QUICK CARD

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

Figure 1: Equipment Requirements

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.

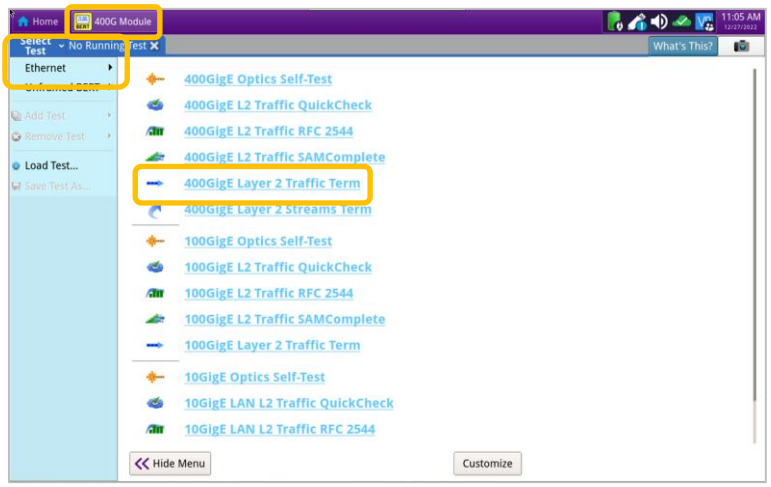

Figure 2: Launch Test

QUICK CARD

CONFIGURE TEST

1. Press the **Setup** soft key 

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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.

