

Quick Card

T-BERD[®]/MTS-5800 Network Tester

Ethernet J-Profiler VLAN Analysis

This document outlines how to use the T-BERD/MTS-5800 J-Profiler application to analyze live network traffic for bandwidth utilization (**top talker** analysis) by VLAN ID. J-Profiler can be used on Ethernet active Switch ports or SPAN (Switch Port Analyzer) ports. A SPAN port is a spare switch port configured to transmit a copy of the packets sent or received on another switch port. It allows the T-BERD to receive all network traffic from a given port, without being physically attached to that port. Bidirectional Traffic can be transmitted to the T-BERD using a single port.

Equipment Requirements:

- T-BERD/MTS-5800 equipped with the following:
 - BERT software release V28.0 or greater
 - Ethernet test options:
 - C510M1GE
 - C5JPROFILER
 - SFP optical transceiver to match the line under test
- Patch Cables to match the optical transceiver and line under test (CAT5E, Single mode or Multimode Fiber)
- Fiber optic inspection microscope (VIAVI P5000i or FiberChek Probe)
- Fiber Optic Cleaning supplies



Figure 1: Equipment Requirements

The following information is required to complete the test:

- Physical Interface (10/100/1000BASE-T, 1000BASE-LX, etc.)
- Auto Negotiation settings of the port under test

Fiber Inspection Guidelines:

- All fiber end-faces must be clean and pass an inspection test prior to connection.
- Use the VIAVI P5000i, FiberChek Probe, or Sidewinder microscope to inspect both sides of every connection being used (SFP/QSFP Port, bulkhead connectors, patch cables, etc.)

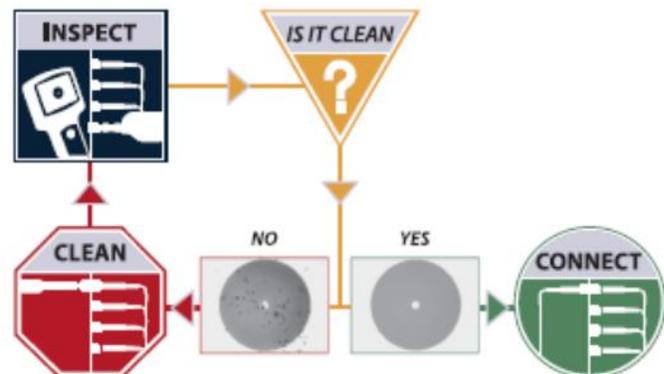


Figure 2: Inspect Before You Connect

Connect to Port under Test:

- For copper 10/100/1000BASE-T interfaces on the T-BERD 5800v2, use CAT 5E or better cable to connect the T-BERD's **Port 1** RJ-45 port to the port under test.
- For copper 10/100/1000BASE-T interfaces on the T-BERD 5800-100G, use CAT 5E or better cable to connect the T-BERD's **Port 2** RJ-45 port to the port under test.
- For optical interfaces, insert the required SFP into the Port 1 slot on the T-BERD and connect the T-BERD's SFP to the SFP in the port under test. Use yellow Single mode patch cables with Single Mode optics; use orange or teal Multimode fiber patch cables with multimode optics.

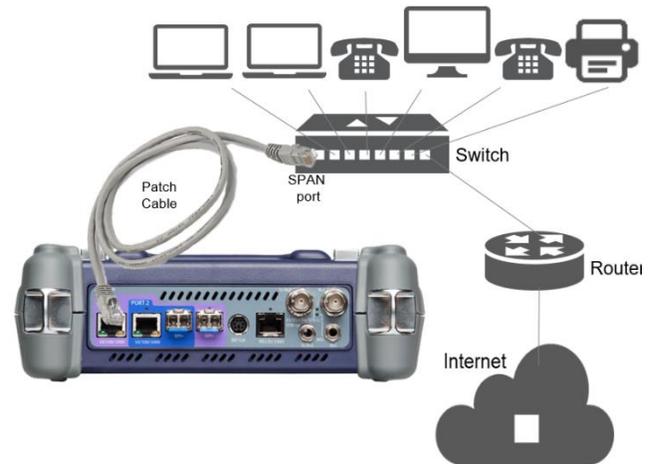


Figure 3: Copper SPAN Port connection

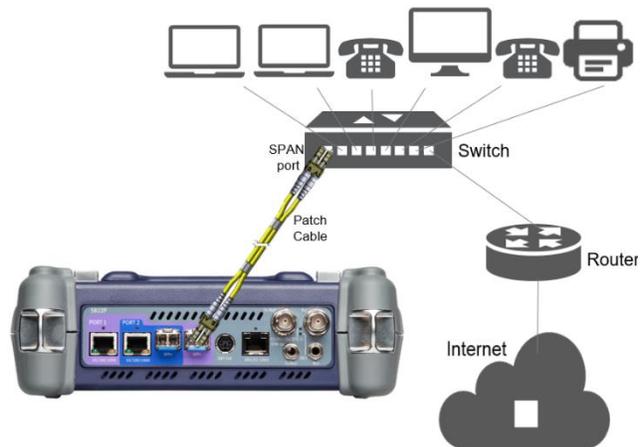


Figure 4: Optical SPAN port connection

Launch Test:

