, optical, and transport/Ethernet testing

The VIAVI T-BERD 8000 platform is the industry's most innovative, versatile test solution for modern and future high-speed transmission network deployments. It covers traditional fiber and BERT testing as well as advanced high-speed ROADM testing and 40/100 G service activation, maintenance, and troubleshooting with a mix of more than 40 apps and hundreds of test configurations to meet your exact testing needs.



T-BERD 8000

#### TrueSpeed<sup>™</sup> VNF

TrueSpeed VNF provides a repeatable, standards-based test methodology to resolve complaints about poor network performance faster than ever before.

With TrueSpeed VNF, users can leverage their installed base of commercial-off-the-shelf (COTS) server resources to quickly evaluate the customer experience of their network and provide actionable information to resolve any problems. Based on the IETF RFC 6349 TCP throughput testing methodology, TrueSpeed VNF performance tests serve as a neutral 3rd-party evaluation of network quality. Operating as a virtual network function (VNF) in conjunction with VMware hypervisors, Red Hat Linux, and x86 compute resources, TrueSpeed VNF deploys quickly and tests reliably in all parts of a network.



#### SmartClass<sup>™</sup> Fiber Handheld Solutions Inspect, test, save, and certify with one compact device

The VIAVI SmartClass Fiber family of optical handheld tools provides ultimate flexibility and performance in easy-to-use solutions that can instantly turn any user into a "fiber smart" technician by integrating all essential fiber test capabilities into one portable device. Ideal for users at any skill level, SmartClass Fiber products automate pass/fail acceptance results for both end-face quality and optical power measurement at the push of a button. In addition, users can save their test results and generate certification reports to document work quality. By integrating these essential capabilities into one system, SmartClass Fiber products drive the technicians' behavior to implement today's best practices in a seamless workflow to optimize efficiency and reliability to get the job done right the first time.



SmartClass optical handheld

#### CleanBlast

CleanBlast is an automated cleaning system for fiber optic connector end faces. Using a precise, noncontact air-solvent-air mixture to blast and remove contamination from fiber surface with near 100% effectiveness, it cleans faster and more effectively with a lower cost-per-clean than conventional methods. With over 8,000 cleaning cycles per cleaning solvent refill, the CleanBlast eliminates user sensitivity and cleaning errors.



#### P5000i Digital Fiber Microscope Automated fiber inspection and analysis probe

The P5000i is a digital video analysis probe microscope that lets technicians quickly and easily certify that every network connection is clear and optimized. This intelligent fiber microscope removes the guesswork from fiber inspection with reliable, objective pass/fail analysis so you can offer your customers the best user experience possible. It also enables pass/fail analysis with many VIAVI test solutions that users already rely on for essential network testing. It easily connects to numerous devices including SmartClass Fiber, T-BERDs, Certifier40G, DSAM, laptop/PC, and many smartphones (Android/iPhones require an additional adapter cable).



P5000i probe

#### Certifier40G Cable Certifier

#### The only enterprise test solution that measures frequencies for all current and future cabling standards required for new enterprise copper and fiber

The Certifier40G is the most advanced, complete and fastest solution available for certifying copper or fiber. The industry's fastest CAT6A solution can certify each cable in less than 9 sec, saving users 30 minutes each time they test 150 CAT6A cables.\* Users can complete Tier-1 fiber certification for multimode, single-mode, or multimode MPO in less than 6 seconds with automated pass/fail end-face analysis (with the P5000i digital fiber microscope), and they can analyze all fiber types. It gives users complete test visibility at both local and remote ends, and ships preconfigured with all leading manufacturers' cabling specifications.



Certifier40G

\*Time savings based on CAT6A cable testing with other existing cable certifiers.

