VIAVI Solutions

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 V27.0 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

Figure 1: Equipment Requirements

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.

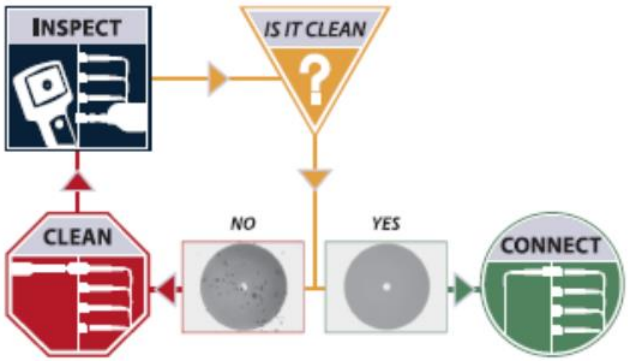


Figure 2: Inspect Before You Connect

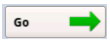
Loopback the Optical Channel:

- ***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**.

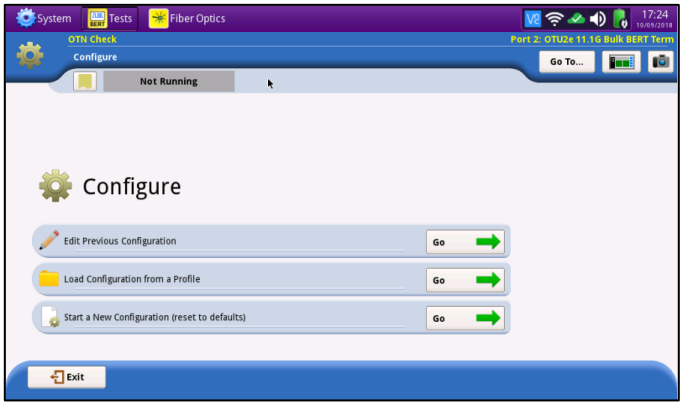


Figure 3: OTN Check

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.

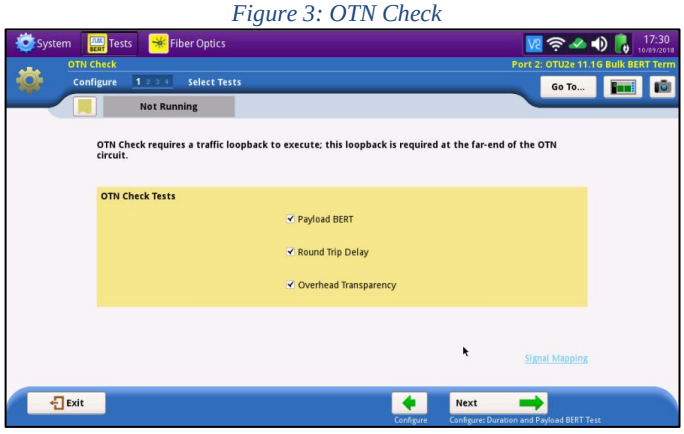


Figure 4: Select Tests

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.

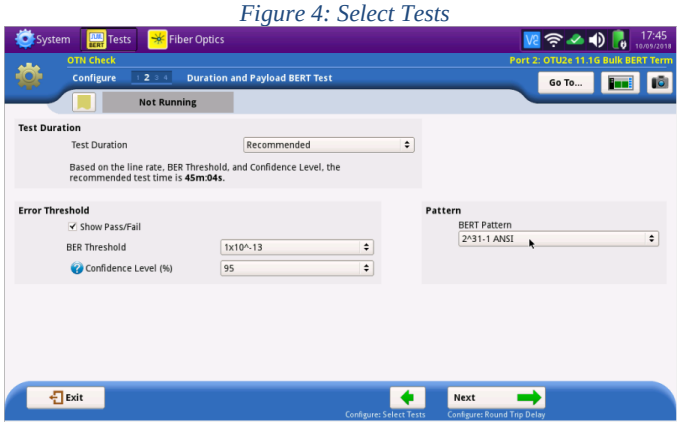


Figure 5: Configure Duration and Payload BERT Test

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 

to proceed to the next configuration screen.

