

Quick Card

T-BERD[®]/MTS-5800 Network Tester 5G NR Discovery

This document outlines how to use the T-BERD/MTS 5800 to discover and display MAC Addresses, VLAN IDs, IPv6 Addresses, and protocols for single or cascaded 5G NR radios. At the end of the test the T-BERD/MTS will ping all discovered IPv6 addresses.

Equipment Requirements:

- T-BERD/MTS-5800 equipped with the following:
 - BERT software release V29.0.1 or greater
 - Ethernet test options:
 - C510M1GE and C5LSCAPTURE for 1 Gigabit Optical
 - C510GELAN and C510GCAPTURE for 10 Gigabit Ethernet
 - C525GELAN and C5100GCAPTURE for 25 Gigabit Ethernet
 - SFP optical transceiver to match the line under test
- Patch Cables to match the optical transceiver and line under test (Single mode or Multimode fiber)
- 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 (1000BASE-LX, 10GBASE-LR, 25GBASE-LR, etc.)

Fiber Inspection Guidelines:

- All fiber end-faces must be clean and pass an inspection test prior to connection.
- Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (SFP Port, bulkhead connectors, patch cables, etc.)

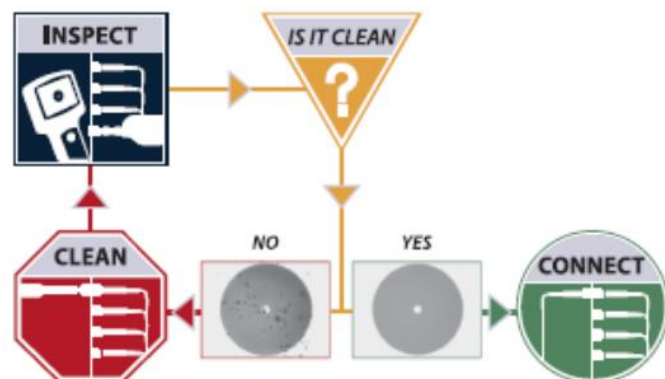


Figure 2: Inspect Before You Connect

Connect to Line Under Test:

1. Insert optics into the Port 1 slot on the top of the T-BERD/MTS 5800.
2. After inspecting the fiber end faces, connect the SFP/SFP+/SFP28 to the fiber under test using an LC-LC patch cable.



Figure 3: T-BERD/MTS 5800v2

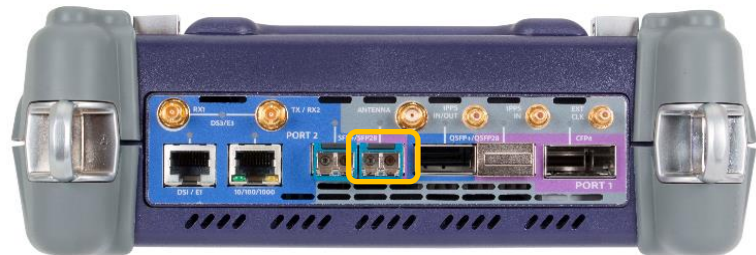



Figure 4: T-BERD/MTS 5800-100G

Launch Test:

1. Press the Power button  to turn on the test set and view the startup screen.
2. Using the **Select Test** menu, **Quick Launch** menu, or **Job Manager**, launch an **Ethernet**, **5G NR Discovery** test on **Port 1** as follows:

- For 1GigE:
 - Ethernet ▶ 1GigE Optical ▶ 5G NR Discovery ▶ P1 Terminate**
- For 10GigE:
 - Ethernet ▶ 10GigE LAN ▶ 5G NR Discovery ▶ P1 Terminate**
- For 25GigE:
 - Ethernet ▶ 25GigE ▶ 5G NR Discovery ▶ P1 Terminate**

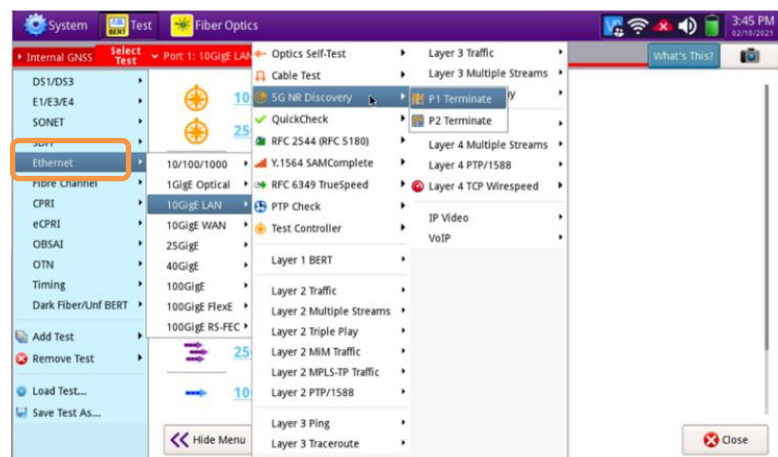
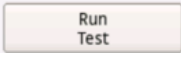


