Ethernet Y.1564 Layer 2 Multiple Streams

This quick card describes how to configure and run an Y.1564 Layer 2 Multiple Streams Test for Metro Ethernet service activation using the OneAdvisor 1000 **100G Module**.

- OneAdvisor 1000 equipped with the following:
  - 100G Transport Module
  - BERT software release V30.1.0 or greater
  - C510GELAN test option for 10 Gigabit Ethernet
  - C525GE test option for 25 Gigabit Ethernet
  - C540GE test option for 40 Gigabit Ethernet
  - C550GE test option for 50 Gigabit Ethernet
  - C5100GE test option for 100 Gigabit Ethernet
- Optical Transceiver supporting the interface 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

Figure 1: Equipment Requirements

LAUNCH TEST

1. Press the Power button to turn on the OneAdvisor.
2. Press the 100G Module **Test** icon 100G Module at the top of the screen.
3. Tap the Power button and click OK to launch the 100G Module.
4. Using the **Select Test** menu, Quick Launch menu, or Job Manager, launch the Ethernet Y.1564 Layer 2 Traffic test on Port 1 for the desired rate. For Example:
   Ethernet► 1GigE Optical► Y.1564 SAMComplete ► L2 Multiple Streams ► P1 Terminate.
5. Tap the Go button next to "**Start a New Configuration (reset to defaults)**"

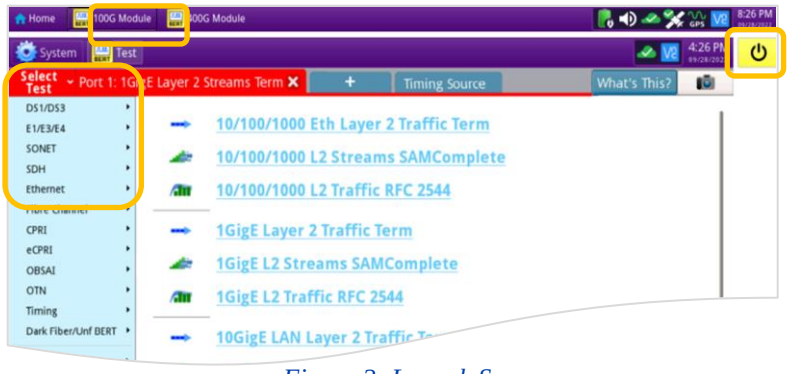

Figure 2: Launch Screen

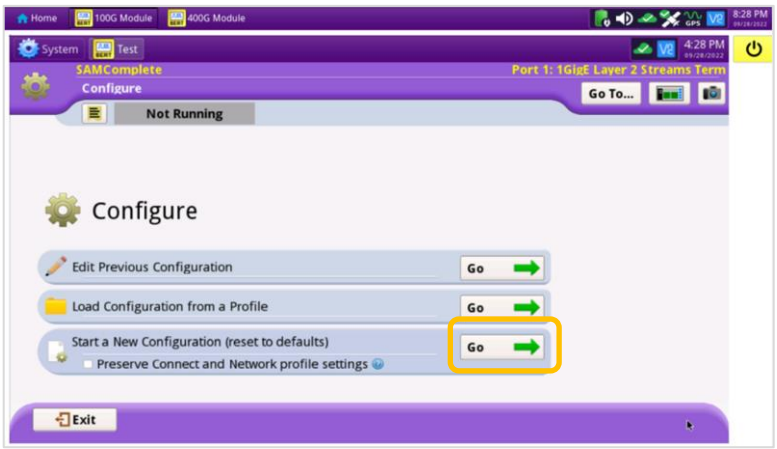

Figure 3: Y.1564 test

QUICK CARD

CONFIGURE TEST

Figure 4: Work Order

- The following Information is needed to configure the test:
  - Number of Streams to generate
  - VLAN ID, if VLAN tagging is used
  - Frame Size for each stream
  - Committed Information Rate (CIR) for each stream
  - Pass/Fail Threshold for Frame Loss Ratio, Delay and Delay Variation (Jitter)

1. Tap the Next button 3 times to display the **Network Services** screen. Set **Number of Services** to the number of streams you wish to generate.

