Quick Card

T-BERD®/MTS-5800 Network Tester
OTN Check™ Test

This document outlines how to configure the OTN Check test on a T-BERD 5800 Network Tester.

Equipment Requirements:

- T-BERD/MTS-5800 equipped with the following:
  - BERT software release V2.7.0 or greater
  - Test options:
    - C5OTU1 for OTU1 (2.7 Gbps)
    - C5OTU2 for OTU2 (10.7 Gbps)
    - C5OTU2E for OTU2E (11.05 and 11.1 Gbps)
    - C5OTU3 for OTU3 (43.02 Gbps)
    - C5OTU4 for OTU4 (111.8 Gbps)
  - Optical transceiver matching the optical network element under test:
    - CSFP-2G5-3-1 for OTU1
    - CSFP-10G-3-1 for OTU2 and OTU2E
    - CQSFP-43G-3-4 for OTU3
    - CQSP28-112G-3-4-LR4 for OTU4
- Optical attenuators, if the transmit level of the optical transceiver exceeds the maximum receive level of the network element
- Jumper Cables to match the network element under test
- Fiber optic inspection microscope (VIAVI P5000i or FiberChek Probe)
- Fiber optic cleaning supplies

The following information is required to complete the test:

- Physical Interface (OTU1, OTU2, OTU2E, OTU3 or OTU4)

Fiber Inspection Guidelines:

- Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (Jumper cables, bulkhead connectors, patch cords, etc.)
- Focus the fiber on the screen.
  - If dirty, clean the connector.
- If it appears clean, run inspection test.
- If it fails, clean the fiber and re-run inspection test. Repeat until it passes.

Figure 1: Equipment Requirements

Figure 2: Inspect Before You Connect
Loopback the Optical Channel:
- **OTN Check** requires a loopback at the far-end of the OTN circuit, typically accomplished using a looped back fiber on the OTN client port. A loopback may also be set up on a network element line card, or another VIAVI test instrument may be used to loop traffic using the OTN Monitor/Thru test application.

Connect T-BERD/MTS to Network Element:
- Insert desired SFP or QSFP into the Port 1 slot on the top of the T-BERD/MTS.
- Inspect and, if necessary, clean all optical transceivers, attenuators, fibers, and bulkheads, as described on page 1.
- If necessary, insert optical attenuators into the SFP TX and/or RX ports.
- Connect the SFP or QSFP to the network element under test using a jumper cable.

Launch Test:
1. Press the Power button to turn on the test set.
2. Using the Select Test menu, Quick Launch menu, or Job Manager, launch an OTN Check test; for example: **OTN►OTU2e 11.1G►OTN Check►P1 Terminate.**
3. Tap the bottom button to Start a New Configuration.

Configure Test:
1. Select all OTN Check Tests (Payload BERT, Round Trip Delay and Overhead Transparency).
2. Tap to proceed to the next configuration screen.

3. Default settings are recommended for Test Duration, Error Threshold, and Pattern; however, settings may be changed to shorten the test or to conform with a specific Method of Procedure (MOP).
4. Tap to proceed to the next configuration screen.
5. Default settings are recommended for **Round Trip Delay** thresholds; however, additional channels or different thresholds may be entered to conform with a specific Method of Procedure (MOP).

6. Tap **Next** to proceed to the next configuration screen.

7. Default settings are recommended for **Overhead Transparency**; however, settings may be changed to conform with a specific Method of Procedure (MOP).

8. Tap **Next** to proceed to the **Save Profiles** screen.

9. Tap **Skip Save Profiles** to proceed to the **Run Test** screen.

**Run Test:**

1. Tap **Run Test**. Wait for the test to complete and verify that all tests pass or complete as indicated by a green or blue checkmark.

2. Tap **Next** three times to display the **Report** screen.

3. Tap **Create Report**.

4. After viewing report, tap **Exit** three times to close the report and exit OTN Check.