1. Press the Power button  to turn on the test set and view the startup screen.
2. Using the **Select Test** menu, **Quick Launch** menu, or **Job Manager**, launch a **J-Profiler** test as follows:
 - For 10/100/1000BASE-T Copper interfaces on the T-BERD 5800v2:
Ethernet ▶ 10/100/1000 ▶ J-Profiler ▶ P1 Monitor
 - For 10/100/1000BASE-T copper interfaces on the T-BERD 5800-100G:
Ethernet ▶ 10/100/1000 ▶ J-Profiler ▶ P2 Monitor
 - For GigE optical interfaces:
Ethernet ▶ 1GigE Optical ▶ J-Profiler ▶ P1 Monitor

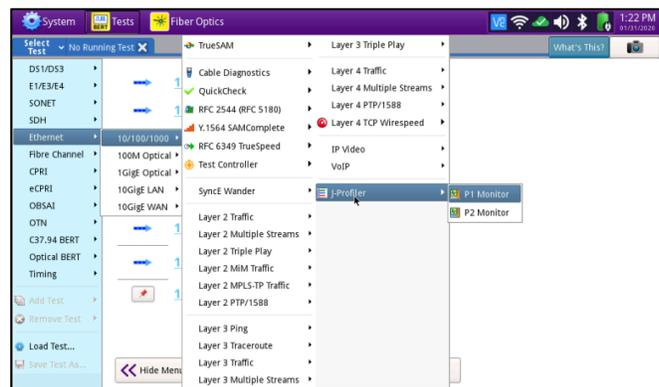


Figure 5: Launch Test

Configure Test:

1. Tap  to display the T-BERD's **Tools Panel**. Tap  and press  to continue.

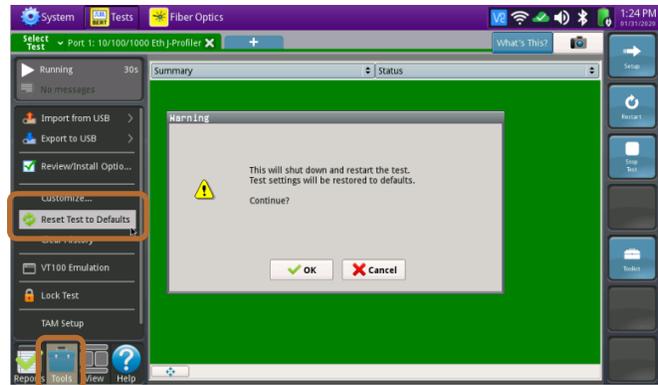


Figure 6: Reset Test to Defaults

2. Tap the **Setup** soft key .

3. Tap the **Interface/Physical Layer** tab and set **Auto Negotiation** selections to match the configuration of the port under test.

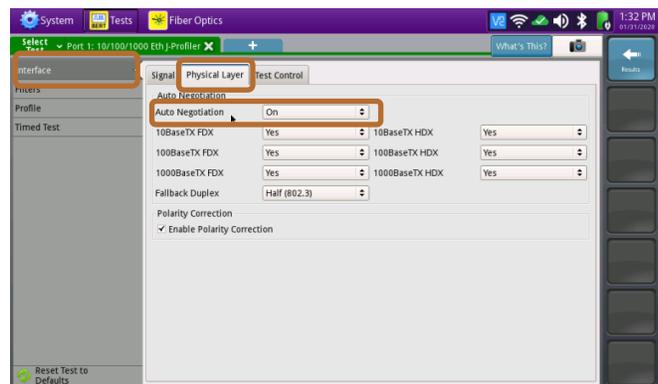


Figure 7: Setup, Interface/Physical Layer

4. Tap the **Profile** tab and set "Group incoming traffic into streams by" to **VLAN ID**.

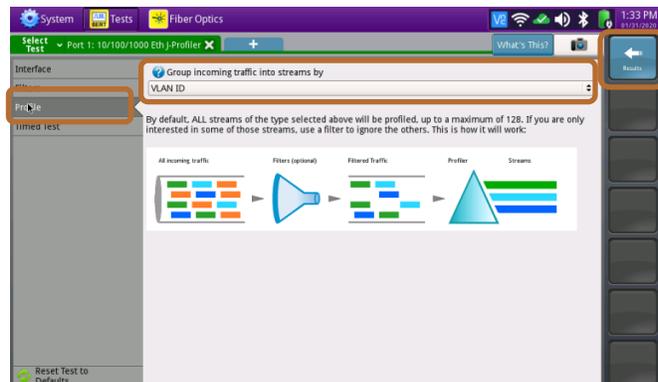


Figure 8: Setup, Profile

5. Press the **Results** soft key  to return to the Results screen.

Packet Capture/Decode:

1. If using the optical test port, tap  in the **Actions panel** at the bottom of the screen. The button will turn yellow and be relabeled .

