

QUICK CARD

5G NR Discovery

This document outlines how to use the **OneAdvisor 400G module** 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 OneAdvisor will ping all discovered IPv6 addresses to verify network connectivity.

- ▶ OneAdvisor 800 or OneAdvisor 1000 equipped with the following:
 - 400G Transport Module
 - Transport software release V4.0.0 or greater
 - Ethernet test options:
 - ✓ CA10GELAN and CA10GCAPTURE for 10 Gigabit Ethernet
 - ✓ CA25GE and CA100GCAPTURE 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

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

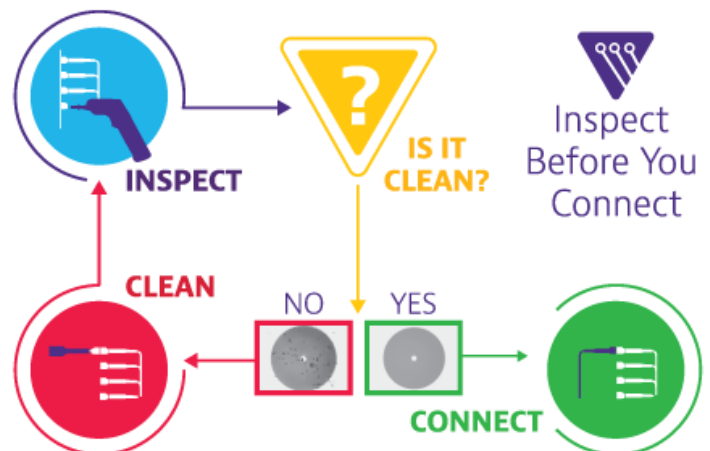


Figure 2: Inspect Before You Connect

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CONNECT TO LINE UNDER TEST

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



Figure 3: OneAdvisor 800 400G Module

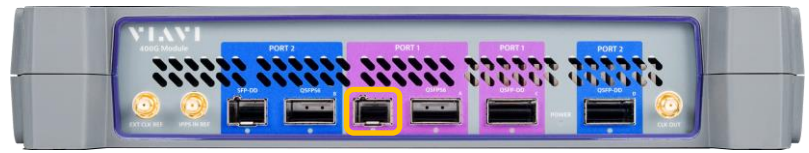



Figure 4: OneAdvisor 1000 400G Module

LAUNCH TEST

1. Press the Power button to turn on the test set and view the startup screen.
2. Press the **400G Module** icon at the top of the screen.
 
3. Using the **Select Test** menu or **Quick Launch** menu, launch an **Ethernet, 5G NR Discovery** test on **Port 1** as follows:
 - For 10GigE interfaces:
Ethernet ▶ 10GigE LAN ▶ 5G NR Discovery ▶ P1 Terminate
 - For 25GigE interfaces:
Ethernet ▶ 25GigE ▶ 5G NR Discovery ▶ P1 Terminate

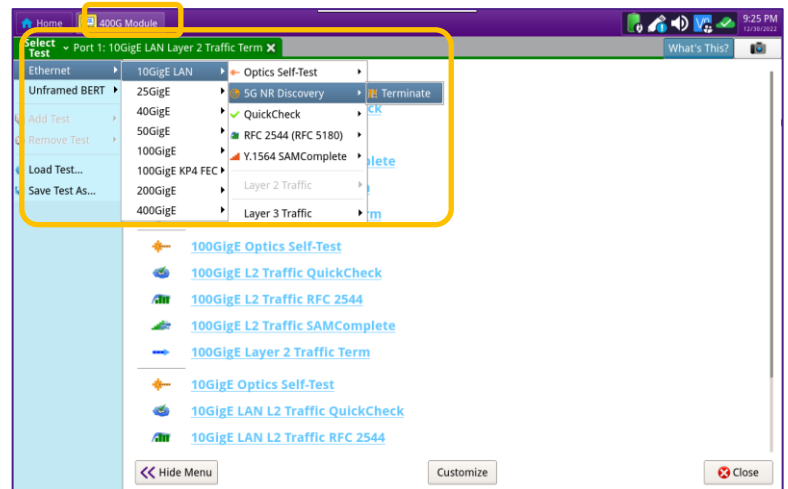
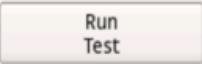


