

QUICK CARD

5G NR Discovery

This document outlines how to use the **SPA06MA-O Radio Analysis 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 equipped with the following:
 - SPA06MA-O Radio Analysis Module
 - Transport software release V4.0.0 or greater
 - Ethernet test options:
 - ✓ ONA-SP-10GELAN and ONA-SP-10GECAP for 10 Gigabit Ethernet
 - ✓ ONA-SP-25GE and ONA-SP-25GECAP 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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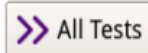
CONNECT TO LINE UNDER TEST

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 SPA06MA-O Module

LAUNCH TEST

1. Press the Power button  on the ONA-800 base top panel to turn on the OneAdvisor.
2. Tap  to display the Home Screen.
3. Tap  to display the Tests menu.
4. Tap  show Radio Analysis test applications.
5. Tap the **Transport** icon. 
6. If the **Select Test** menu or favorite test list is not displayed, tap  to view the **Select Test** menu.
7. Using the **Select Test** menu or favorite test list, launch the Ethernet Layer 2 Traffic test for the desired data rate. For example:
Ethernet ► 10GigE LAN ► 5G NR Discovery ► Terminate.

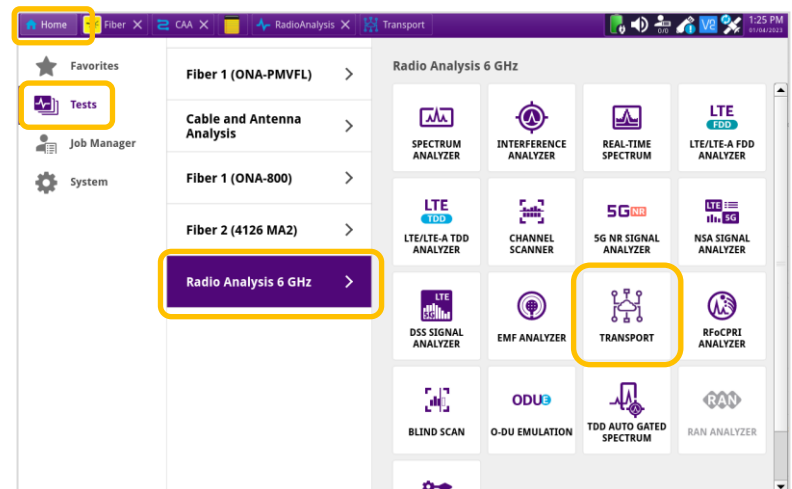


Figure 4: Transport Launch screen

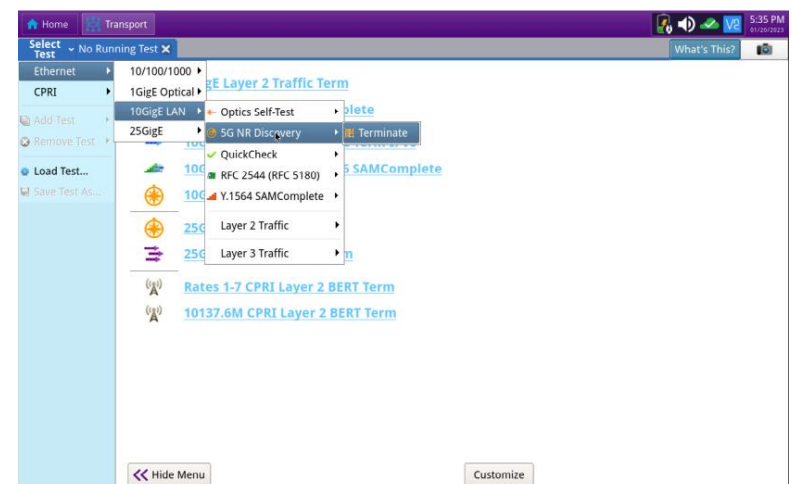
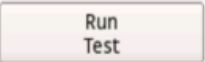


