Certifier

The industry standard in enterprise certification

Data consumption has exploded in the past few years and enterprise network owners are scrambling to meet the demanding requirements of 40 G and beyond to serve their buildings, data centers, and campuses. New technologies are driving change in every aspect of enterprise networks—new industry standards, new topologies, new types of connectivity, new test methods, and certainly new challenges for designers and technicians. Everything in the enterprise is new!

The VIAVI Solutions Certifier is the world's most comprehensive solution for enterprise network certification. Available in 2 models-the Certifier40G can test both copper and fiber cabling types to ensure network performance for all current and future cabling standards, and the Certifier10G—a cost-effective solution for testing and certifying copper up to Category 6A.

Drive User Efficiency

The Certifier40G is not only the most advanced solution available, it is also the fastest and most complete. Whether certifying copper or fiber, users will get the job done right and on time...the first time!

- The industry's fastest CAT6A solution can certify each cable within 9 seconds, saving users 30 minutes each time they test 150 CAT6A cables*

- Tier 1 certification of multimode and single-mode fiber in less than 6 seconds

- Automate pass/fail end-face analysis for all fiber types

- Gain complete test visibility at both local and remote ends

- Pre-configured with all leading manufacturer's cabling specifications

KEY BENEFITS

- Achieve complete network certification with one device
- Optimize productivity with the industry's fastest test workflow
- Obtain comprehensive results for the latest TIA-568 and ISO 11801 requirements
- View test set up and results data and edit labels at both local and remote ends

KEY FEATURES

- Permanent link and channel adapters for certifying to TIA category 5e/6/6A and ISO class D/E/EA/F/FA
- Multimode (850/1300 nm) and single-mode (1310/1550 nm) adapters for Tier 1 fiber certification (loss/length/polarity)
- Industry-leading VIAVI P5000i digital fiber end-face inspection probe support
- Integrated, standards-based certification labeling and reporting

APPLICATIONS

- Complete TIA 568/ISO 11801 copper and fiber certification
- TIA-942-A data center certification
- Objective pass/fail testing for IEC 61300-3-35 fiber end-face requirements

Category-8-Ready Certification

Copper cabling systems are rapidly evolving to support new enterprise. With recent released standards*
from IEEE, TIA, and IEEE, the need to test cabling systems to beyond 2000 MHz is on the horizon. With the ability to already test up to 2,500 MHz, the VIAVI Certifier40G is ready for these new standards. The VIAVI Certifier40G has been ETL verified to ANSI/TIA-1152 Level IIIe, IEC 61935-1 Levels IIIe and IV, and Level V draft accuracy specifications.
The current IEC 61935-1 proposed Level V draft accuracy standard addressed the needs up to Class FA (1000 MHz). The VIAVI Certifier40G is accurate beyond 2000 MHz and, therefore, will support the latest standards being developed to protect your investment.

* Current released Cat 8 standards include:
ANSI/TIA-568-C.2-1
ANSI/TIA-1152-A
ISO/IEC 11801-99-1
IEC 61935-1

Inspect Fiber End Faces with Pass/Fail Analysis

Dirty connectors are the number one cause for troubleshooting in optical networks. Microscopic dirt particles create enough signal loss and back reflection to cause significant network errors and downtime. Proactively inspecting fiber end faces is critical for testing and certifying a fiber network. The Telecommunications Industry Association (TIA) recently revised TIA-568 to establish quality and cleanliness acceptance criteria for fiber connector end faces when testing optical connections. Whether using TIA-568 or customer-specific requirements, users can easily inspect and certify fiber connector end faces with automated pass/fail analysis at the push of a button on the Certifier40G to get the job done quickly and correctly

- Prove compliance to the new TIA-568 end-face inspection requirements

- Get fast results at the push of a button

- Eliminate subjectivity with automated pass/fail analysis

- Ensure your network is optimized for a lifetime of performance

- Prevent costly network downtime and time-consuming troubleshooting

The Complete Tier 1 Test Solution

Voice and video, cloud computing, and virtualization are driving an increasing demand for fiber-cabling networks. To guarantee that these new fiber networks can handle higher data rates, they must be certified based on the TIA-568 and ISO 11801 industry standards, which specify the insertion loss and length requirements for each type of fiber-optic cabling. The VIAVI Certifier40G fiber test adapters quickly and accurately certify any fiber-cabling installation. These adapters complement an existing, comprehensive coppercabling feature set, letting structured-cabling installers and professionals perform all their fiber and copper certifications with the same, easy-to-use tool.