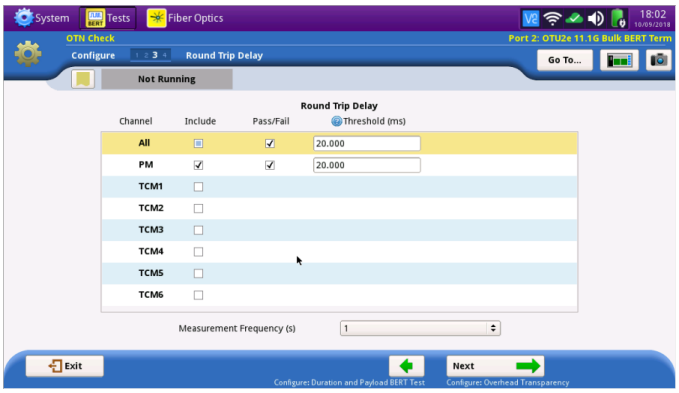


Figure 6: Configure Round Trip Delay

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

to proceed to the **Save Profiles** screen.
9. Tap 

to proceed to the **Run Test** screen.

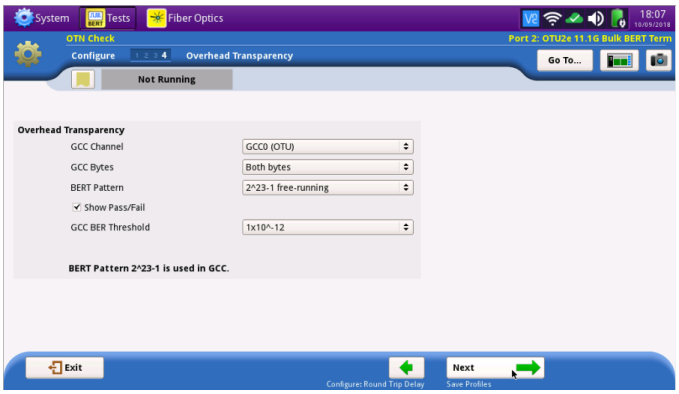
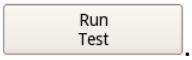
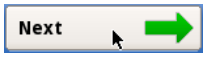


Figure 7: Configure Overhead Transparency

Run Test:

1. Tap 

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

three times to display the **Report** screen.
3. Tap 

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4. After viewing report, tap 

three times to close the report and exit OTN Check.

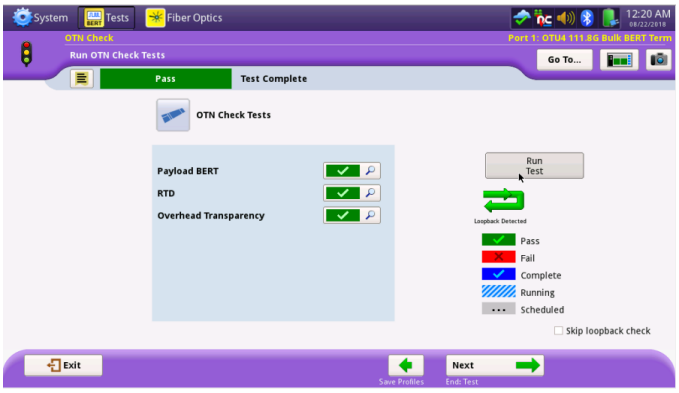

Figure 8: Run OTN Check Tests

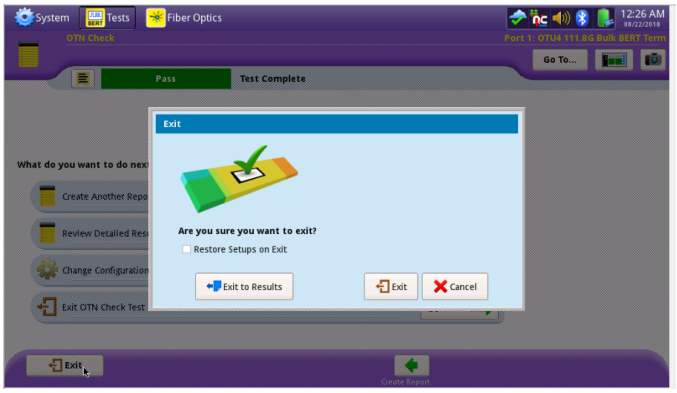

Figure 9: Exit