Figure 5: Select Test

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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 5GNR radio
 - Each radio received 10 of 10 ping

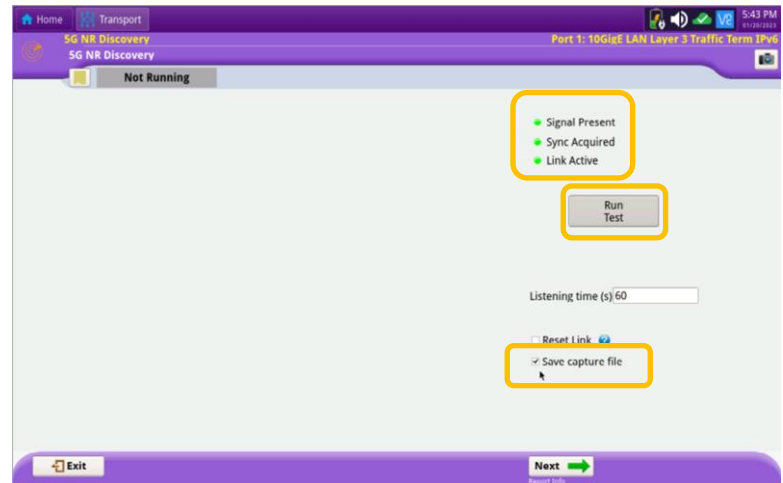


Figure 6: Run Test

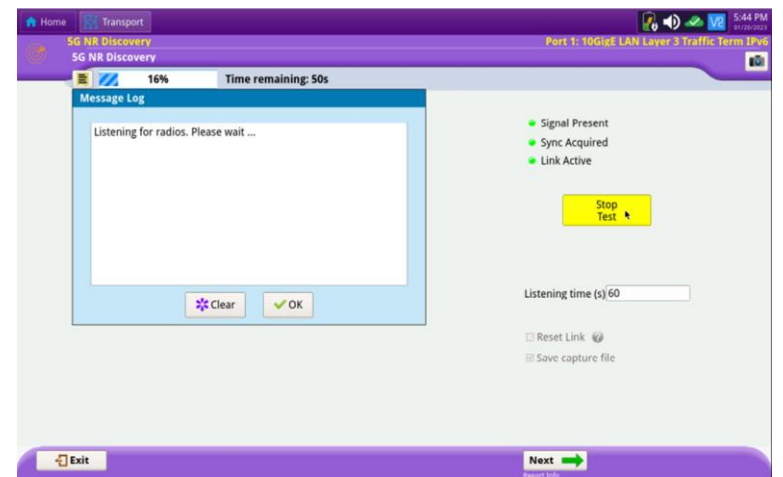


Figure 7: 5G NR Discovery

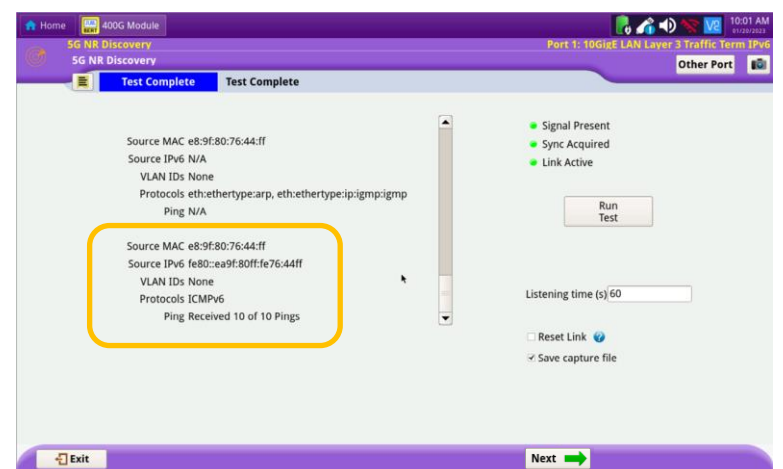
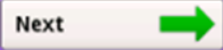





Figure 8: Protocol Discovery and Ping results

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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.