- Perform standards-compliant loss measurements of multimode fiber cabling with encircled flux (EF) multimode test heads; EF launch conditions are required by TIA and IEC standards and help ensure consistency and accuracy of loss results

- Two complete user interface touch screens show full fiber results at both ends giving technicians complete results for all fibers and all wavelengths—not just a pass/fail light

Two complete units minimize time initiating, naming, and saving results
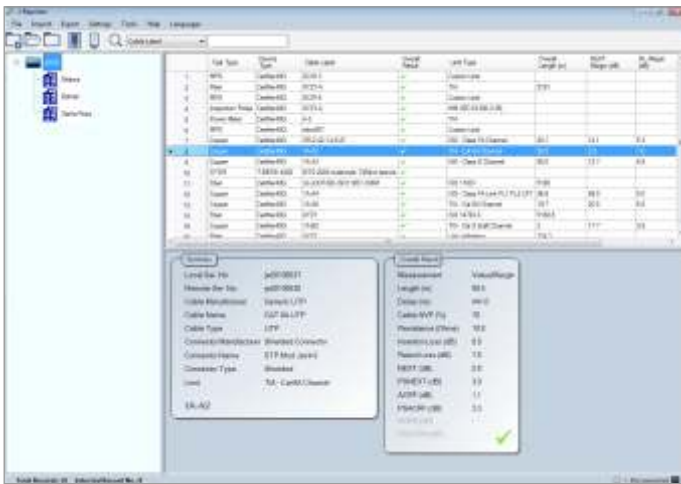
USB flash drive supports transferring test results

For more fiber testing and certification capabilities, combine the Certifier40G with one of the market-leading VIAVI fiber testers, such as the T-BERD/MTS-2000 , OLTS-85P , and MPOLx.

Comprehensive, Easy-to-Use Test Data Management

Easily manage all of your test data with J-Reporter. This PC-based software is included with all Certifier models so that network technicians and managers can keep organized records of test data and generate reports. In addition to managing data from the Certifier, J-Reporter also supports other VIAVI test solutions including the OLTS-85, MPOLx, and OTDR traces from the VIAVI T-BERD®/MTS-2000 instrument.

Additional features include:

- Adding a company's logo and name
- Reporting in summary or detail
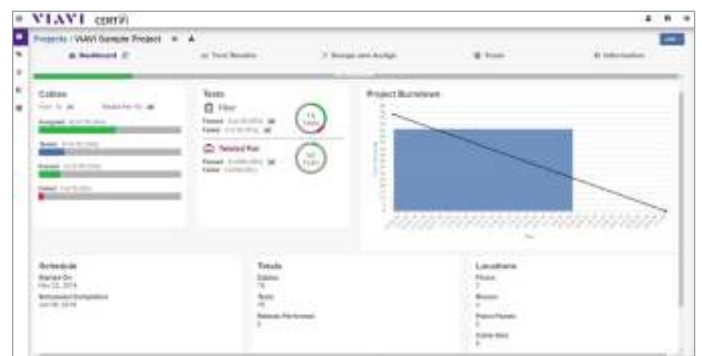- Creating hierarchies for record keeping

J-Reporter

Integrates with CERTiFi cloud-based workflow management

CERTiFi is a cloud-based solution for teams who design, build, test, and certify the structured cabling in enterprise networks. With CERTiFi, team members establish alignment at every stage of their project—from creating design requirements and assigning tasks, to performing tests and analyzing project metrics in real time. Manage your projects with confidence and equip your team to succeed with CERTiFi.

- Manage your projects with confidence at every stage
- Align your team and project specs in one place
- Communicate job requirements clearly and in real-time
- Track project status and analyze results from anywhere
- Assign tasks directly to team members
- Deploy tasks directly to instruments with the CERTiFi Mobile app

CERTiFi Dashboard

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 FA, the Certifier10G is an entry-level copper certifier with the same benefits as Certifier40G. Contact VIAVI for more information.

Specifications

Description	Part Number1
Certifier10G copper	NGC-500-6A
Certifier40G copper	NGC-4500-FA
Certifier40G copper, multimode (EF)	NGC-4500-CuMMEF
Certifier40G copper, single-mode, multimode (EF)	NGC-4500-CuQEF

Copper kits ship with all adapters and cords for testing links and channels to CAT6A/Class EA. Class FA adapters are available. The mainframe tests to beyond 2000 MHz and is CAT8 ready

