Ethernet RFC 6349 TrueSpeed Test - Local Unit

RFC-6349 specifies a methodology for measuring end-to-end TCP throughput between a local (near-end) TCP Client and a remote (far-end) TCP Server. This Quick Card describes how configure and run an RFC 6349 test on a local T-BERD 5800 instrument.

EQUIPMENT REQUIREMENTS

- T-BERD/MTS 5800 equipped with the following:
  - BERT software release V30.1.0 or greater
  - C510M1GE test option for 10 Megabit to 1 Gigabit Ethernet
  - C510GELAN test option for 10 Gigabit Ethernet
  - C5100GE test option for 100 Gigabit Ethernet
  - C5LSLAYER4 test option for 1 Gigabit Truespeed
  - C510GLAYER4 test option for 10 Gigabit Truespeed
  - C5100GLAYER4 test option for 100 Gigabit Truespeed
- Optical Transceiver supporting the line rate to be tested
- 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

CONNECT TO LINE UNDER TEST

► **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). Clean and 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 2: 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.

QUICK CARD

LAUNCH TEST

1. Press the Power button to turn on the test set.

2. Using the **Select Test** menu, **Quick Launch** menu, or **Job Manager**, launch an **Ethernet, RFC 6349 TrueSpeed, Terminate** test on Port 1 for the desired physical interface. For example:

   Ethernet►10/100/1000►RFC 6349 TrueSpeed ►IPv4 ►P1 Terminate

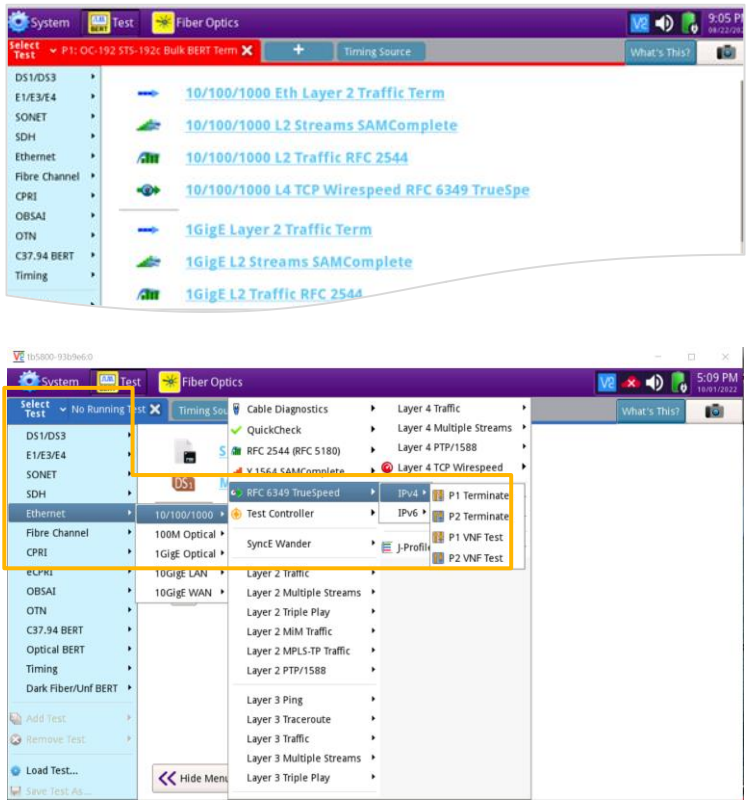

Figure 3: Launch Test

3. Tap the Go button next to **"Start a new configuration (reset to defaults)"** option.

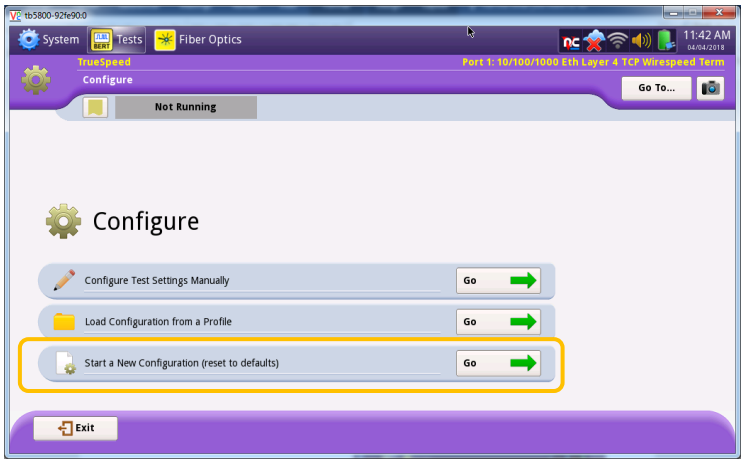

Figure 4: Configure

QUICK CARD

CONFIGURE TEST

1. Select "**I am installing or turning-up a new circuit"** and tap the Next button to advance to the **Symmetry** screen.

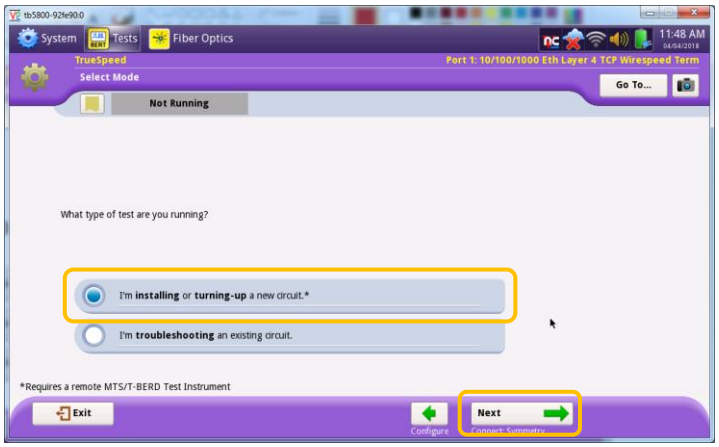

Figure 5: Select Mode

2. Make the appropriate symmetry selection and tap the Next button to advance to the **Connect to Remote Instrument** screen.

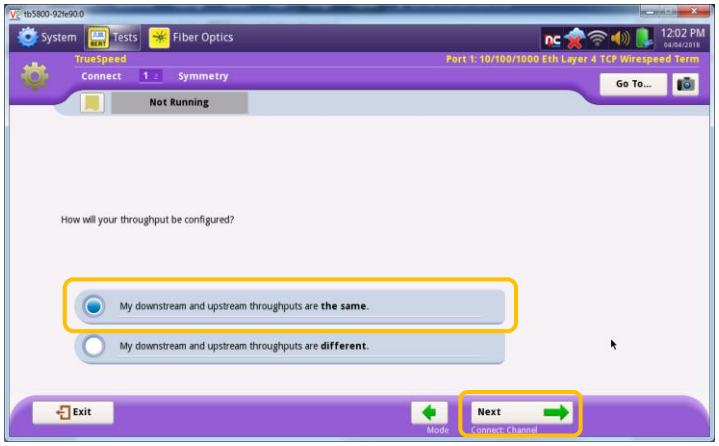

Figure 6: Symmetry

3. Fill in the local T-BERD **IP address, Subnet Mask, Default Gateway** as well as the **IP address** of the **remote T-BERD, MAP-2100,** or **OneAdvisor unit**.

   - If VLAN tagging is used, set the **Encapsulation** option to **VLAN** and provide the appropriate VLAN ID.
   - You can then tap the Ping button to verify connectivity to the remote unit.

4. Tap the Connect to Remote button to connect to the remote unit.

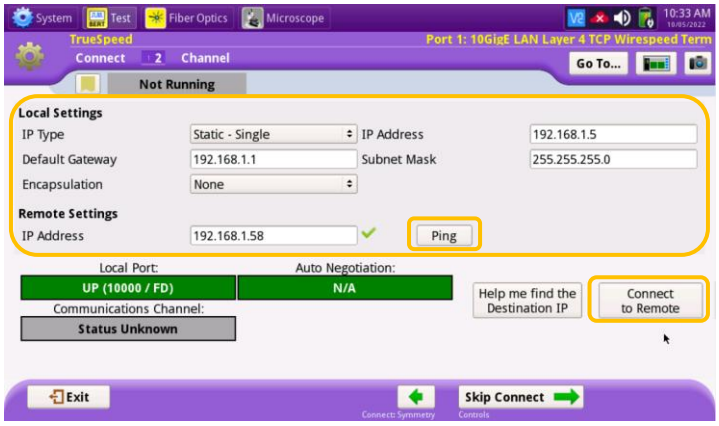

Figure 7: Ethernet

CONFIGURE TEST - Continued

5. Verify the **Communication Channel** is **Connected**. Once connected tap the Next button to advance to the TrueSpeed Test **Controls** screen.

