

## Quick Card

# T-BERD<sup>®</sup>/MTS-5800 Network Tester

## Ethernet Packet Capture/Decode in Copper RJ-45 10/100/1000 Dual Through Mode

This document outlines how to use the T-BERD 5800 to capture and analyze live, in-service network traffic in pass-through mode on a copper RJ-45 10/100/1000BASE-T connection.

### Equipment Requirements:

- T-BERD/MTS-5800 equipped with the following:
  - BERT software release V28.0 or greater
  - Ethernet test options:
    - C510M1GE
    - C5LSCAPTURE
    - C5DUALPORT
- 1 X CAT5E or better Patch Cable
- 1 X Copper 10/100/1000BASE-T SFP (for T-BERD 5800-100G only, VIAVI part number CSFP-1G-CU)



Figure 1: Equipment Requirements

### The following information is required to complete the test:

- Filtering criteria (Destination MAC address, Source MAC address, VLAN ID, EtherType)

### Connect to Line Under Test:

In-line Monitoring uses two Copper RJ-45 10/100/1000 ports in the T-BERD in “through” mode.

1. If you are using a **T-BERD 5800-100G**, insert the Copper SFP into SFP **Port 1**.
2. Disconnect the CAT5E patch cable from the equipment under test and reconnect the cable to the copper RJ-45 10/100/1000 connector in **Port 1** of the T-BERD.
3. Connect a CAT5E or better cable between 10/100/1000 **Port 2** of the T-BERD and the equipment under test.

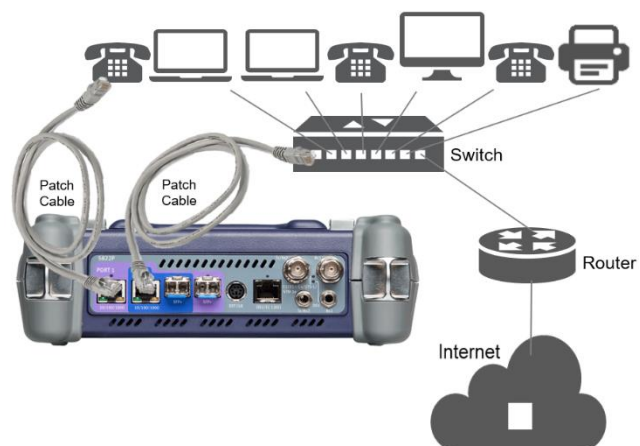






Figure 2: Copper Dual Thru mode connection

### 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 an **Ethernet** test on **Port 1** as follows:
  - **Ethernet ▶ 10/100/1000 ▶ Layer 2 Traffic ▶ Dual Thru**
3. Tap  to display the T-BERD's **Tools Panel**. Tap  and press  to continue.

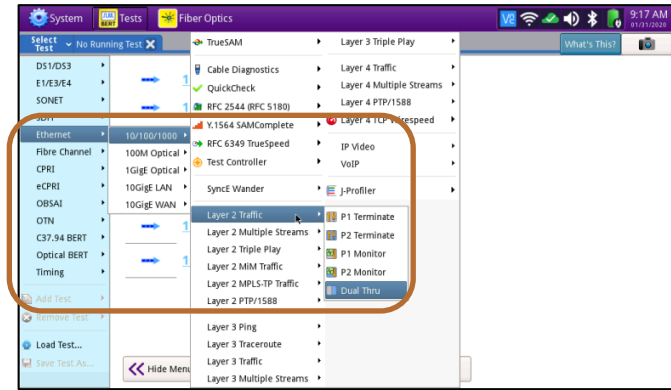







Figure 3: Launch Test

### Configure Test:

1. Tap the **Port Selection** soft key  to select **Port 1**.
2. Press the **Setup** soft key .
3. In the **Filters/Ethernet** settings, set desired encapsulation, MAC Address filter (DA or SA), VLAN filter, or Type filter for **Port 1**.
4. Tap the **Port Selection** soft key  to select **Port 2**.
5. In the **Filters/Ethernet** settings, set desired encapsulation, MAC Address filter (DA or SA), VLAN filter, or Type filter for **Port 2**.
6. Press the **Results** soft key  to return to the Results screen.
7. Press the **Restart** Soft Key  on the right side of the screen.
8. Check LEDs: Green **Sync Acquired** and **Link Active** LEDs indicate that the T-BERD has successfully connected to the network equipment.
9. Set the left Results Window to display **Port 1/Ethernet/Capture** results.
10. Set the right Results Window to display **Port 2/Ethernet/Capture** results.