1. Append model number with -NA, -UK, -EU, -AU for regional power cords.

Single-mode modules

Multimode (encircled flux) modules

Copper kit

Specifications

Parameter	Performance
Copper Testing	
Certification testing	TIA 568-C.2 Cat 5e, 6, 6A ISO/IEC 11801, EN 50173 Class D, E, EA Additionally Certifier40G supports ISO/IEC 11801, EN 50173 Class F, FA
Autotest time – Cat6A/ Class EA	12 s
Autotest time – Class FA	19 s
Maximm cable length for dual-ended autotest	500 m
Insertion cycles (typical)	Channel: 10,000 Permanent link: 5,000
Test parameters	As specified in TIA 1152, IEC 61935-1
Wiremap	Included
Loop resistance	0 to 40 Ω, ±0.1 Ω
Length	0 to 500 m, ±0.5 m (dual-ended testing)
Propagation delay and delay skew	0 to 5000 ns, ±1 ns
Attenuation	0 to 70 dB, ±0.1 dB
Pair-to-pair and power sum NEXT	0 to 85 dB, ±0.2 dB
Pair-to-pair and power sum ACR-F	0 to 85 dB, ±0.2 dB
Return loss	0 to 40 dB, ±0.2 dB
ACRN, PS ACRN	–25 to 85 dB, ±0.5 dB
Advanced diagnostics	Time-domain fault locator for RL and NEXT (200 m)
Measurement accuracy	ANSI/TIA-1152 Level 2G, IEC 61935-1 Draft Level VI (Certifier40G) ANSI/TIA-1152 Level IIIe, IEC 61935-1 Level IIIe (Certifier10G)
Measurement frequency range	1 to 2,500 MHz (Certifier40G) 1 to 500 MHz (Certifier10G)

Parameter	Performance
Fiber Testing – Multimode Encircled Flux Tier 1 (Loss/ Length) Test Probes (Certifier40G only)	
Wavelengths	850 nm, 1300 nm
Autotest time	10 seconds for dual-ended test
Test standards	TIA-568.3, IEC 14763-3, ISO 11801, Network Limits
Measurement length	0 to 1,000 m, ±1.5 m
Transmitter	
Connector type	FC
EF compliance	IEC 61280-4-1, TIA-526-14C
Power	–16 to –20 dBm
Source type	LED
Spectral width	±15 nm
Receiver	
Connector type	Interchangeable (SC, LC, ST)
Dynamic range	12 dB
Sensitivity	–40 dBm
Resolution	0.01 dB
Visual fault locator	
Wavelength	650 nm
Power	0 dBm

Parameter	Performance
Fiber Testing – Single-Mode Tier 1 (Loss/Length) Test Probes (Certifier40G only)	
Wavelengths	1310 nm, 1550 nm
Autotest time	10 seconds for dual-ended test
Test standards	TIA-568.3, IEC 14763-3, ISO 11801, Network Limits
Measurement length	0 to 10,000 m, ±1.5 m
Transmitter	
Connector type	SC
Power	–5 dBm to –9 dBm
Source type	Laser
Receiver	
Connector type	SC (Adapters for LC available)
Dynamic range	31 dB
Sensitivity	–40 dBm
Resolution	0.01 dB
Fiber Testing – Multimode MPO/MTP Light Source/ Power Meter Kit (Certifier40G only)	
Autotest	
Test time	5 s
Test parameters	Loss per channel in graphical and tabular format, polarity of link (A, B, C, Custom), pass/fail against user set limit
MPO link configurations	All 12 fibers or user-selected channels
Test configurations	MPO-MPO MPO-SC/LC (Requires duplex multimode fiber adapter on local unit)
MPO Light Source Adapter	
Fiber/connector type	Multimode MPO (Type A, pinned)
Wavelength	830 – 860 nm
MPO Power Meter Adapte	
Fiber/connector type	Multimode MPO (Type A, pinned)
Loss Measurement	
Dynamic range	15 dB
Accuracy	±0.2 dB
Verification period	Yearly verification recommended (copper calibration stored on mainframe, fiber calibration stored on fiber test probes)

Parameter	Performance
General Specifications	
Interfaces	Probe Interface, RJ45 Ethernet, USB host and device, talkset, power jack
Display	Industrial LCD, 6" touch sensitive area on both local and remote units
Enclosure	Ruggedized plastic with rubber over-mold, withstands 1.5 m drop test on hard surface
Remote unit capabilities	View test results, edit labels, save results, start autotest
Power supply	AC 100 to 240 V to 12 V, 3 A power adapter
Input over-voltage protection	Protected against Telco voltages
Battery	Removable and rechargeable LiON Battery capacity >8 hours continuous operation
Internal storage capacity	700 MB
Dimensions	232 X 126 X 87 mm (9.1 X 5.0 X 3.4 in)
Weight	Approx. 1 kg (2.2 lb) per unit
Supported languages	Device supports 17 languages: Chinese, Traditional Chinese, Czech, English, Finnish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Spanish, Swedish, Turkish, Hungarian
Calibration period	1 year (copper calibration stored on mainframe, fiber calibration stored on fiber test probes)
Environmental	
Operating temperature	0 to 40°C
Storage temperature	–20 to 60°C
Relative humidity	10% to 80%