



# Certifier40G™

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!

Our customers tell us that their old tools are insufficient for new enterprise networks. The Viavi Solutions Certifier40G equips technicians with all the capabilities they need to certify both copper and fiber networks quickly, completely, and correctly for all current and future cabling standards for the new enterprise.

## 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, single-mode, and multimode MPO 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

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



## 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)
- Multimode (850 nm) MPO adapters for certifying and troubleshooting MPO links and trunks
- Industry-leading JDSU 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
- Certify plug-and-play (trunk/cassette) fiber connectors with MPO connectors
- Objective pass/fail testing for IEC 61300-3-35 fiber end-face requirements

## The Only Category-8-Ready Certifier

Copper cabling systems are rapidly evolving to support the new enterprise. With the IEEE working to ratify 802.3bq (40GBASE-T), and TIA moving quickly to ratify Category 8 cabling systems, the need to test cabling systems to beyond 2000 MHz is on the horizon. The Viavi Certifier40G is the only certification tool on the market today that 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.

## Easily Test 10/40/100 G MPO Links

In new enterprise architectures, the use of parallel optics has become essential to achieve the demand for high-speed 40 G and 100 G transmission. From active media incorporating quadrature small form-factor pluggable (QSFP) transceivers to using trunk cables and cassettes, MPO connectivity is essential for delivering speeds of 40 G and beyond in the enterprise.

- The industry's only modular certifier with MPO test capability
- Test MPO to LC/SC
- Discover or ensure correct polarity with Fiber Map
- Conduct 5-second loss and polarity tests on 12 fibers
- Display absolute and relative power levels
- Measure MPO power on live systems



## 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 copper-cabling 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

## Comprehensive, Easy-to-Use Reporting

Manage your test results and generate professional reports for all your test results with J-Reporter, the Viavi reporting platform for the Certifier40G. Included with the Certifier40G, J-Reporter is PC-based software that produces consolidated reports for copper, fiber (including MPO and end-face certification with the Viavi P5000i optical scope), 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



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

| Test Type | Device Type     | Cable Label  | Overall Result | Unit Type                      | Overall Length (ft) | MDOT Margin (dB) | PL Margin (dB) |
|-----------|-----------------|--------------|----------------|--------------------------------|---------------------|------------------|----------------|
| 1         | MPO             | Certifier40G | ✓              | Custom Link                    |                     |                  |                |
| 2         | Fiber           | Certifier40G | ✓              | TIA                            | 5191                |                  |                |
| 3         | MPO             | Certifier40G | ✓              | Custom Link                    |                     |                  |                |
| 4         | Inspector Probe | Certifier40G | ✓              | MTS (IEC-61303-3-35)           |                     |                  |                |
| 5         | Power Meter     | Certifier40G | ✓              | TIA                            |                     |                  |                |
| 6         | MPO             | Certifier40G | ✓              | Custom Link                    |                     |                  |                |
| 7         | Copper          | Certifier40G | ✓              | ISO - Class FA Channel         | 60.1                | 14.1             | 5.3            |
| 8         | Copper          | Certifier40G | ✓              | TIA - Cat 6A Channel           | 16.5                | 2.1              | 0.7            |
| 9         | Copper          | Certifier40G | ✓              | ISO - Class D Channel          | 36.5                | 12.7             | 6.9            |
| 10        | OTDR            | T-BERD 4500  | ✓              | ISO 11801                      | 1588                |                  |                |
| 11        | Fiber           | Certifier40G | ✓              | ISO - Class FA Link PL1 PL2 C1 | 96.5                | 39.0             | 5.0            |
| 12        | Copper          | Certifier40G | ✓              | ISO - Class FA Link PL1 PL2 C1 | 96.5                | 39.0             | 5.0            |
| 13        | Copper          | Certifier40G | ✓              | TIA - Cat 6A Channel           | 19.7                | 28.9             | 6.0            |
| 14        | Fiber           | Certifier40G | ✓              | ISO 11801                      | 1588.9              |                  |                |
| 15        | Copper          | Certifier40G | ✓              | TIA - Cat 6 Channel            | 2                   | 17.7             | 0.8            |
| 16        | Fiber           | Certifier40G | ✓              | Link Validation                | 374.1               |                  |                |

  

| Summary                |                      |
|------------------------|----------------------|
| Local Ser. No.         | jx20100537           |
| Remote Ser. No.        | jx20100538           |
| Cable Manufacturer     | Gemini LUTP          |
| Cable Name             | CAT 6A LUTP          |
| Cable Type             | UTP                  |
| Connector Manufacturer | Shielded Connector   |
| Connector Name         | STP Mod Jack 6       |
| Connector Type         | Shielded             |
| Limit                  | TIA - Cat 6A Channel |
| 1A-A2                  |                      |

  

| Overall Result      |              |
|---------------------|--------------|
| Measurement         | Value/Margin |
| Length (m)          | 90.5         |
| Delay (ns)          | 441.8        |
| Cable NVP (%)       | 70           |
| Resistance (Ohms)   | 10.8         |
| Insertion Loss (dB) | 0.8          |
| Return Loss (dB)    | 7.0          |
| NEXT (dB)           | 2.9          |
| PSNEXT (dB)         | 3.9          |
| ACRF (dB)           | 1.1          |
| PSACRF (dB)         | 3.3          |
| PSACRFN (dB)        |              |

J-Reporter

## 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.

## Ordering Information

| Description                                              | Part Number <sup>1</sup> |
|----------------------------------------------------------|--------------------------|
| Certifier40G copper                                      | NGC-4500-FA              |
| Certifier40G copper, multimode (EF)                      | NGC-4500-CuMMEF          |
| Certifier40G copper, single-mode, multimode (EF)         | NGC-4500-CuQEF           |
| Certifier40G copper, multimode (EF), MM MPO              | NGC-4500-CuMMEFMPO       |
| Certifier40G copper, single-mode, multimode (EF), MM MPO | NGC-4500-CuQEFMPO        |

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.



Multimode (encircled flux) modules



Single-mode modules



Copper kit



MPO modules

Visit [www.viavisolutions.com/go/Certifier40G](http://www.viavisolutions.com/go/Certifier40G) for more information, vendor endorsements, and product videos.

**CONOSUR.**

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