Ethernet Layer 2 Traffic
This quick card describes how to set up the OneAdvisor 800 400G Module or OneAdvisor 1000 400G Module as a Layer 2 Traffic Generator and measure Metro Ethernet key performance indicators (KPIs).

- OneAdvisor 800 or OneAdvisor 1000 equipped with the following:
  - 400G Transport Module
  - Transport software release V4.0.0 or greater
  - Software option for data rate to be tested:
    - CA10M1GE test option for 10/100/1000M Copper or 1 Gigabit Optical Ethernet
    - CA10GELAN test option for 10 Gigabit Ethernet
    - CA25GE test option for 25 Gigabit Ethernet
    - CA40GE test option for 40 Gigabit Ethernet
    - CA50GE test option for 50 Gigabit Ethernet
    - CA100GE test option for 100 Gigabit Ethernet
    - CA200GE test option for 200 Gigabit Ethernet
    - CA400GE test option for 400 Gigabit Ethernet
- Optical Transceiver supporting the Ethernet data rate to be tested (SFP, QSFP, or OSFP)
- 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 to turn on the OneAdvisor.
2. Press the 400G Module Test icon at the top of the screen.
3. Using the Select Test menu, Quick Launch menu, or Job Manager, launch the Ethernet Layer 2 Traffic test for the desired data rate on the desired port (P1 or P2). For example: Ethernet ► 400GigE Optical ► Layer 2 Traffic ► P2 Terminate.
4. Tap to open the Tools Panel and select.
5. Press to continue.
1. Press the **Setup** soft key.

2. Select the **Interface/Connector** folder.

3. Insert Optical Transceiver into the OSFP, QSFP or SFP slot on Port 1 or Port 2 of the 400G Module, as selected on page 1, step 3.

4. Review QSFP or SFP information in the **Connector** tab:
   - Verify that the SFP operates on the correct wavelength (1301nm, 1310nm, etc.)
   - Verify that the SFP supports the required Physical Interface (10GBASE-LR, 100GBASE-LR4, 400GBASE-FR4, etc.)
   - If you are testing 10/100/1000 Electrical or 1GigE Optical interface with auto negotiation disabled, select the **Physical Layer** tab and configure settings to match the Ethernet port under test.

5. Select the **Ethernet** settings tab.
   - If you are testing a **VLAN**, set **Encapsulation** to **VLAN**, tap the **VLAN** field and enter your VLAN ID.
   - If you are testing head-to-head with another OneAdvisor or T-BERD/MTS, tap the **SA** field to display the Factory Default Source MAC Address of your OneAdvisor. Provide this address to the operator of the other test instrument, upon request.
   - If you wish to measure **Frame Loss and Round-Trip Delay**, tap the **Data** field, and set **Tx Payload** to **Acterna**.
   - If you wish to measure **Bit Error Rate**, tap the **Data** field, and set **Tx Payload** to **BERT**.

6. Select the **Traffic** settings tab. Set **Load Unit** to **Bit Rate** and set **Load** to the desired traffic rate or Committed Information Rate (CIR).

7. Press the **Results** soft key to return to the Test Results screen.
1. For Optical interfaces, 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. Connect the SFP to the port under test using a patch cable compatible with the line under test.
3. Select the Laser tab in the Actions panel.
4. Press \( \text{Laser off} \) The button will turn yellow and be relabeled \( \text{Laser On} \).
5. Press the Restart soft key \( \text{Restart} \).
6. Verify the following:
   - Summary LED is yellow.
   - Signal Present LED is green.
   - Sync Acquired LED is green.
   - Link Active LED is green.

**RUN TEST**

1. Select the Actions tab in the Actions Panel.
   - If you are testing head-to-head, to a hard loop, or if the loopback device is already in Local Loop Back (LLB) mode, proceed to step 2.
   - If the Loopback device is a OneAdvisor, T-BERD/MTS, or another VIAVI compatible loopback device, press \( \text{Loop Up} \) to loop up the far end device.
2. Press \( \text{Traffic} \). The button will turn yellow and will be relabeled \( \text{Traffic Started} \).
3. Press the Restart soft key \( \text{Restart} \). Verify that the Right Results window shows “Rx Mbps, L1” is approximately equal to the CIR.
4. Allow the Test to run for the desired duration.
   - Verify that the Left Result window displays “ALL SUMMARY RESULTS OK” throughout the test.