

QUICK CARD

Ethernet Layer 2 Traffic Loopback

This quick card describes how to set up the OneAdvisor 800 **400G Module** or OneAdvisor 1000 **400G Module** as a Layer 2 Loopback device.

- 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 loopback
 - ✓ CA10GELAN test option for 10 Gigabit Ethernet loopback
 - ✓ CA25GE test option for 25 Gigabit Ethernet loopback
 - ✓ CA40GE test option for 40 Gigabit Ethernet loopback
 - ✓ CA50GE test option for 50 Gigabit Ethernet loopback
 - ✓ CA100GE test option for 100 Gigabit Ethernet loopback
 - ✓ CA200GE test option for 200 Gigabit Ethernet loopback
 - ✓ CA400GE test option for 400 Gigabit Ethernet loopback
- Optical Transceiver supporting the Ethernet data rate to be tested (SFP or QSFP)
- 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 icon 2006 Module at the top of the screen.
- 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.
- Tap to open the **Tools** Panel and select Reset Test to Defaults.
- 5. Press **Yok** to continue.

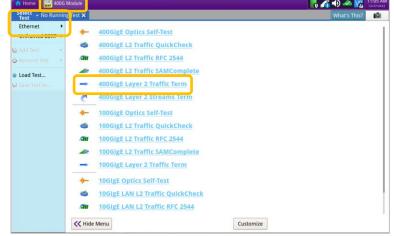


Figure 2: Launch Test



Figure 1: Equipment Requirements

QUICK CARD

CONFIGURE TEST

- 1. Press the **Setup** soft key
- 2. Select the Interface/Connector folder.
- 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 OSFP, QSFP or SFP information in the **Connector** tab:
 - Verify that the transceiver operates on the correct wavelength (1301nm, 1310nm, etc.)
 - Verify that the transceiver supports the required Physical Interface (10GBASE-LR, 100GBASE-LR4, 400GBASE-FR4, etc.)
 - Press the **Results** soft key to return to the Test Results screen.

CONNECT TO LINE UNDER TEST

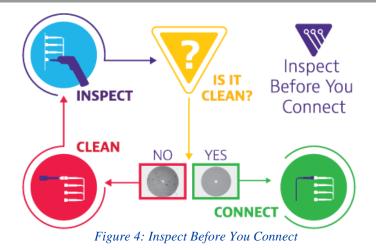
► For Optical Interfaces:

- Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (SFP, attenuators, patch cables, bulkheads)
 - \circ Focus the fiber on the screen.
 - If it appears dirty, clean the fiber end-face and re-inspect.
 - o 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 Laser off. The button will turn yellow and be relabeled laser .
- 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.

Select v Port 1: 4000igE:	Layer 2 Traffic Term 🗙			White this?	
nterface	Connector Signal RS-FEC P	hysical Layer Network Visibility			
raffic	QSFP SFP Expert 12C				
iters	Nominal Wavelength (nm)	1301	Rx Power Level Type	Average Power	
imed Test	Vendor	INNOLIGHT	Rx Max Lambda Power (dBm)	6.5000	
ITTED PER	Vendor PN	T-DQ4CNT-N00	Tx Max Lambda Power (dBm)	6.5000	
	Vendor SN	INKAX5320049			
	Vendor Rev	1A	Power Class	Class 6 (~ 12.0 W)	
	Date Code	200612	Module ID	QSFP-DD	
	Lot Code				
	Connector Type	LC	Rev Compliance	CMIS 4.0	
	Max Link Length	2km (SMF)	Cable Length	-	
	Transceiver		400G-FR4		

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Figure 3: Setup, Interface/Connector/QSFP



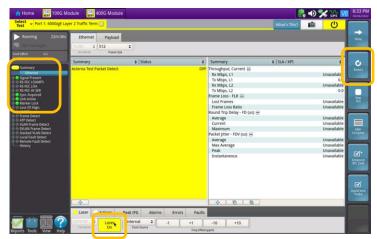


Figure 5: Optical Interface Results



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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.

- 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 💴 agai

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 the progress of the test.

to view

SA

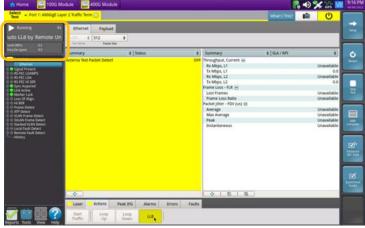


Figure 6: Loop Up message response

Running 21s	Ethernet Payload	1/							
			_		_				
	Ter Monte Engel								
ri satilimi i -0.2 (Dev lageni) 0.0	Summary	e Status	•	Summary	\$ SLA / KP1				
Summary	Acterna Test Packet Detect	• Joranos		Throughput, Current E	* [3047 MP]				
Signal Present Signal Present	Acternal rest Packet Detect		OFF	Rx Mbps, L1		Unavailable			
				Tx Mbps, L1		0.0			
			Rx Mbps, L2		Unavailable				
				Tx Mbps, L2		0.0			
Sync Acquired				Frame Loss - FLR -					
Unk Active Marker Lock				Lost Frames		Unavailable			
Loss Of Align. HI BER Frame Detect				Frame Loss Ratio		Unavailable			
				Packet Jitter - FDV (us) 🖃		-			
ATP Detect				Average		Unavailable			
VLAN Frame Detect				Max Average		Unavailable			
SVLAN Frame Detect Stacked VLAN Detect				Peak		Unavailable			
© Mackard VLAN Detect local Fault Detect # Remote Fault Detect History				Instantaneous		Unavailable			
				0.000					
	Las r Actions	Peak IFG	Frrors Faults						

Figure 7: Manual LLB

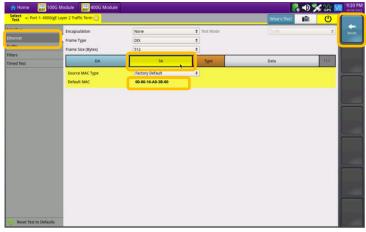


Figure 8: Ethernet Setup, Source MAC

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