VIAVI Solutions | SAVITRI TELECOM SERVICES

OneAdvisor 800 Fiber

Fiber optic network installation, turn-up, and troubleshooting solution

5G networks carrying massive data loads, smart cities connected through communication networks, ongoing deployment of FTTH services and data center proliferations will continue pushing the industry demand for reliable and future proof fiber optic networks.

Equipped with the test solution that combines performance, efficiency and versatility, the One Advisor 800 becomes the fiber optic test solution of choice for any high-demanding fiber job.

Its intuitive, modern user interface with large touchscreen, combined with advanced features and guided steps, enables any field technicians to install, turn up, and troubleshoot any optical network architecture rapidly and reliably.

Key test functions include:

- Optical connector inspection
- OTDR and PON-OTDR
- FiberComplete PRO™ Bi-directional IL/ORL and OTDR
- DWDM OTDR
- Optical spectral testing
- Advanced dispersion testing

Key Applications

- Submarine cables qualification and troubleshooting
- High speed DWDM terrestrial transport networks
- Radio Access network for 4G/5G — Backhaul, midhaul and frontaul
- Data center, Data center campus and interconnect (DCI)
- FTTH/PON network — any standard, unbalanced/tapped or indexed topologies
- DWDM access networks for DAA, R-PHY and C-RAN
- Enterprise/LAN

Connector Inspection

Contaminated connectors are the #1 cause for troubleshooting in optical networks. Maintaining best practices with an Inspect Before You Connect workflow is essential, but without the right tools, it is difficult and time consuming. Connector inspection eliminates these challenges by fully automating every detail of the inspection workflow

- Eliminates guesswork with on-board connector inspection
- Inspect bulkhead and patchcord connectors
- Autocenter, autotest and auto-save features for maximum efficiency
- Certifies compliance to industry IEC standards and specifications

OTDR

Smart applications drive efficiency improving quality of work and reducing the amount of training and support. Advanced and intelligent functions detect and perform precision measurements to provide superior link characterization that guarantees a solid network foundation.

Instant switching between results views, no retest, with data correlated across the views providing seamless analysis to make your life easier. One data set, 3x results views (SmartLink Mapper, Trace and Table) to match user profile and preference without switching test applications.

SmartLink Mapper

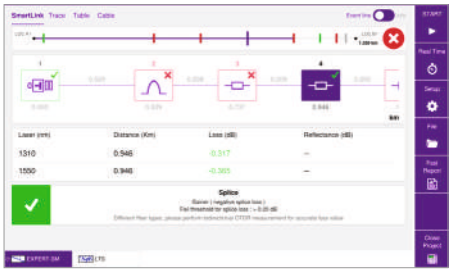
Analyzes and identifies passive optical elements within any OTDR trace, new or old, and represents them as simple icons in the form of a fiber link map. SLM then enhances the icons with pass/fail information based on user-defined or IEC/TIA standard thresholds and explicitly names the type of optical element such as a splice, connector, bend, splitter or multiplexer.

SmartTest

The OTDR assistant that eliminates all complex OTDR setup errors and guides a user through easy and clear operational steps. Critical testing parameters are included in pre-defined test configuration files (SmartConfig), defined by VIAVI or customer specific set by the manager or network engineer. No time lost in guessing what settings are required to make a good measurement. Four simple steps guide techs through initial setup, testing, result review and reporting.

Expert Mode

The Expert OTDR is designed for construction crews who require in depth analysis and greater control over test settings for various types of fiber links and network scenarios.



SmartLink Mapper view

Trace view

Table view

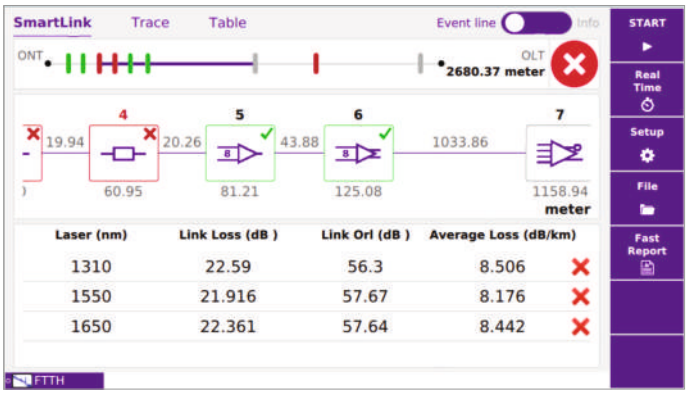
PON OTDR

Delivering simple test, certification and reporting solutions, tailored for FTTH/PON, to prove end to end network build quality, installation reliability and on-going operational performance. Enabling reliable deployment of FTTH/PON networks with reduced training time for new fiber techs/contractors to minimize build, activation and install times.

