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QUICK CARD

Ethernet Y.1564 SAMComplete Layer 3 Service Acceptance Test

This quick card describes how to configure and run a Y.1564 Layer 3 Traffic Test for Metro Ethernet service activation. The quick card documents a procedure to set up the OneAdvisor on a 1GigE Optical Interface with IPv4 addressing, the same workflow may be applied to other data rates and IPv6.

EQUIPMENT REQUIREMENTS

- OneAdvisor 800 equipped with the following:
  - o RAxxMA-O Radio Analysis Module, SPA06MA-O Spectrum Analyzer Module, TM400GB-QQ 400G Module, or TM400GB-QO 400G Module.
  - o Transport software release V5.1.0 or greater
  - o CA10M1GE or ONA-SP-10M1GE 1-Gigabit Ethernet option
- Optical Transceiver supporting the Ethernet data rate to be tested (SFP, SFP+, SFP28, QSFP28, QSFP-DD, etc.)
- Cables to match the optical transceiver and the line under test
- Fiber optic inspection microscope (P5000i, FiberChek Probe, or INX-760)
- Fiber optic cleaning supplies

Figure 1: Equipment Requirements

LAUNCH TEST

1. Press the Power button on the ONA-800 base top panel to turn on the OneAdvisor.

2. Tap **Home** to display the Home Screen.

3. Tap **Tests** to display the Tests menu.

4. Tap **Radio Analysis Transport >** or **400G Transport >** to show the Transport test application.

5. Tap the **Transport** icon. **TRANSPORT**

6. If the **Select Test** menu is not displayed, tap **>> All Tests** in the lower left screen corner.

7. Using the **Select Test** menu or favorite test list, launch the Ethernet Y.1564 SAMComplete Layer 3 Traffic test for the desired data rate and port (P1 or P2). For example:
Ethernet ►1GigE Optical ►
Y.1564 SAMComplete ► L3 Traffic IPv4 ►
P1 Terminate or
Ethernet ►1GigE Optical ►
Y.1564 SAMComplete ► L3 Traffic IPv4 ►
Terminate.

8. Tap the **Go →** button next to "**Start a New Configuration (reset to defaults)**"
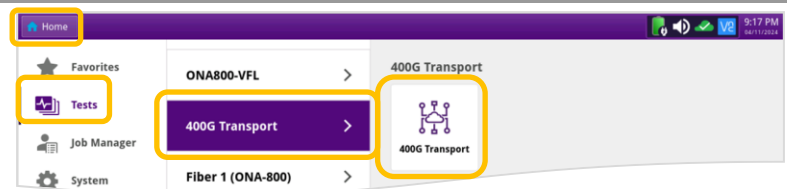
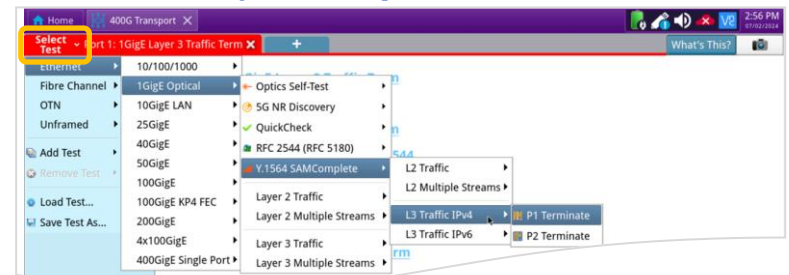*Figure 2: Transport Launch screen*
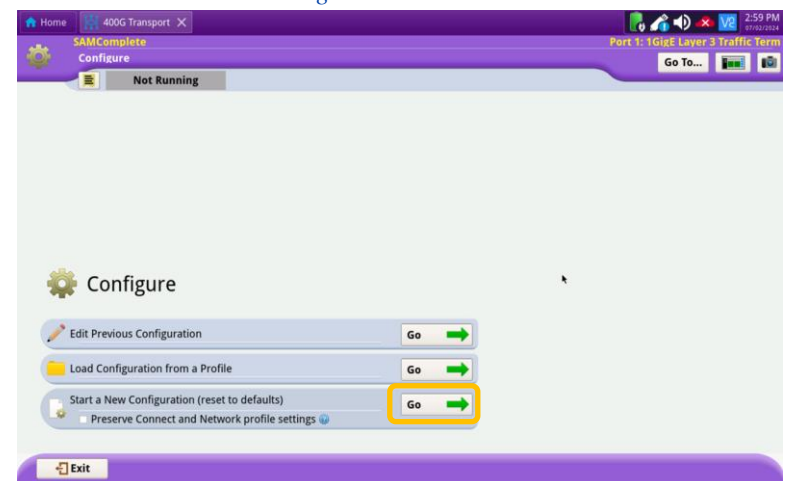
Figure 3: Select Test