Figure 5: Select Test

Run Test:

1. Tap the **Save capture file** check box if you wish to save captured packets to a PCAP file for analysis with WireShark™.

2. Tap  to start discovery.

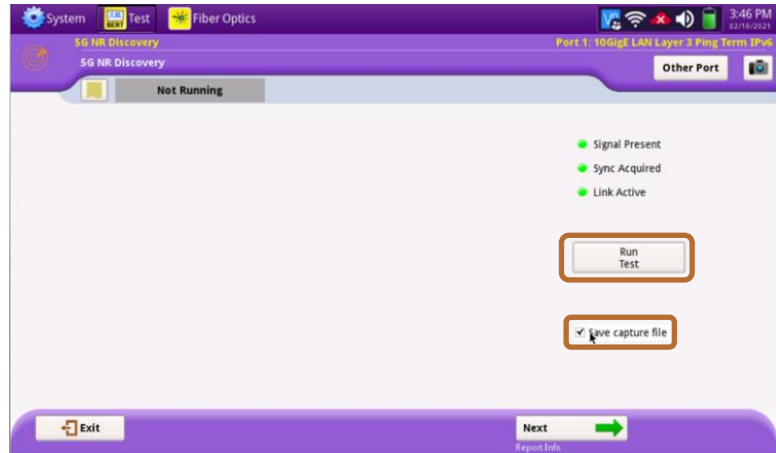


Figure 6: Run Test

3. The T-BERD/MTS will listen for 5G NR radios, analyze frames, and display IPv6 addresses, MAC addresses, and VLAN IDs for discovered radios.

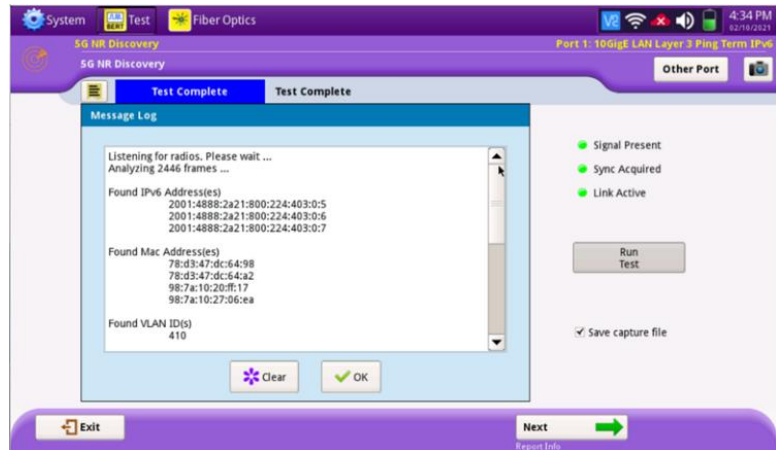


Figure 7: 5G NR Discovery

4. The T-BERD/MTS will also display discovered protocols (well-known TCP/UDP Ports) and ping all discovered IPv6 addresses.

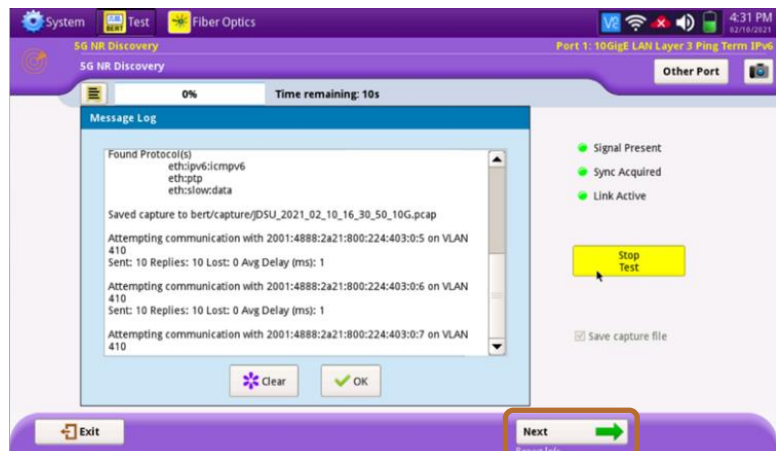
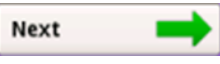