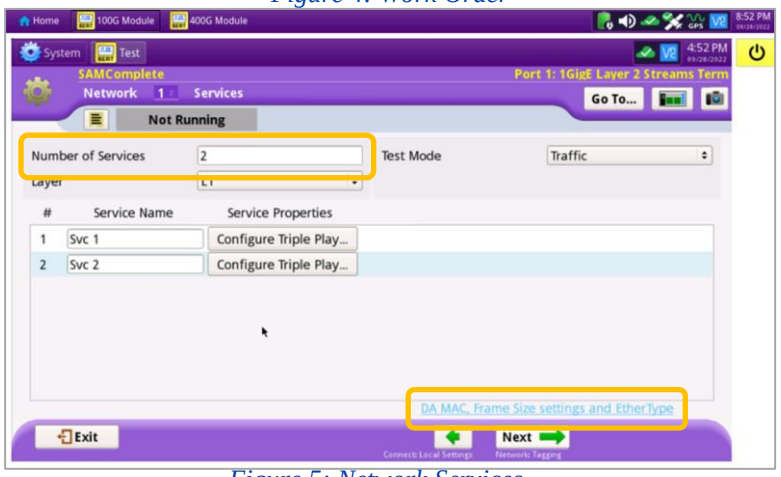

Figure 5: Network Services

2. If you want different Frame Sizes, Destination MAC Addresses, or Ethertypes for each stream, tap DA MAC, Frame Size setting and Ethertype, enter desired values, and tap Back.

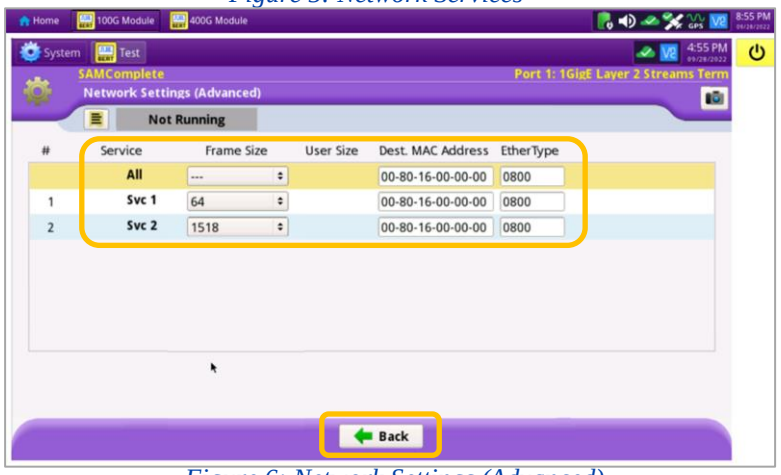

Figure 6: Network Settings (Advanced)

3. Tap Next to display the **Network Tagging** screen.
   - If you are testing a single VLAN, set **Encapsulation** to **VLAN** and enter the **VLAN ID.**
   - If you are testing multiple VLANs, tap the **Yes** radio button and enter the **VLAN IDs** and **Priorities**.