Figure 4: Configure

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CONNECT TO LINE UNDER TEST

► **For Optical Interfaces:**

1. Use the VIAVI P5000i, FiberChek Probe or INX 760 microscope to inspect both sides of every connection being used (SFP, attenuators, patch cables, bulkheads)
   o Focus the fiber on the screen.
   o If it appears dirty, clean the fiber end-face and re-inspect.
   o If it appears clean, run the inspection test.
   o 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 OneAdvisor.
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.
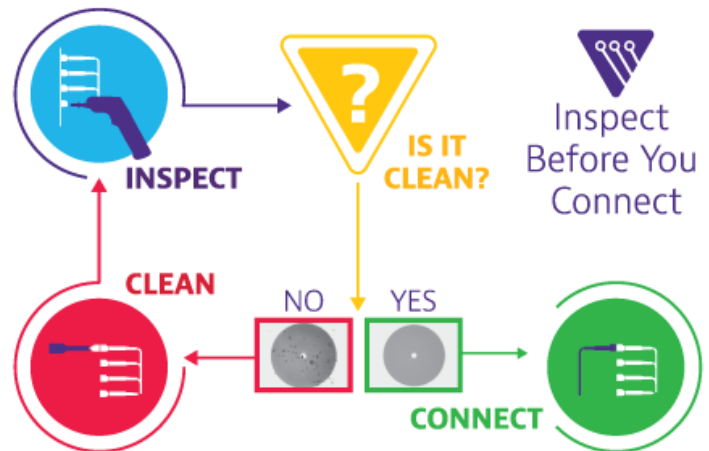
Figure 5: Inspect Before You Connect

► **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.

CONFIGURE TEST

► **The following Information is needed to configure the test:**

- Source and Destination IP Address settings
- Packet Length (46 to 1500, Random, Jumbo, or EMIX)
- Committed Information Rate (CIR)
- Pass/Fail Threshold for Throughput, Frame Loss Ratio, Delay, and Delay Variation (Jitter)

Figure 6: Work Order

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CONFIGURE TEST (Continued)

1. Tap the **Next →** button to display the **Local Network Settings 1** screen.
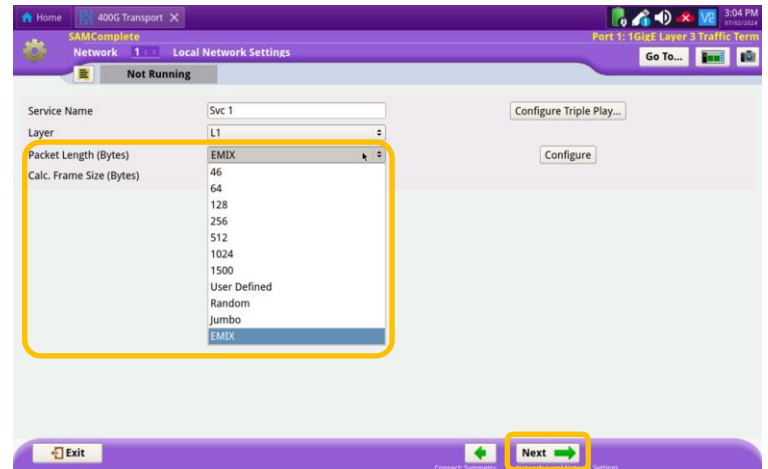
    ► Select the **Packet Length** you wish to generate.