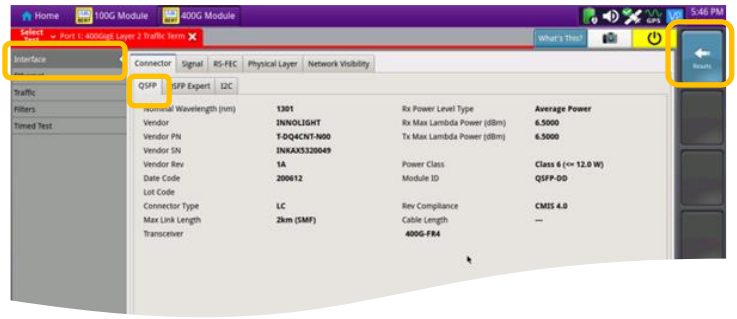


Figure 3: Setup, Interface/Connector/QSFP

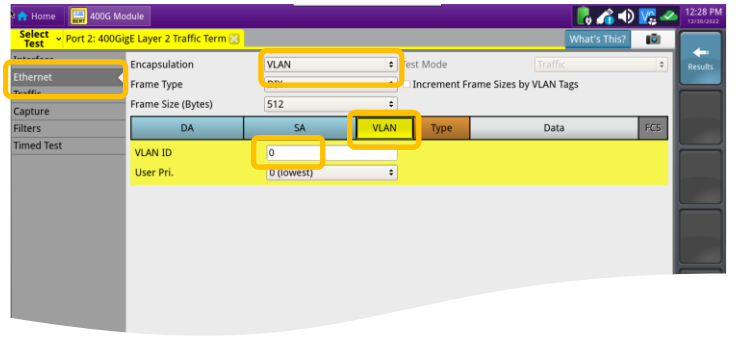


Figure 4: Setup, Ethernet/VLAN

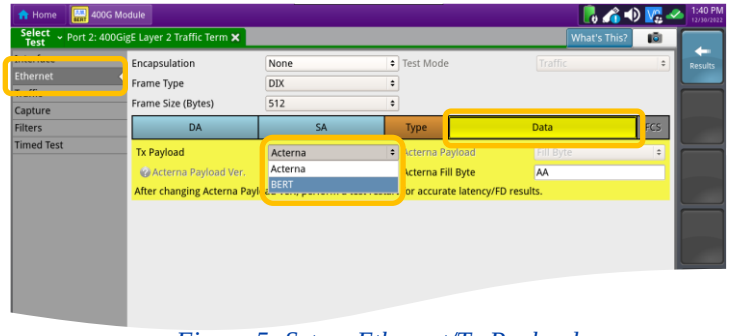


Figure 5: Setup, Ethernet/Tx Payload

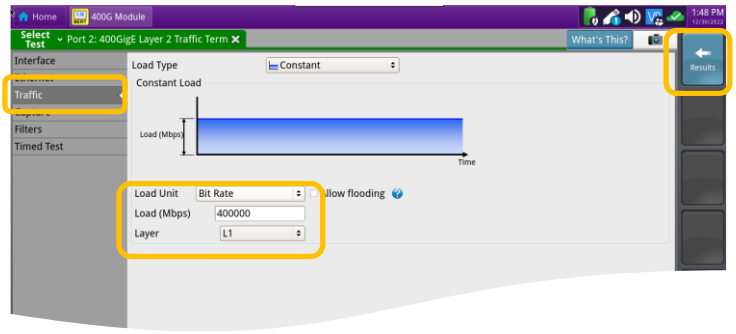


Figure 6: Setup, Traffic

QUICK CARD

CONNECT TO LINE UNDER TEST

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 

The button will turn yellow and be relabeled 

.
5. Press the **Restart** soft key 

.
6. 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

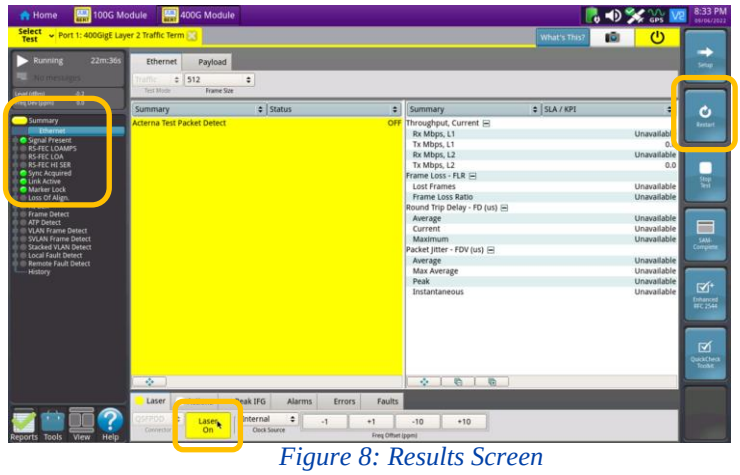
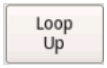


Figure 8: Results Screen

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 

to loop up the far end device.
2. Press 

. The button will turn yellow and will be relabeled 

.
3. Press the **Restar**t soft key 

. 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.

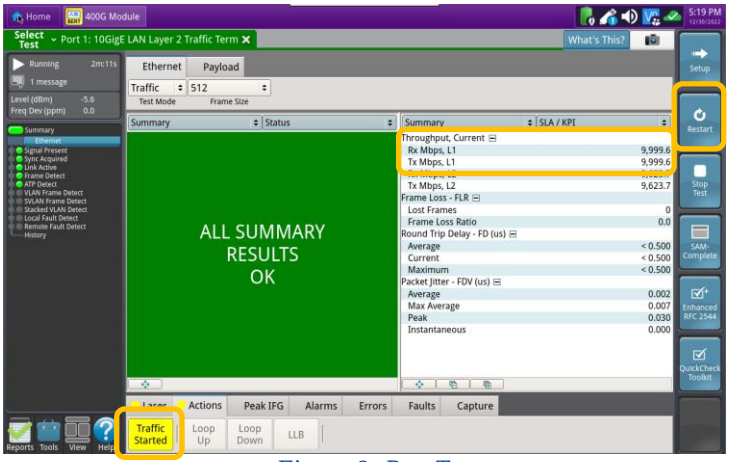


Figure 9: Run Test

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To reach the VIAVI office nearest you, visit viavisolutions.com/contact