## Solutions for Lab, Research and Development, and Data Centers

#### **ONT Family**

# *Highly configurable, multi-application and multiport platform for system verification and acceptance testing up to 400G*

The Optical Network Tester (ONT) platform is a multifunctional, multiport, and multi-user solution for fast, flexible testing of optical transport network environments. All ONT models address optical and digital testing needs for research and development (R&D), system verification testing (SVT), production, and troubleshooting. VIAVI offers several instrument plugin modules for packet-based services like Ethernet and Fibre Channel (FC) and for transport services like OTN and SDH/SONET, as well as VIAVI industry-leading 400G CFP8 module, which is breaking new ground in the high-speed test ecosystem. Designed to keep pace with the evolution of today's high-speed communications technology, the ONT is an essential test tool for manufacturers, early technology installers, and network operator verification labs.



#### Multiple Application Platform (MAP-200) Optical test and measurement platform optimized to cost-effectively develop and manufacture optical

transmission network elements

The optimized MAP-200 optical test and measurement platform is used to cost-effectively develop and manufacture optical transmission network elements. Today's rapidly changing optical market requires investing in productivity-enhancing technologies and tools, making the scalable MAP-200 test platform the best tool for use in even the most stringent environments.

The MAP-200 offers the broadest module portfolio in the densest and most configurable platform. It is optimized for test applications in both lab and manufacturing environments ranging from insertion loss testing to dispersion penalty testing.



MAP-200

#### **Optical Switch Solutions**

## A wide range of optical switching solutions independent of data rate and transmission format

The mOSW-C1 Optical Switch Module and mISW Optical Switch tray are built on the industry-leading, fourthgeneration instrumentation class of VIAVI optical switch technology. With more than 30 years of leadership in optical switching across network, monitoring, and manufacturing applications, the mOSW-C1/mISW-C1 represents a new milestone for performance and reliability offered in the industry's smallest footprint.

For the first time, the performance and repeatability found in large, fixed-format, rack-mount systems are available in a modular plug-in, or tray. Leveraging the mOSW-C1/mISW-C1 can reduce the size of switching systems by as much as 75% while still delivering the performance of much larger legacy systems. A 50% increase in switching speeds significantly reduces testing time for connection-intensive architectures.



Optical switch solutions

#### **Wireless Field Test**

#### **CellAdvisor Field Test Solutions**

VIAVI CellAdvisor test solutions for field applications cover all different tests required to validate, install, and maintain base stations. The four main test areas in a base station are backhaul, feed-line, radio performance, and air interface. CellAdvisor includes cable and antenna analyzers, RF analyzers, signal analyzers, and base station analyzers. CellAdvisor analyzers help you:

- Accelerate time-to-revenue for new services
- Minimize OpEx with a single instrument for base station, cable, and antenna analysis
- Ensure service quality and customer satisfaction
- Reduce training requirements



#### RANAdvisor™

The RANAdvisor platform is the industry's most customizable and scalable solution for optimizing wireless networks. RANAdvisor supports a receiver with up to eight frequency bands—more than any in the industry—and software that can simultaneously measure and troubleshoot network RF coverage and service delivery across all existing 2/3/4 G technologies including LTE, VoIP, and VoLTE. The solution reflects VIAVI strategy of protecting customer investments by building hardware that can quickly incorporate new technologies with software upgrades. Multi-technology drive test measurements are critically important because diverse networks do not operate in isolation.

#### RANAdvisor TrueSite™

TrueSite is a portable, Android-based solution that includes a receiver for comprehensively testing any indoor network. In addition to app and service testing, TrueSite supports voice quality metrics including VoLTE.

Ultra-portable, cloud-enabled TrueSite makes it easy to test any indoor environment. Using the Androidbased app, a single user can discreetly gather data from up to six smartphones and a single receiver. TrueSite minimizes repeat data-capture walks and post-processing by automatically identifying and geolocating missing/faulty antennas and macro-ingress issues during collection.

TrueSite is the optimal solution for all your indoor testing needs, including surrounding exteriors.