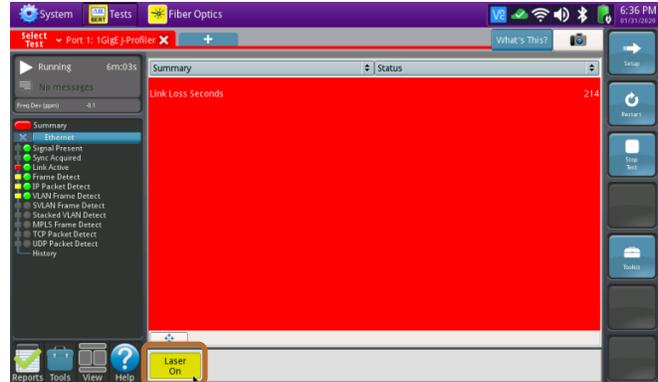


Figure 9: Laser On

2. Press the **Restart** Soft Key  on the right side of the screen.

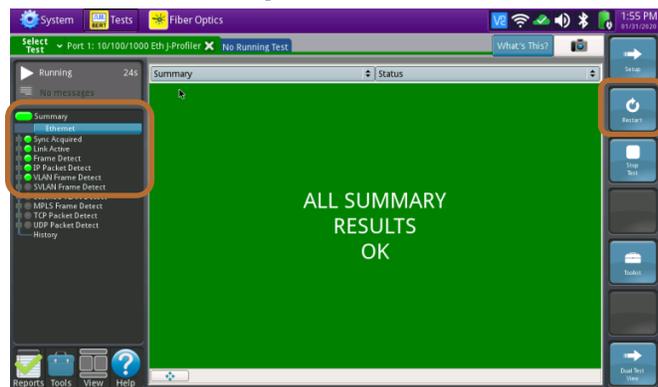


Figure 10: Check LEDs

3. Check LEDs: a green **Signal Present** LED  indicates the T-BERD is receiving an optical signal from the port under test. Green **Sync Acquired** and **Link Active** LEDs indicate that the T-BERD has successfully connected to the port under test.

4. Set the Results Window to display **Traffic Profile/Streams** results.

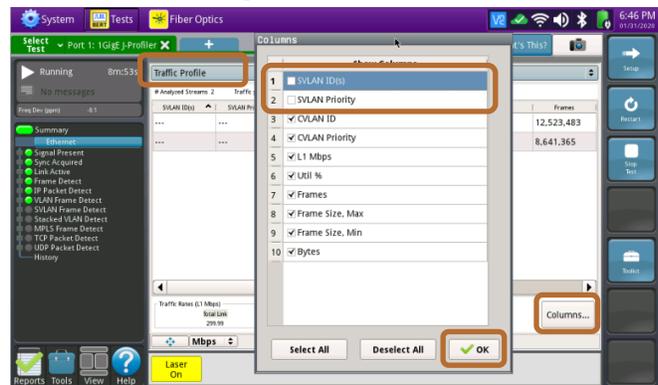
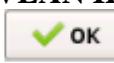


Figure 11: Deselect Columns

5. Tap , deselect **SVLAN ID(s)** and **SVLAN Priority**, and tap .

6. View the Traffic Profile.

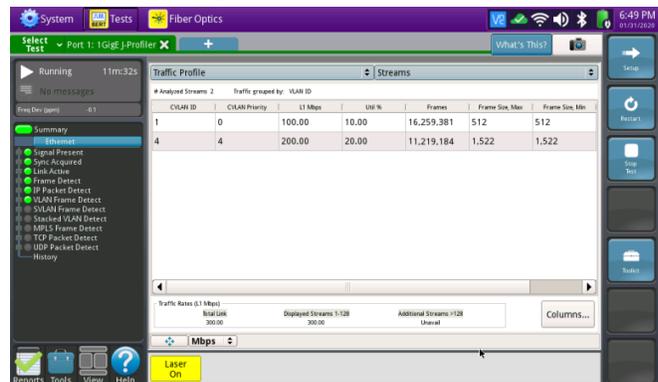


Figure 12: Traffic Profile