Figure 5: Select Test

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RUN TEST

1. Verify that Signal Present, Sync Acquired, and Link Active LEDs are all green.
2. Tap the **Save capture file** check box if you wish to save captured packets to a PCAP file for analysis with WireShark™.
3. Tap  to start discovery.
4. The OneAdvisor will listen for 5G NR radios, analyze frames, and display IPv6 addresses, MAC addresses, and VLAN IDs for discovered radios.
5. The OneAdvisor will also display discovered protocols (well-known TCP/UDP Ports) and ping all discovered IPv6 addresses.
6. At the end of the test, verify the following:
 - A valid source MAC address, VLAN ID and IPv6 address is displayed for each 5G NR radio
 - Each radio received 10 of 10 ping

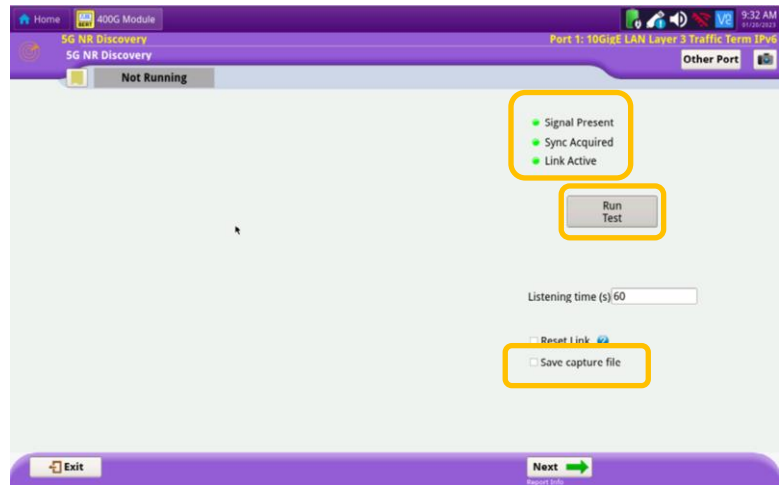


Figure 6: Run Test

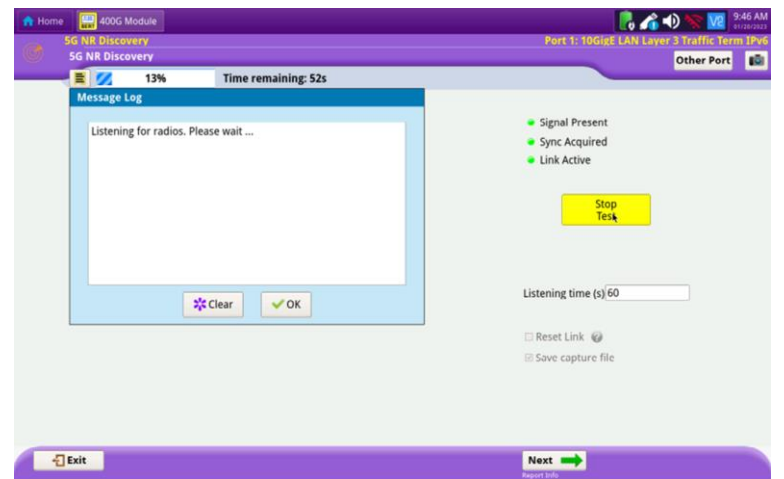


Figure 7: 5G NR Discovery

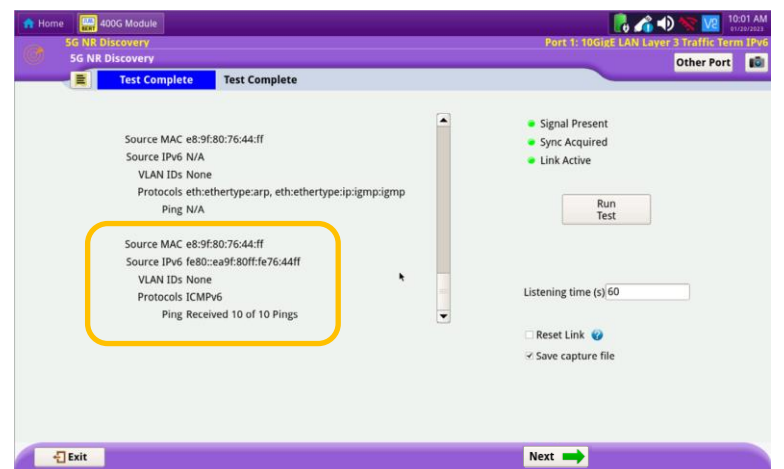
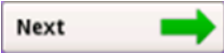


Figure 8: Protocol Discovery and Ping results

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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.