Figure 7: Local Network Settings 1

2. Tap the **Next →** button to display the **Local Network Settings 2** screen.

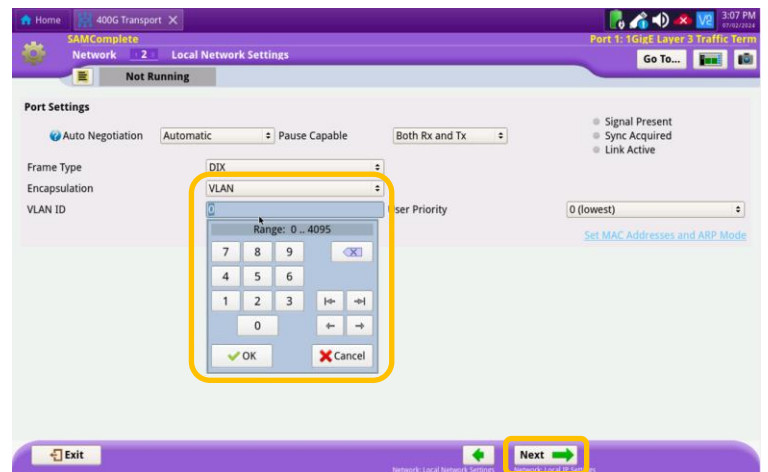   ► If you are testing a VLAN, set **Encapsulation** to **VLAN** and enter the **VLAN ID.**

Figure 8: Local Network Settings 2

3. Tap the **Next →** button to display the **Local IP Settings** screen.

    ► Enter IP Parameters (Source IP Type, Source IP, Default Gateway, Subnet Mask, and Destination IP for Loopback).

    ► The OneAdvisor will resolve the destination IP address using the Address Resolution Protocol (ARP).

    ► Once resolved, the Ping button becomes available, and you can use it to verify connectivity to the loopback device.
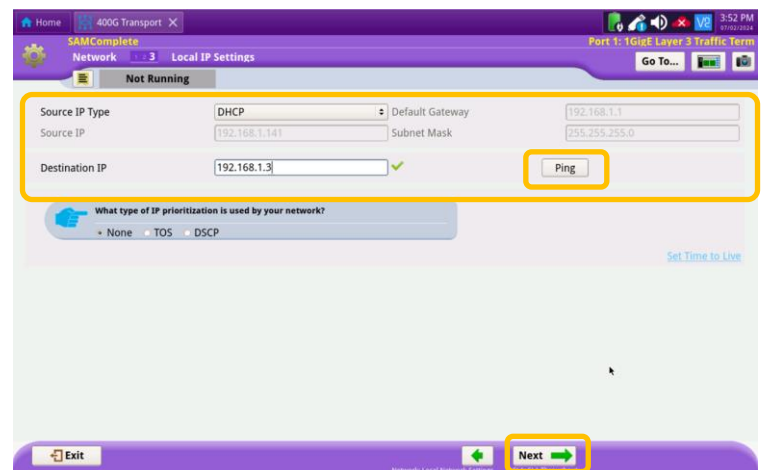

Figure 9: Local IP Settings

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4. Tap the `Next →` button to display the **SLA Throughput** screen.
   - ► Enter the Committed Information Rate (CIR).
   - ► If the you are testing at full line rate or if traffic is not being policed, **uncheck** the **Policing** checkbox.

5. Tap the `Next →` button twice to display the **SLA Performance** screen.

   - ► Enter the Pass/Fail Thresholds for Frame Loss Ratio, Frame Delay, and Delay Variation (Jitter)