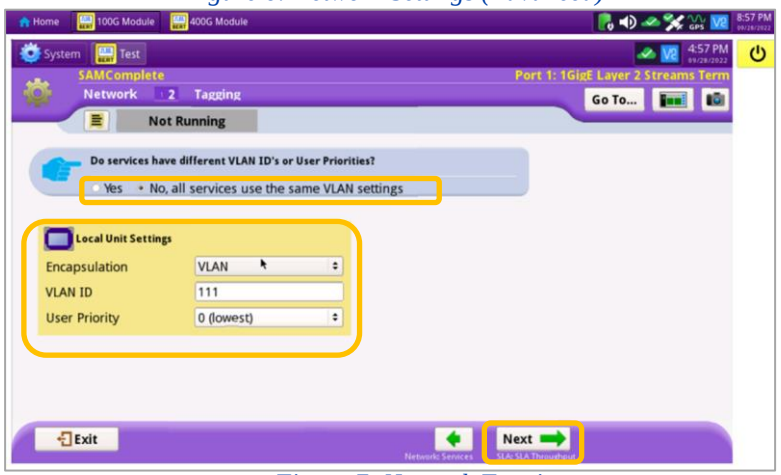

Figure 7: Network Tagging

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4. Tap Next to display the **SLA Throughput** screen.
   - ► Enter the **CIR** allocated to each stream of traffic or service.
   - ► Under **EIR**, Enter the additional bandwidth available when only one stream of traffic is being generated,
   - ► If the streams are not policed individually, uncheck all **Policing** checkboxes.

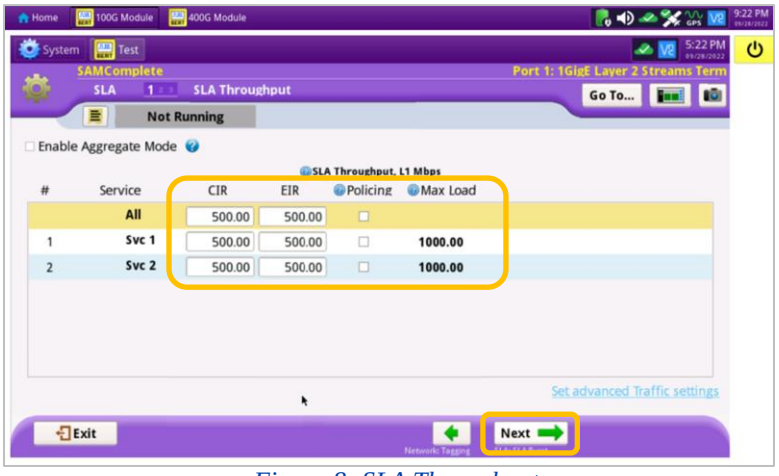

Figure 8: SLA Throughput

5. Tap the Next button twice to display the **SLA Performance** screen.
   - ► Enter the **Frame Loss Ratio**, **Frame Delay**, and **Delay Variation** pass/fail criteria for all services.