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

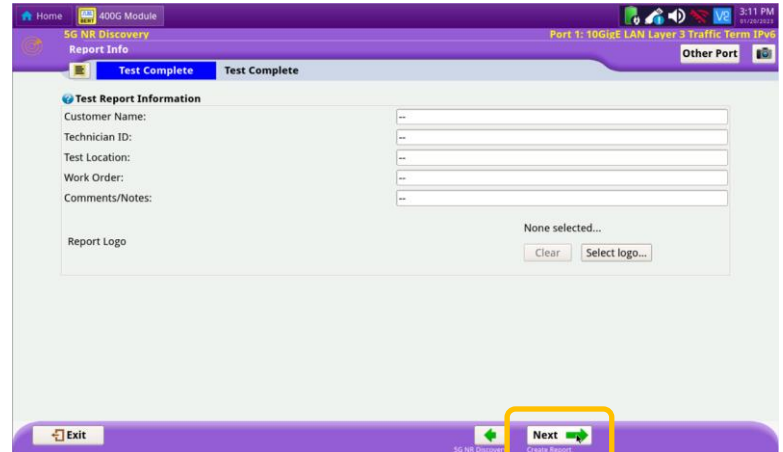


Figure 9: Test Report Information

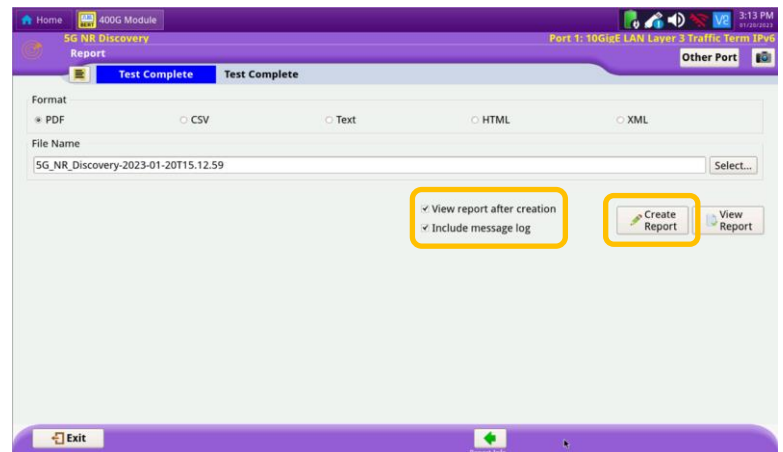


Figure 10: Create Report

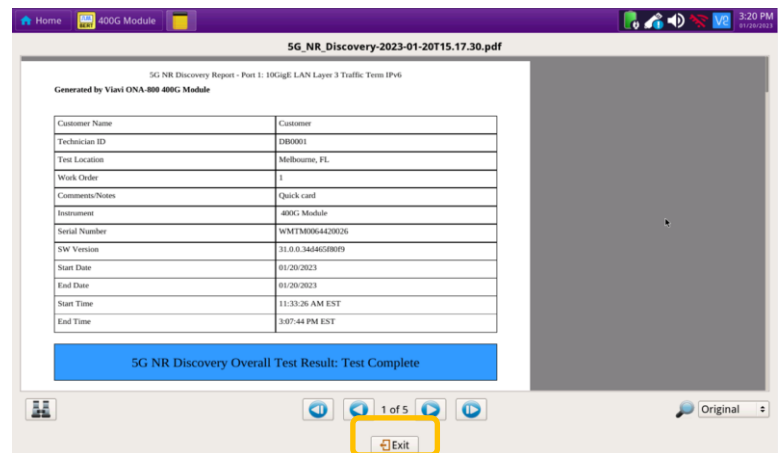


Figure 11: 5G NR Discovery Report