Figure 8: Protocol Discovery and Ping results

Create Report:

1. If you wish to save a report, tap  to proceed to the **Test Report Information** screen.
2. Enter test report information and comments/notes.
3. Tap  to proceed to the **Report** screen.
4. Tap and check the **View report after creation** and **Include message log** check boxes.
5. Tap  to generate a test report in .pdf format.

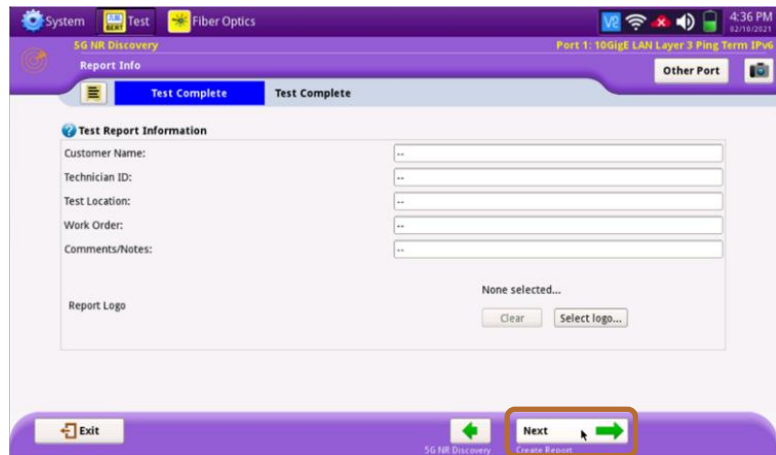


Figure 9: Test Report Information

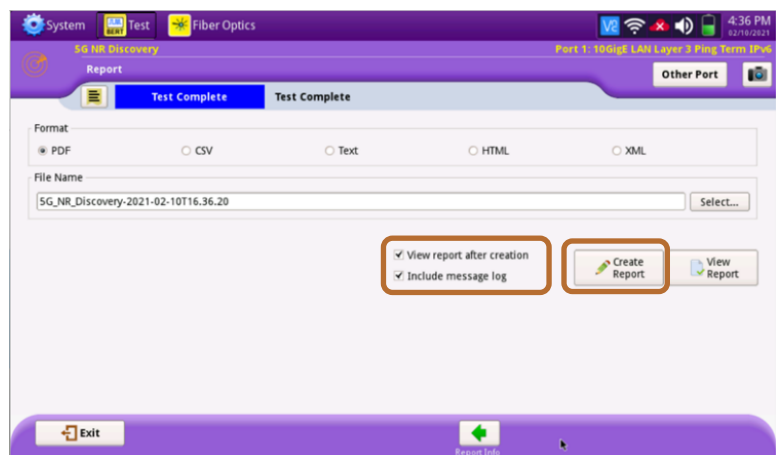



Figure 10: Create Report

6. After viewing the report, tap  twice to exit the **5G NR Discovery** test.

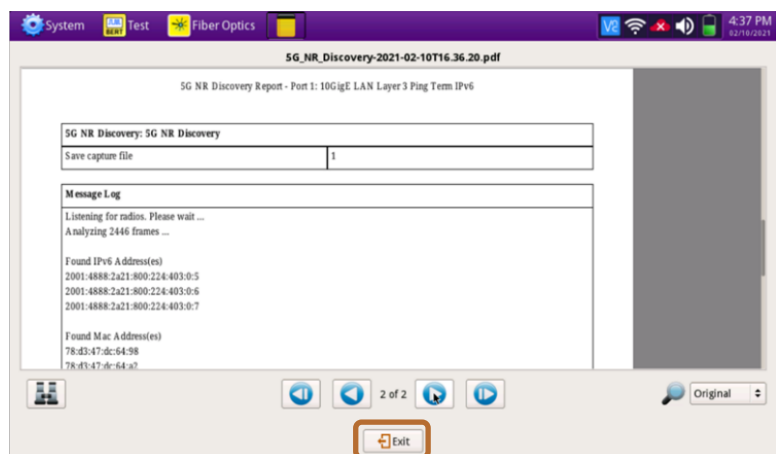


Figure 11: 5G NR Discovery Report