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

7. Verify that **Local Port** status is **UP** and Full Duplex (**FD**), and that **ARP Status** is **Success.**
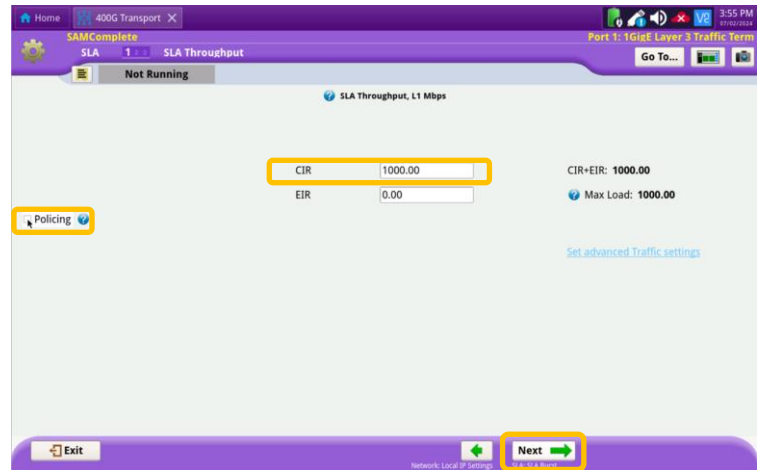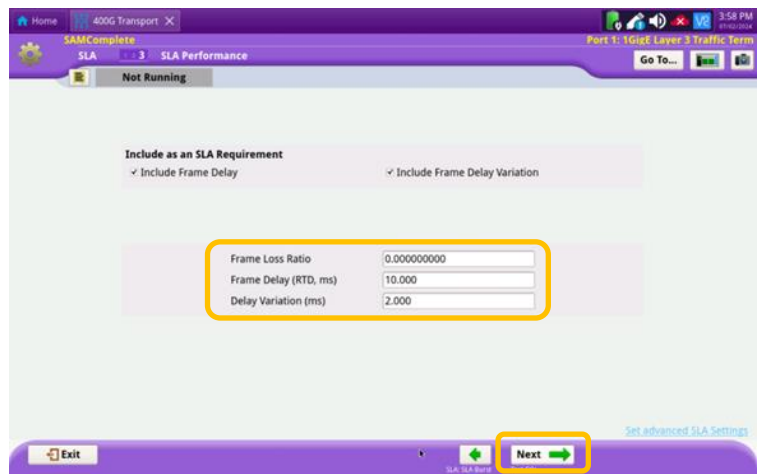

Figure 10: SLA Throughput
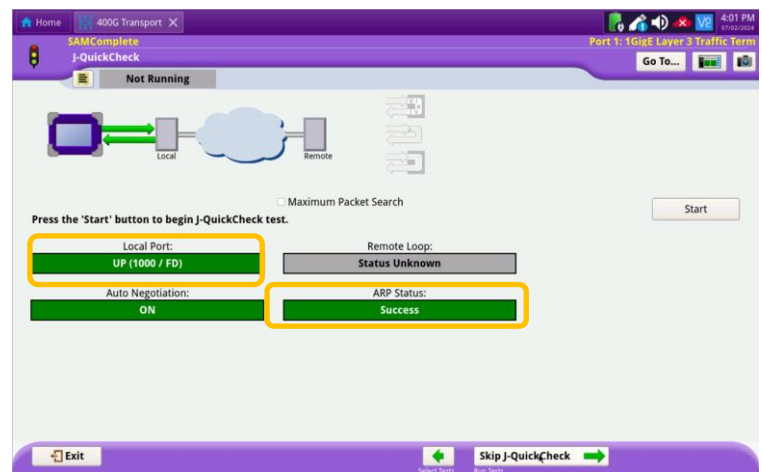

Figure 11: SLA Performance

Figure 12: J-QuickCheck

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RUN J-QUICKCHECK

1. Tap the **Start** button.

2. Verify that the **Remote Loop** is recognized.

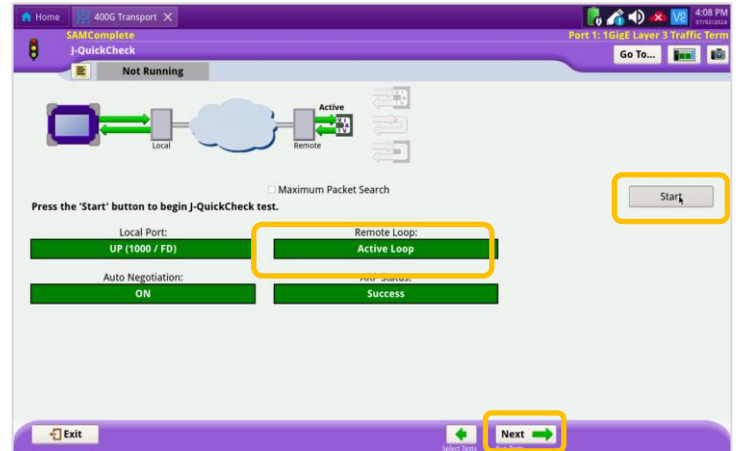3. Tap the **Next →** button to display the **Run Y.1564 Tests** screen.