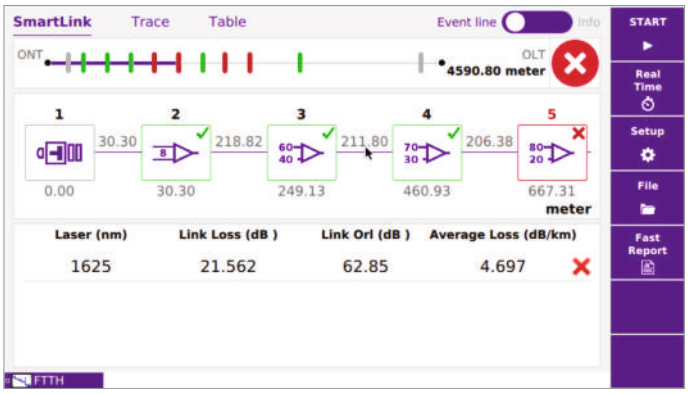
FTTH SmartLink Mapper (FTTH-SLM)

VIAVI PON OTDR support standard and cascaded splitter architectures plus unbalance/tap and indexed splitter topologies to form the industry's most comprehensive solution for certifying traditional and new PON end to end.

Without solutions optimized any PON splitter architectures, test results can be misinterpreted (as bad connectors or severe bends) resulting in certification failures and unnecessary investigation or re-work, all of which is time and money.



Cascaded splitter network



Unbalance/tap splitter network

FiberComplete PRO™ — Bi-directional IL, ORL and OTDR

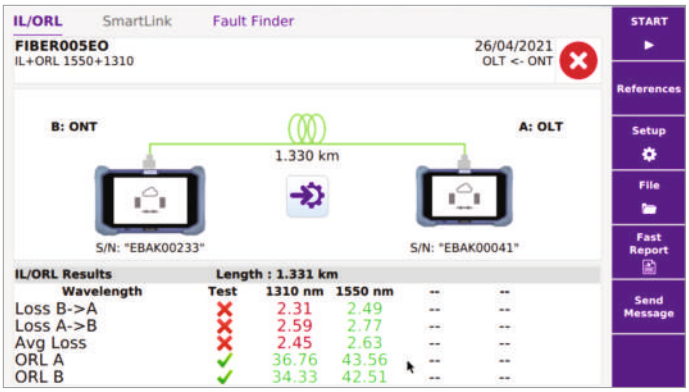
FiberComplete™ is the first and only solution to fully automate all the fundamental fiber tests, such as bi-directional IL and ORL plus OTDR testing via a single test port and one button push application (patented). Providing a complete fiber certification and characterization covering the end-to-end link and all individual link elements in around 1 minute.

Real time Bi-directional OTDR analysis - TrueBIDIR

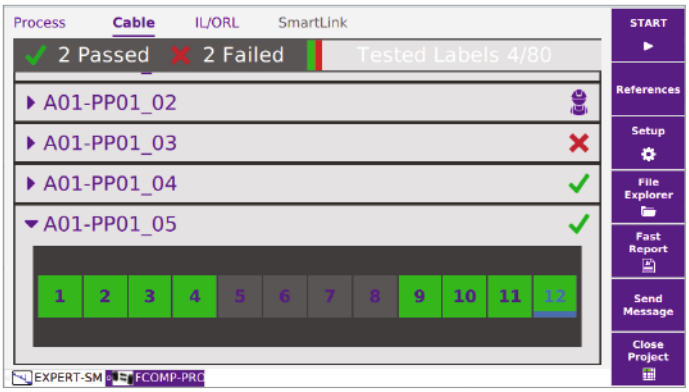
TrueBIDIR improves measurement accuracy, event detection, location accuracy, lets you deal with gainers and allows immediate corrective actions to be performed while you are still on-site, reducing future site revisits. After each test sequence, utilizing the FUT datalink, FiberComplete PRO performs real-time bi-directional analysis of the OTDR results taken in both directions, averaging the loss measurements for every detected event to provide the 'True' event loss.