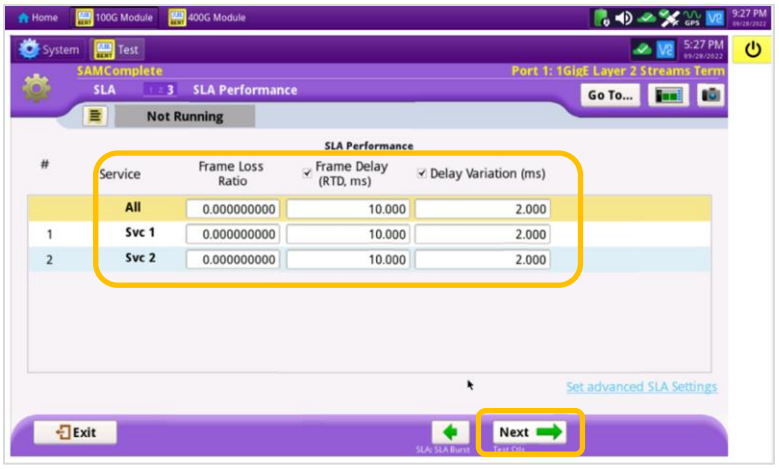

Figure 9: SLA Performance

6. Tap the Next button 5 times to display the **J-QuickCheck** screen.

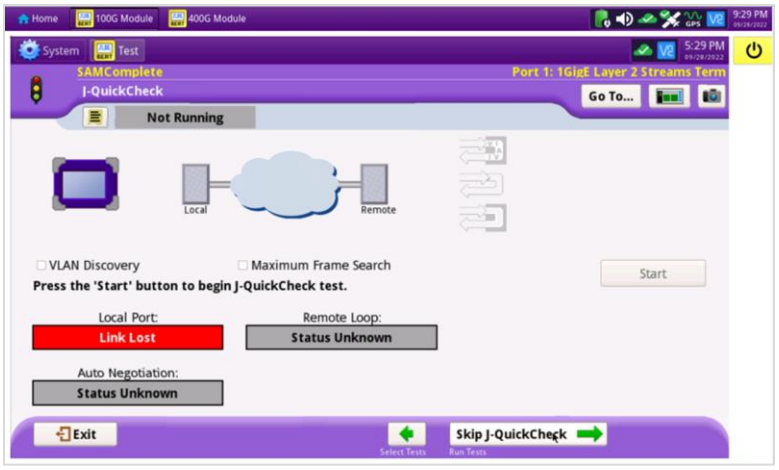

Figure 10: J-QuickCheck

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CONNECT TO LINE UNDER TEST AND LOOP BACK DEVICE

► **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. Insert desired Optical Transceiver into the Port 1 SFP or QSFP slot on the top of the T-BERD.
3. If necessary, insert optical attenuators into the SFP TX and/or RX ports.
4. Connect the SFP to the port under test using a jumper cable compatible with the line under test.

Figure 11: Inspect Before You Connect

► **For Copper 10/100/1000BASE-T interfaces**:

Connect the 10/100/1000 RJ-45 jack to the port under test using CAT 5E or better cable.

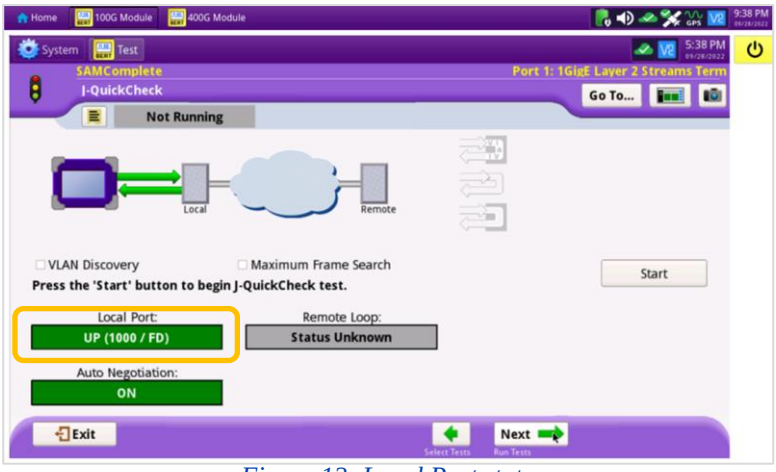

Figure 12: Local Port status

1. Verify that **Local Port** status **UP** and Full Duplex (**FD**)
2. Tap the Start button.
3. Verify that the **Remote Loop** is recognized.
4. Tap the Next button to display the **Run Y.1564** Tests screen.