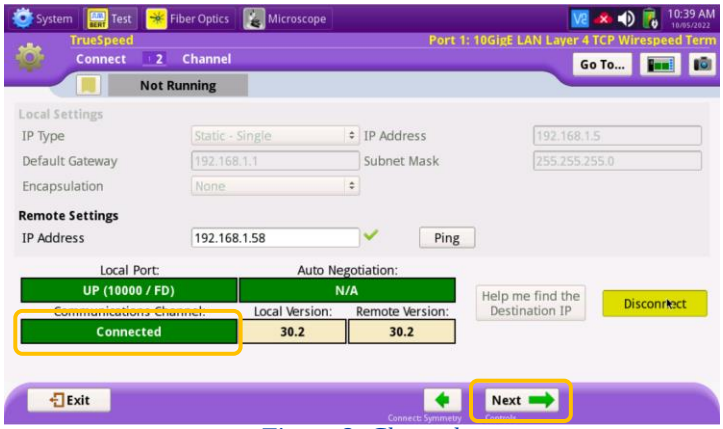

Figure 8: Channel

6. Set the **Total Test Time** to desired interval in seconds and set the **CIR** to the circuit Committed Information Rate. If IP Class of Service is used on the circuit, select the appropriate **Type** (**TOS** or **DSCP**) and provide the desired values for local and/or remote T-BERD unit. Once done tap the Next button twice to advance to the **Save Profiles** screen.

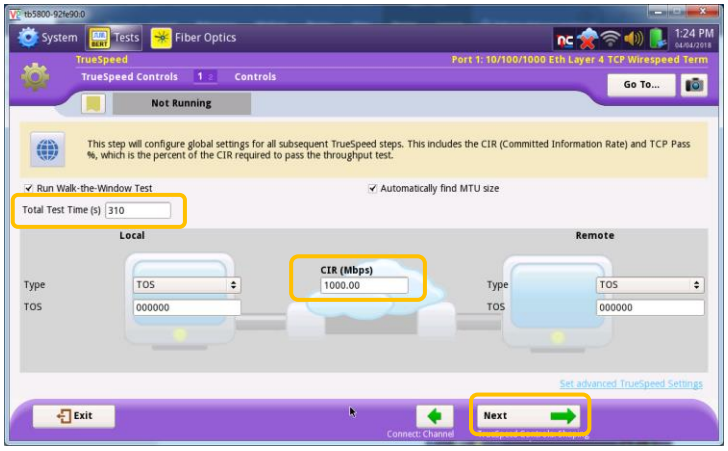

Figure 9: Controls

7. If desired, provide a name for the created test configuration and tap Save Profiles button to save it for later re-use. Tap the Next button twice to advance to **Run TrueSpeed Tests** screen.

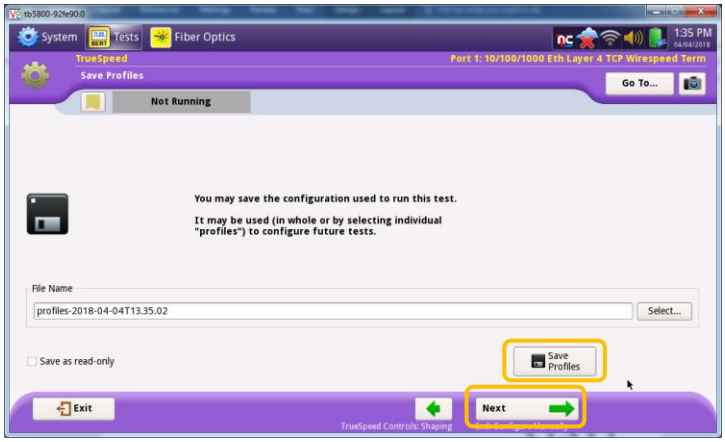

Figure 10: Save Profiles

T-BERD/MTS 5800 Portable Network Tester

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QUICK CARD

RUN TEST

1. Tap the Run Test button to execute the **RFC 6349 / TrueSpeed** tests. Wait for all tests to complete as indicated by the progress bar Running at the top of the screen.