Figure 13: Run J-QuickCheck

RUN RFC 2544 TEST

1. Tap the **Start** button.

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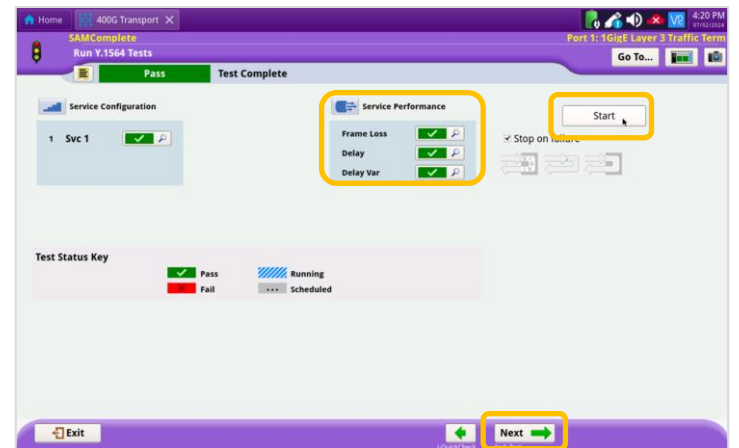

Figure 14: Run Y.1564 Tests

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CREATE REPORT

1. Tap the **Next →** button **3 times** to display the **Report** screen.

Figure 15: Create Report

2. Tap the **Create Report** button.

3. Tap the **← Exit** buttons **3 times** to close the report and exit the Y.1564 SAMComplete test.

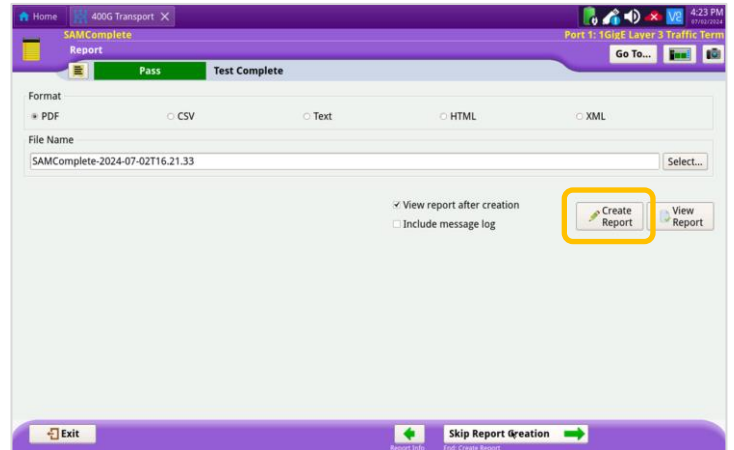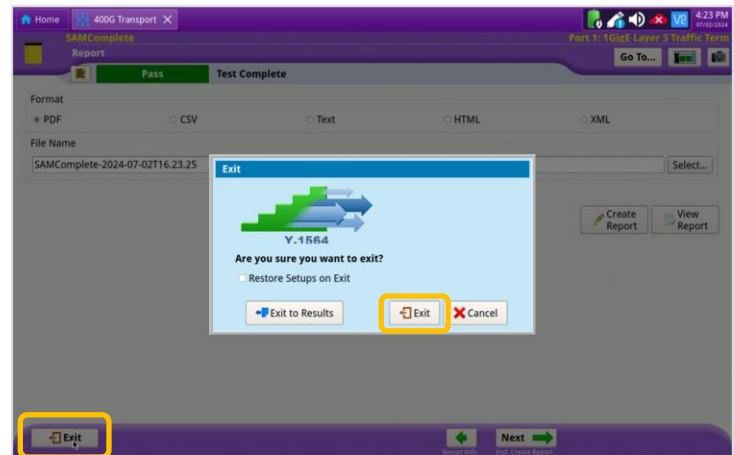*Figure 16: Exit*

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