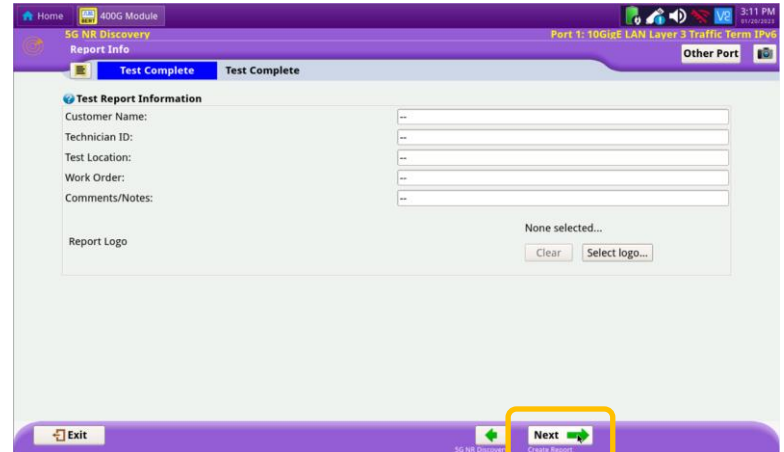


Figure 9: Test Report Information

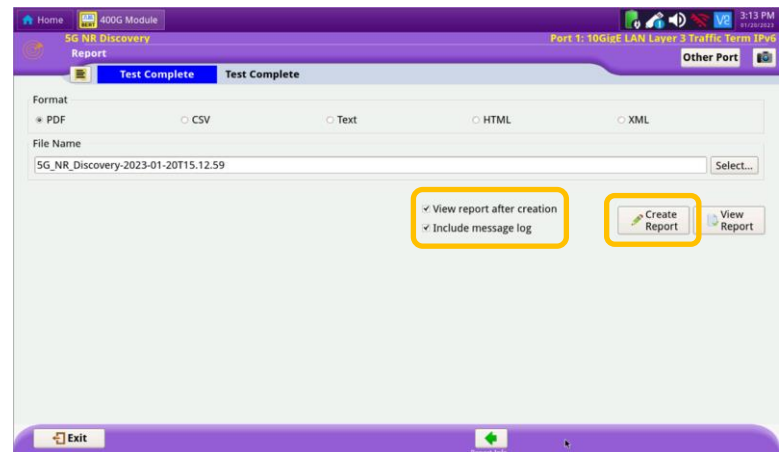


Figure 10: Create Report

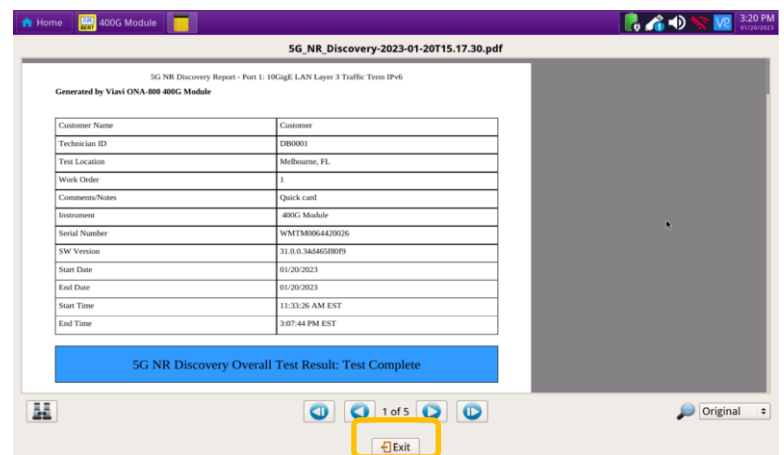


Figure 11: 5G NR Discovery Report