QUICK CARD

Ethernet Layer 2 Traffic Loopback
This quick card describes how to set up the OneAdvisor 800 SPA06MA-O Radio Analysis Module as a Layer 2 Loopback device.

- OneAdvisor 800 equipped with the following:
  - SPA06MA-O Radio Analysis Module
  - Transport software release V4.0.1 or greater
  - ONA-SP-100GE option for 100 Gigabit Ethernet
  - ONA-SP-25GE option for 25 Gigabit Ethernet
  - ONA-SP-10GELAN option for 10 Gigabit Ethernet
  - ONA-SP-10M1GE option for 10M/100M/1G Ethernet
- Optical Transceiver supporting the Ethernet data rate to be tested (SFP, SFP+, SFP28, or QSFP28)
- Cables to match the optical transceiver and the line under test
- Fiber optic inspection microscope (P5000i or FiberChek Probe)
- Fiber optic cleaning supplies

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 to 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 ► 1GigE Optical ► Layer 2 Traffic ► Terminate.
8. Tap to open the Tools Panel and select .
9. Press to continue.

OneAdvisor 800 Wireless Platform
The following Information is needed to configure the test:

- Physical Interface (1000BASE-LX, 10GBASE-LR, 25GBASE-LR, etc.)
- Auto Negotiation settings of the port under test.

For Optical Interfaces:

1. Press the **Setup** soft key on the top right side of the screen.
2. Select the **Interface/Connector** folder.
3. Insert desired Optical Transceiver into the Port 1 SFP+/SFP28 or QSFP28 slot on the top of the OneAdvisor.
4. Review SFP information in the **Connector** tab:
   - Verify that the optical transceiver operates on the required wavelength (850nm, 1310nm or 1550nm).
   - Verify that the SFP supports the required Data Rate (1G, 10G, etc.)
   - Note the Min and Max Tx Levels (dBm) and Max Rx Level (dBm) to assess if optical attenuators are required.
   - Press the **Results** soft key to return to the Test Results screen.

For 1GigE Optical tests, tap the Ethernet tab of the Quick Configuration menu and set **Auto Neg.** to the same value as the Ethernet port under test (On or Off).
**CONNECT TO LINE UNDER TEST**

► **For Optical Interfaces:**

1. Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (SFP, attenuators, patch cables, bulkheads)
   - Focus the fiber on the screen.
   - If it appears dirty, clean the fiber end-face and re-inspect.
   - If it appears clean, run the inspection test.
   - If it fails, clean the fiber and re-run inspection test. Repeat until it passes.
2. If necessary, insert optical attenuators into the SFP TX and/or RX ports.
3. Connect the optical transceiver to the port under test using a jumper cable compatible with the line under test.
4. Select the **Laser** tab in the **Actions** panel.
5. Press ![Laser Off](image). The button will turn yellow and be relabeled ![Laser On](image).
6. Press the **Restart** soft key ![Restart](image).
7. Verify the following:
   - **Summary** LED is yellow.
   - **Signal Present** LED is green.
   - **Sync Acquired** LED is green.
   - **Link Active** LED is green.

*Figure 7: Inspect Before You Connect*

*Figure 8: Optical Interface Results*
LOOP UP

The OneAdvisor may be looped up by any of the following methods. Once looped, the OneAdvisor will reflect all received test packet after inverting Source and Destination MAC addresses.

1. **Broadcast Loop up message**: The OneAdvisor will respond to VIAVI Loop up messages received via Broadcast MAC address and enter Local Loopback (LLB) mode.

2. **Unicast Loop up message**: The OneAdvisor will respond to VIAVI Loop up messages received via Unicast MAC address and enter LLB mode.

3. **Manual Local Loopback**: Select the Actions Panel and tap to manually enter LLB mode. Tap again to exit LLB mode when the test is complete.

With **Unicast** and **Manual** loopback, the operator of T-BERD or OneAdvisor traffic generator will need to know the MAC address of this OneAdvisor:

- Tap the Setup soft key, select the Ethernet menu, and tap to display the Factory Default Source MAC Address of your OneAdvisor.
- Provide this address to the operator of the Traffic Generator, upon request.
- Press the Results soft key to view the progress of the test.