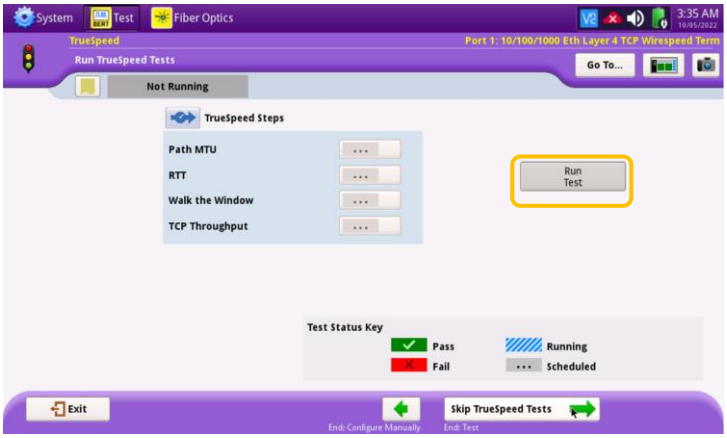

Figure 11: Run Truespeed Tests

2. Verify that all **RFC 6349 / Truespeed** tests passed as indicated by the green check marks. Tap the Next button three times to advance to the Report screen.

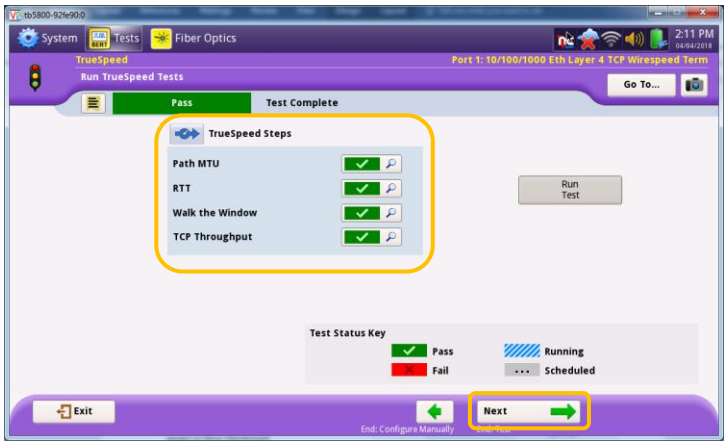

Figure 12: Run Truespeed Tests

CREATE REPORT

1. Provide a desired report file name and tap the Create Report button to create the test report.

2. Tap the Exit buttons three times to close the report and exit the **RFC 6349/Truespeed** test.

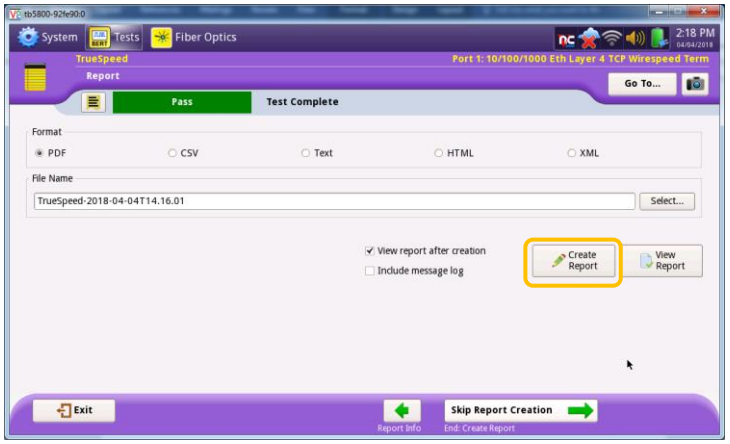

Figure 13: Report

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