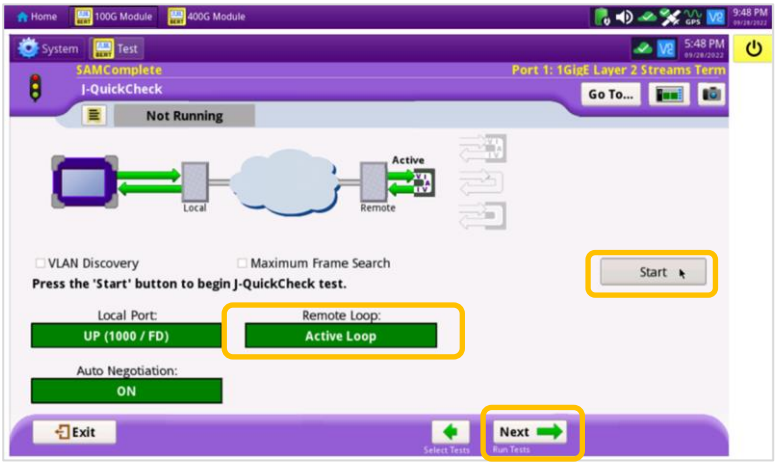

Figure 13: Run J-QuickCheck

QUICK CARD

RUN TEST

1. Tap the Start button.

2. Wait for the test to complete and verify that all tests pass or complete as indicated by a green checkmark.

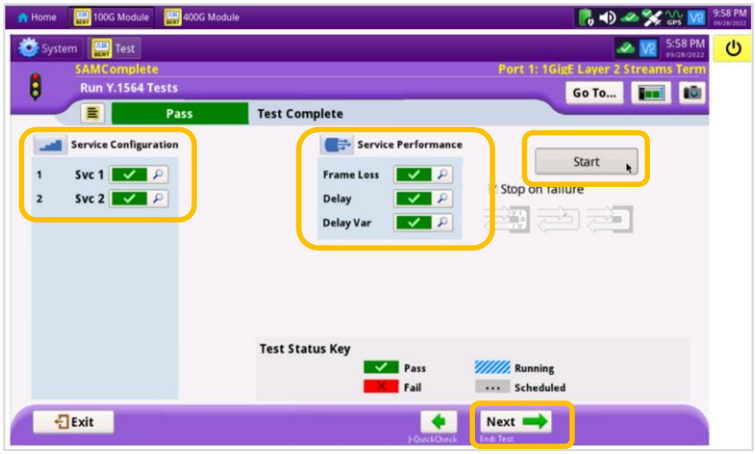

Figure 14: Run Y.1564 Tests

CREATE REPORT

1. Tap the Next button three times to display the **Report** screen.

2. Tap Create Report .

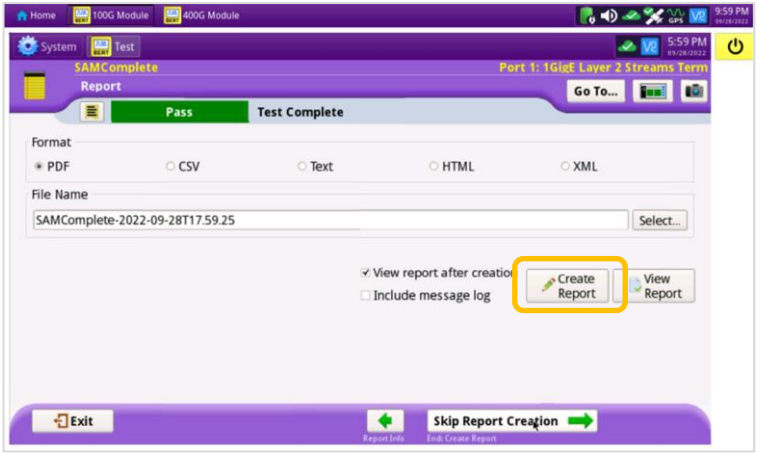

Figure 15: Create Report

3. Tap Exit buttons three times to close the report and exit the Y.1564 test.

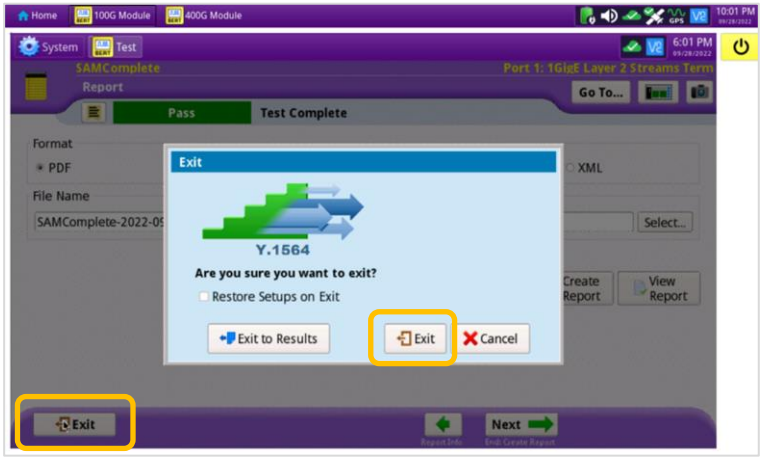

Figure 16: Exit

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