High Fiber Count testing – Cable-SLM

With the use of fan out cables or native MPO connectors test sequences can be prepared to certify multiple fibers in a single action with the integrated MPO switch. The fiber cable management places results in a single 'Cable' view that gives a real time overview of project progress and the pass/fail status of each fiber tested



Simplex single fiber test



Cable-SLM for high fiber count / MPO

DWDM OTDR

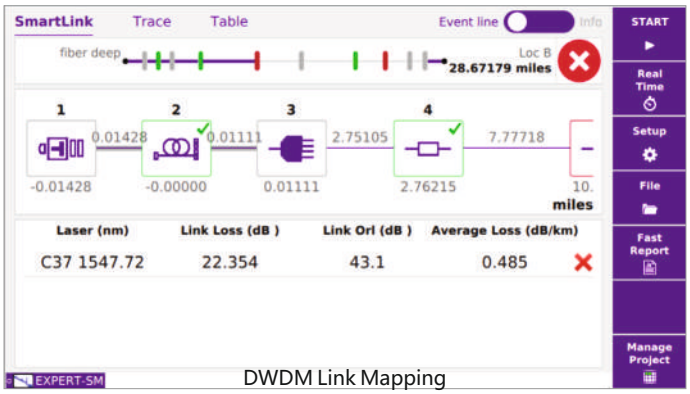
As xWDM technology adoption continues to grow in access networks for broadband services, technicians require comprehensive and lightweight xWDM test tools. The C-band DWDM OTDR solution enables cable, wireless, and telco operators to perform complete end-to-end link characterization and troubleshooting of DWDM and hybrid CWDM/DWDM networks.

Wavescan

Automatically identify the operational channel of a MUX/DeMUX port in less than 10 seconds and complete an OTDR test for the link. Ideal for checks/certification prior to link turn-up and troubleshooting situations where a port is faulty, or labeling is incorrect, unreadable, or missing. Eliminates guesses about port wavelength and knock-on effect of installing the wrong SFP/SFP+ or configuring an SFP/SFP+ incorrectly and the impact to link turn-up time.

SFP protect

Ensures that a DWDM transceiver is not damaged by the OTDR testing process, ideal for checks/certification prior to link turn-up and troubleshooting applications where an SPF transceiver may still be connected at the far end of a link. Allows live test while eliminating the risk of accidental SFP damage, cost of replacement and turn-up/repair delays.



DWDM Link Mapping

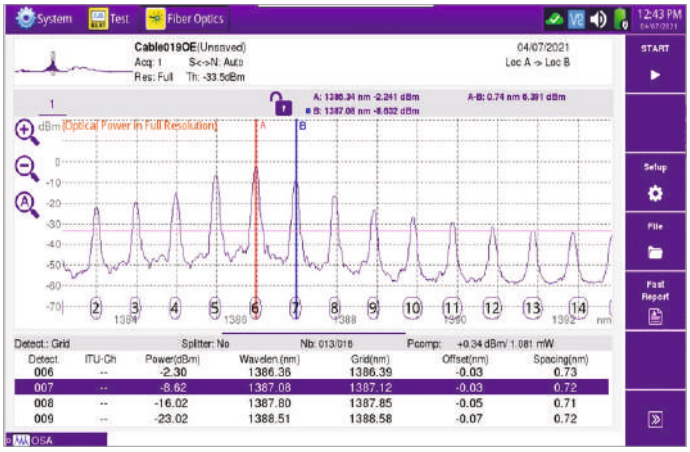
Optical Spectral Testing

A versatile range of Optical Spectrum Analyzer (OSA) and Channel Checker (OCC) modules for WDM channel verification and spectral test to turn up and verify any new xWDM service for high speed (100G/400G/800G), Data Center Interconnect, metro, access, Cable Distributed Access Architecture (DAA), Remote PHY, C-RAN and 5G applications.

- Full wavelength range testing for any CWDM and DWDM applications
- SPF/SFP+ bay for tuning and verifying pluggable optics in the field
- High resolution OSA for complex Nyquist filtering verification
- Optical Signal to Noise Ratio (OSNR)

WDM-Expert

Easy and fast way to measure power, wavelength, and OSNR to assess the signal quality of each channel. Automating channel identification and data rate estimation of optical channels including 100/400G or higher speed polarization-multiplexed (Pol-Mux) signals.