#### Rubix<sup>™</sup> Real-Time Post-Processing for RANAdvisor

The cloud-based Rubix drive- and walk-test postprocessing capability analyzes RF interface data in real time and delivers easy-to-understand performance reports with all relevant KPIs. Rubix helps streamline RF engineering workflows by identifying RAN issues to selected skilled engineers located centrally. This lets experts take actions quickly rather than wait for complete field data collection and post-processing.



#### Network and Application Performance Management

#### Observer<sup>®</sup> Performance Management Platform overview

The Observer platform is a full-service IT solution for optimizing application and network performance management.

Each part of the system fits together with all other components to:

- Achieve global infrastructure visibility
- Identify and resolve service anomalies
- Plan for long-term IT operations growth
- Optimize app delivery and performance
- Ensure project success

#### Observer Apex™

#### Enterprise-wide performance management

Apex is a standalone appliance that simultaneously collects and aggregates data from probes, NetFlow devices, and other collection agents. Combine Apex with GigaStor<sup>™</sup> to gain long-term views of network and application activities.



#### **Observer Analyzer**

#### The industry's most powerful analytics

Analyzer is often integrated with GigaStor, probes, and Apex to increase management performance power. It's used with GigaStor for long-term data capture and in-depth analysis of historical events, forensics analysis, and stream reconstruction. Analyzer is paired with Apex for high-level or aggregate reporting, enterprise-wide reporting, and global alerting. It also connects with larger enterprise initiatives, including integration with IBM<sup>®</sup> Tivoli<sup>®</sup> and HP<sup>®</sup> OpenView<sup>®</sup>.



#### **Observer GigaStor**

#### Improve uptime with back-in-time analysis

GigaStor is available in an array of form factors, network speeds, port counts, and capacities that range from 4 TB to over a petabyte. To ensure wire-speed and linerate capture, all GigaStor appliances include the unique VIAVI full-duplex Gen2<sup>™</sup> capture card with multiple link support. There is also a software edition with 250 GB or

Access data with ease and speed nTAPs are passive devices installed on critical links for 24/7 access to traffic without disrupting data flow. They keep traffic flowing even when power doesn't. With streamlined form factors and an array of configuration options, nTAPs feed network analyzers, monitoring tools, and security devices while decreasing the risk of dropped data. Quick to deploy and economical to implement, network nTAPs provide devices with the comprehensive visibility needed for optimal performance management.

### Observer nTAP™

manner.

The Matrix network monitoring switch is the perfect device to enhance the power of your monitoring appliances. Stop compromising on configuration or giving up on powerful features and functionality. With Matrix, guickly leverage all your legacy monitoring tools and get the right data to the right tool in a timely

Observer Matrix<sup>™</sup>

#### Maximize your monitoring machines

Service Assurance Solutions

#### xSIGHT<sup>™</sup> Real-Time Intelligence Platform

The xSIGHT platform features a state-of-the-art real-time transaction and flow analytics engine, endto-end correlation, in-memory analysis, advanced service policies, and models that capture the complex relationships between customers, applications, services, and their underlying networks. The xSIGHT RTI Platform is capable of collecting data from network elements, element management systems (EMS), and other data sources such as VIAVI agents, third-party probes and feeds, and business/operational support systems (B/ OSS) and applications.

The platform architecture consists of a data collection layer and a mediation layer. The data collection layer collects data from various sources. For transaction and flow records data, the mediation layer performs extremely fast analysis, aggregation, filtering, and enrichment, based on configurable criteria to generate performance metrics and data analytics.

The mediation layer abstracts and normalizes the collected data. It is extremely important to eliminate the differences in performance metric implementations by different vendors as well as differences in data collected from different sources. This laver identifies relationships between data retrieved from different network domains, device types, and data sources. It also calculates the values for key performance indicators (KPI) and evaluates KPI values vs. performance targets in real time. This layer also enables the correlations required for impact and root-cause analysis functions. Impact analysis correlates network issues with the services and customers they affect, while root-cause analysis correlates the customer experience and service performance problems with relevant network issues for service delivery.