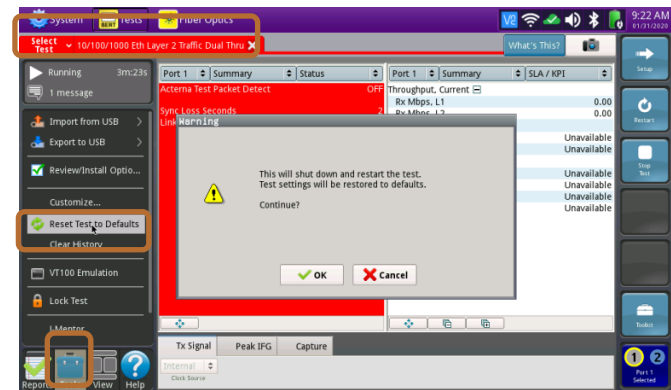


Figure 4: Reset Test to Defaults

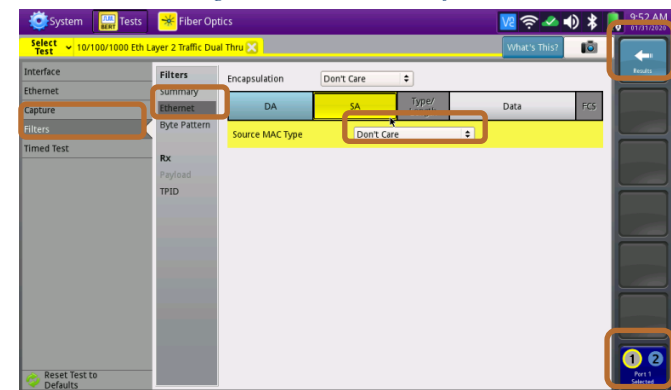


Figure 5: Setup

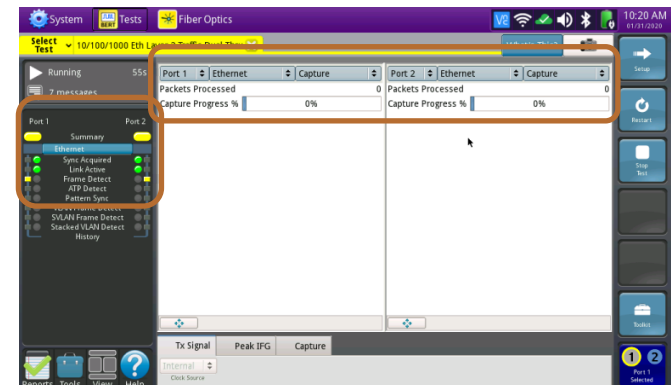

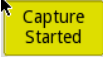
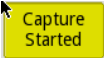



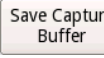

Figure 6: Check LEDs and Set Results Windows

## Packet Capture/Decode:

1. Select the **Capture** tab in the **Actions**

panel, and press . The button will turn yellow and be relabeled .

2. When the desired number of packets have been processed, press  to stop packet capture. The button will turn gray and be relabeled .

3. Press . Ensure “Launch Wireshark after saving” is checked and press  to save the **PCAP (Packet CAPture)** file to the /bert/capture folder of the T-BERD’s hard drive.

4. View and analyze the packet capture using Wireshark.

5. Tap **File** and **Quit** to exit Wireshark.

Note: Go to <https://www.wireshark.org/> for information and tutorials on Wireshark.

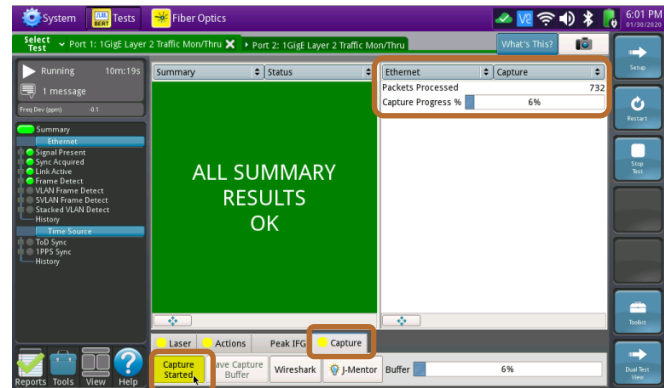


Figure 7: Start Capture

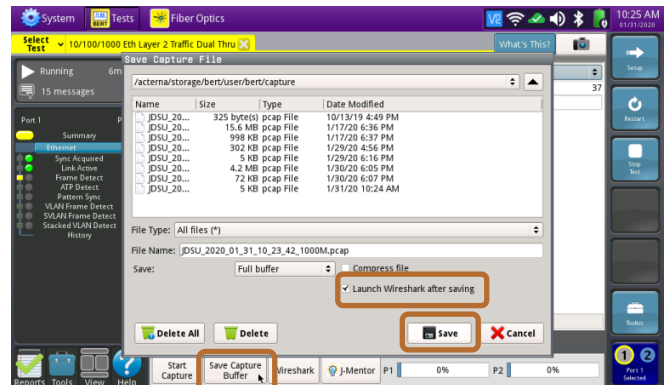


Figure 8: Save Capture Buffer

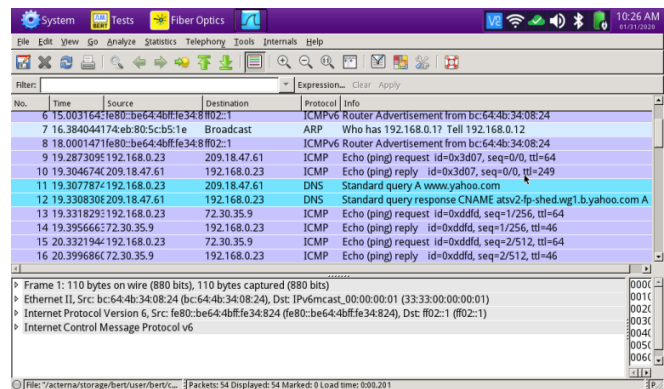


Figure 9: Wireshark