Optical Spectrum Analysis

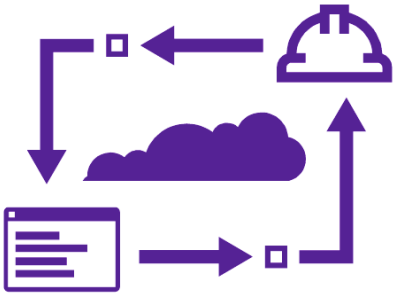
Advanced dispersion testing

Integrated dispersion test solutions allow network operators, fiber installers and dark fiber providers to characterize any fiber link or network for latest high speed technologies such as 100 or 400Gb/s transmission.

- Combined chromatic dispersion (CD), Polarization Mode Dispersion (PMD) and Attenuation Profile (AP)
- Complete suite of Fiber Characterization test with FiberCompete PRO
- Medium to very long range testing capabilities

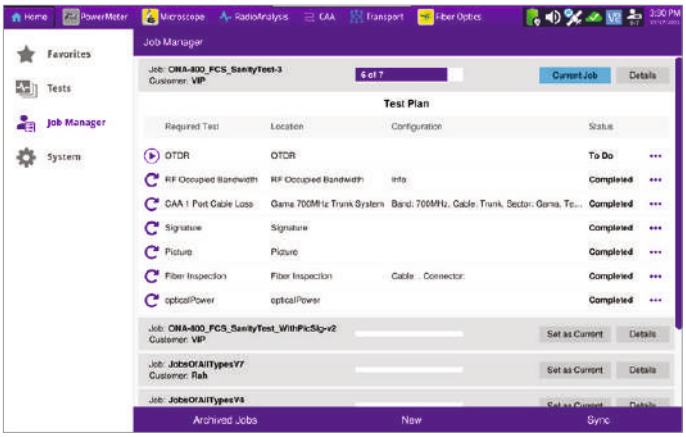
Managing your workforce, tasks and test data

Test Process Automation (TPA) allows your team to deliver expert-level test results and close projects on the first try, every time. TPA is a closed loop test system that optimizes workflows, eliminates manual, error prone work and automates immediate data reporting for job close out, team progress updates and network health analytics. Execute jobs efficiently to ensure high quality network builds, rapid turn-up/activation, and enhanced operational visibility.



Managing fiber work

- Plan and Assign Jobs with Guided Procedures and Automated Job Reports
- Allows jobs with a detailed test plan to be created, assigned, and sent to a tech's instrument via the VIAVI Mobile Tech App
- Associates tests to specific job work order
- Sequence of individual test tasks grouped together in a single job
- Instrument UI displays step-by-step task instructions, progress, and results
- Enrich test results with workflow audit details — geolocation data, time stamp, and multimedia attachments (pictures, signature capture) through Mobile Tech App



8100-Series OTDR EVO Modules

For OneAdvisor 800 Fiber platform

The VIAVI Solutions® 8100-Series OTDR EVO family transforms fiber testing. Connect the OTDR EVO family anywhere on the fiber to characterize single-mode and multimode fibers for commissioning, network upgrades, and troubleshooting with the added insurance of workflow optimization and accurate fiber-link fingerprinting.

The OTDR EVO family's optical performance combined with the One Advisor 800 Fiber's ensures that testing jobs are performed right—the first time.

Standard testing features include:

- Automatic macrobend detection
- Summary results table with pass/fail analysis
- FastReport onboard report generation

Key Benefits

- Industry-leading dead zone performance for full element event characterization on fiber links
- Includes an integrated power meter, light source, and OTDR in a one-port tool for added flexibility
- Traffic detection avoids risking live signal interference or optical transmitter damage during an OTDR test
- Eliminates OTDR interpretation errors with Smart Link Mapper (SLM) without compromising on test time
- Reduces event loss measurement uncertainty and improves measurement repeatability

Key Features

- Up to 50 dB dynamic range
- Integrated CW light source and broadband power meter (single-mode wavelengths)
- PON-optimized to test through a 1x128 splitter