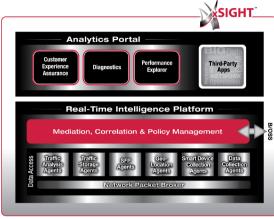


1 TB capacities that can be flexibly installed on a virtual

machine or laptop. Analyzer integrates seamlessly with

all GigaStor models to provide in-depth analysis.

Mediation-layer capabilities can be grouped into six main categories: a real-time transaction and flow analytics engine, service modeling, policy and SLA definition, reporting, data processing, and data collection.



xSIGHT RTI platform architecture

#### **GEO Platform**

GEO platform 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.

#### Unrivaled Scalability

The platform supports the widest range of infrastructure vendors and cellular technologies in the industry, with support for GSM, UMTS and LTE. A key feature of the multi-technology support is that the data is available in a single unified data structure, enabling the GEO applications to be truly customer-centric and perform analytics that span technology layers, representing the complete user experience regardless of the access technology in use at the time.

The platform leads the industry in terms of scalability and efficiency. Running on commodity servers with horizontal scalability designed in from the outset, it is in use as a network-wide 24/7 deployment today in multiple networks worldwide.



#### Optical Network Management System Comprehensive hardware and software platform for fiber network management

The Optical Network Management System (ONMSi) monitors the physical layer and generates real-time alarms for events such as security breaches and hardware malfunctions or OSS, database, and application software problems. It can detect and locate faults and degradation on the fiber optic links and run all diagnostics without taking hardware or software out of service. Sophisticated reporting and documentation management are combined with fiber monitoring (remote fiber test set, RFTS), fiber mapping, and complete QoS reporting.



ONMSi

#### **VIAVI Services**

#### Fiber Characterization Service

#### Complete qualification of advanced optical networks

VIAVI offers the most extensive network qualification expertise in the industry to help organizations verify fiber plant infrastructure for high-speed networks, perform staging tests for new DWDM, ROADM, and 40 G configurations, and to qualify end-to-end services, including burn-in testing. Whether increasing the speed or density of traffic on an existing network or verifying the quality of a fiber installation prior to deployment, the information provided in this comprehensive report allows for proper planning of network deployments and satisfies the most stringent network acceptance requirements.



#### **VIAVI** Certified Equipment

## *The ENCORE Program provides a reliable source for used equipment*

The VIAVI ENCORE Program allows for the purchase of used VIAVI equipment while providing the same confidence as when purchasing new equipment. The ENCORE Program provides guaranteed products that meet original VIAVI product specifications.

#### **Product Support Services**



#### Save on Test Equipment You Trust

#### Standard 3-year warranty

To improve responsiveness and confidence, provide greater convenience, and increase productivity, the standard warranty includes:

- All parts and labor necessary to return an instrument to full performance specifications
- Authorized VIAVI repair processes performed by VIAVI factory-trained engineers and technicians
- Genuine VIAVI parts
- All relevant engineering changes and firmware upgrades
- Thorough performance testing, adjustment, and verification post-repair

#### Calibration

VIAVI offers ISO-certified on-site or return-to-factory calibration for VIAVI and non-VIAVI instruments, thus providing a one-stop solution for all calibration and calibration-management needs.

#### Repair

VIAVI, together with its strategic partners, offers repair and repair management services for test equipment and general instrumentation products used to support networks. This means there is a single supplier providing all test instrument repair needs and assurance that all of the services provided will conform to VIAVI quality and accountability standards.



9 Product Offerings for Federal Government and Defense

#### **Education Services**

#### Increases workforce knowledge and skills

VIAVI education services include courses such as product training, fundamentals, and test applications to guarantee your staff receives the exact information needed to improve on-the-job performance. Course formats include public training, on- site training, virtual classrooms, and self-paced training.

For a complete list of offerings, visit **www.VIAVIsolutions.com** or contact your dedicated sales representative.





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