

T-BERD® / MTS-8000

All-in-One 40 G High-Resolution Dispersion Test Solution



Increasing customer demand for high-bandwidth triple-play services, is a market driver for 40 G long-haul systems with a need for an easy upgrade path from 10 G to 40 G.

When deploying or upgrading a fiber network to 40 G, chromatic dispersion (CD) and polarization-mode dispersion (PMD) are critical parameters that can impact system performance and restrict the distance that light can be transmitted over the fiber. While PMD limitations for 10 G Ethernet/SONET/SDH do not present major obstacles for transmission deployments, potential issues with the further reduced thresholds associated with 40 G require clear and correct consideration. At 40 G the sensitivity to PMD increases 4-fold compared to 10 G, and 16-fold for CD. Depending upon the modulation format, PMD thresholds can be as low as a few picoseconds. This requires precise PMD measurement combined with high-performance testing for CD and attenuation profiles (AP).

After performing these critical measurements, end-to-end network-level qualification needs to be performed as part of system turn-up. This is done with a bit-error-rate (BER) test on a SONET/SDH interface.

The scalable JDSU T-BERD/MTS-8000 field platform provides the most complete service installation and maintenance test solution available that combines full-fiber characterization (CD/PMD) along with 40 G testing.

T-BERD/MTS-8000 Platform Benefits:

- Provides a modular/stackable platform best suited for 40 G testing requirements
- Combines protocol and optical testing in one tester
- Offers a rugged, field-portable design suitable for metro- and core-networking needs
- Provides dedicated test coverage for service activation and troubleshooting while reducing training costs

T-BERD/MTS-8000

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COMMUNICATIONS TEST &
MEASUREMENT SOLUTIONS

Most powerful 40 G installation and maintenance features available in a portable platform:

- One platform address all 40 G installation and maintenance test needs: fiber characterization, service verification, maintenance, and troubleshooting
- Combines with PMD module to address specific application needs, such as fiber characterization
- 40 G transport module addresses OC-768, STM-256, and OTU3 with client testing
- Supports both Terminate and Through mode testing, including Intrusive Through for OTU3
- Broad signal mapping offers spanning for both SONET/SDH and OTN multiplexing
- Supports APS and service disruption testing
- Evaluates round-trip delay with 10 μ s resolution
- Concurrently tests FEC and all 6 TCMs
- Exact same GUI and operation as the industry-leading T-BERD/MTS-8000 Transport Module supporting 10 G and lower line rates, eliminating the need for additional training to support 40 G services
- Quickly and easily updates existing T-BERD/MTS-8000 procedures to support 40 G equipment and service installation and maintenance requirements
- Third-generation design leverages many years of industry-leading JDSU 40 G and fiber-characterization test solutions.

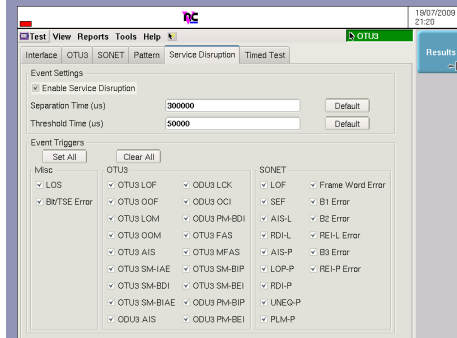
High-resolution dispersion test solution:

- Performs standard and ultra-low PMD measurements (0 fs to 18 ps)
- Helps qualify dense and coarse wavelength-division multiplexing (DWDM/CDWM) high-speed networks to 40 G
- Offers automatic coverage of various polarization launch conditions
- Offers high repeatability even for the lowest PMD delay
- Measures end-to-end PMD to verify inserted network elements do not add excessive PMD

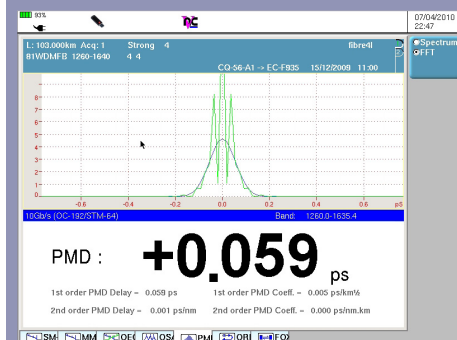
The JDSU T-BERD/MTS-8000 40 G is an optimized tool for qualifying standard- and low-PMD values for any optical-fiber link with very high repeatability, while simultaneously qualifying CD and spectral attenuation (SA).

Ordering Information

Part Number	Description
EM8000nb	TB/MTS-8000 tester with backplate for AC use
3074/01	40 G transport module
3074/95.13	43 G OTN option for 40 G transport module
3074/95.14	43 G ODU multiplexing
EMTSHRESPMDKIT1	High-resolution PMD kit 1 with MTS-8000 and MTS-6000 platforms
EMTSHRESDISPKIT2	High-resolution dispersion (PMD/CD/AP) kit 2 with MTS-8000 platform
ETBHRESPMDKIT1	High-resolution PMD kit 1 with T-BERD 8000 and T-BERD 6000 platforms
ETBHRESDISPKIT2	High-resolution dispersion (PMD/CD/AP) kit 2 with T-BERD 8000 platform
TB8KUP-HRESPMD-KIT1	High-resolution PMD upgrade kit for T-BERD 8000 platform



Service Disruption Triggers



High resolution PMD result



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