Key Applications

- Access, Metro, very long-haul, and ultra-long-haul fiber network characterization
- Advanced FTTH PON network qualification and troubleshooting
- Hollow core fiber certifications
- Upgrading core fiber networks up to 800G
- Remotely monitoring fiber while in or out of service
- Fiber installation/deployment certification and troubleshooting for Submarine Cable Networks

Specifications (Typical at 25°C)

General	
Weight	Approx. 500 g (1.1 lb)
Dimensions (W x H x D)	213 x 124 x 32 mm (8.38 x 4.88 x 1.26 in)
Laser safety class (21 CFR)	Class 1
Distance units	Kilometer, meter, feet, and miles
Group index range	1.00000 to 1.70000 in 0.00001 steps
Number of data points	Up to 256,000 data points
Distance Measurements	
Mode	Automatic or dual cursor
Display range	Single-mode: 0.1 – 400 km
Display resolution	1 cm
Cursor resolution	From 1 cm
Sampling resolution	From 4 cm
Accuracy (Excluding group index uncertainties)	Single-mode: ±(0.75 m + sampling resolution + 0.001% x distance)
Attenuation Measurements	
Mode	Automatic, manual, 2-point, 5-point, and LSA
Display resolution	0.001 dB
Linearity	Single-mode: ±0.03 dB/dB
Threshold	0.01 to 4.99 dB in 0.01 dB steps
Reflectance/ORL Measurements	
Mode	Automatic or manual
Reflectance accuracy	±2 dB
Display resolution	0.01 dB
Threshold	–11 to –99 dB in 1 dB steps

OTDR Modules	8100D
Central wavelength[1]	1310 ±20 nm; 1550 ±20 nm; 1625 +15/–5 nm; 1650 ±1 nm
Dynamic range[2]	50/50/50/48 dB
Pulse width	2 ns to 20 µs
Event dead zone[3]	0.5 m
Attenuation dead zone[4]	2.5 m
Splitter attenuation dead zone	15 m after a 15 dB splitter loss
Power meter	
Calibrated wavelengths[5]	1310/1490/1550/1625 nm
Power range	–5 to –55 dBm
Accuracy[6]	±0.5 dB at –30 dBm
Continuous wave light source[7]	
Wavelengths	1310/1550/1625 nm
Output power	0 dBm
Stability	±0.1 dB at 25°C over 1 hour
Operating modes[8]	270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINtest

1. Laser at 25°C and measured at 10 µs.
2. The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS (SNR=1) noise level, after 3 minutes averaging using the largest pulse width.
3. Measured at ±1.5 dB below the peak of an unsaturated reflective event using the shortest pulse width.
4. Measured ±0.5 dB from the linear regression using an FC/UPC reflectance and the shortest pulse width.
5. 1625 nm is not available on the 8138C-65 version.
6. At calibrated wavelengths.
7. At calibrated wavelengths; multimode source (850 nm) is compliant to the IEC 61280-1-4 standard related to the encircled flux.
8. Subtract 3 dB when in modulation mode (270 Hz/330 Hz/1 kHz/2 Khz).
9. Measured at 1.5 dB below the peak of an unsaturated 27 dB reflective event using the shortest pulse width.

Platform Ordering Information

Description	Part Number
8100D Modules	
1550 nm OTDR module[1]	E8115D
In-service 1625 nm OTDR module[1]	E81162D
In-service 1650 nm OTDR module[1]	E81165D
1310/1550 nm OTDR module	E8126D
1550/1625 nm OTDR module[1]	E8129D-62
1310/1550/1625 nm OTDR module	E8136D
Universal Optical Connectors	
Straight connectors	EUNIPCFC, EUNIPCSC, EUNIPCST, EUNIPCDIN
8° angled connectors	EUNIAPCFC, EUNIAPCSC,EUNIAPCDIN

1. Source and power meter not available on these versions.
2 . APC connector not available on these versions.

Quality Testing

Our products undergo rigorous quality testing before shipment to ensure their excellence.

Packaging

We meticulously package our products to guarantee they arrive at their destination in pristine condition.

Transport

We prioritize swift transportation, minimizing your waiting time to receive your order promptly.

Delivery

Our delivery service is designed to bring the products you've ordered directly to your doorstep, tailored to your specific preferences.

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Please note that product specifications, size, and shape are subject to change without prior notice. As a result, the actual appearance of the product may vary from what is shown in the picture. However, we take pride in our ability to customize products to meet unique specifications, ensuring utmost customer satisfaction.
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