

## Quick Card

# T-BERD<sup>®</sup>/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:
  - $\odot$  BERT software release V28.0 or greater
  - Ethernet test options:
    - C510M1GE
    - C5JPROFILER
  - $\circ$  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

test as follows:
For 10/100/1000BASE-T Copper interfaces on the T-BERD 5800v2:
Ethernet ▶ 10/100/1000 ▶

the test set and view the startup screen.Using the Select Test menu, Quick Launch

menu, or Job Manager, launch a J-Profiler

to turn on

J-Profiler ► P1 Monitor

1. Press the Power button

Launch Test:

- 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:**





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.

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nterface	Signal Physical Layer	Test Control				Results
hiters	Auto Negotiation	,,,,,,, _				
Profile	Auto Negotiation	On ¢				
Timed Test	10BaseTX FDX	Yes	10BaseTX HDX	Yes	•	
	100BaseTX FDX	Yes	100BaseTX HDX	Yes	•	
	1000BaseTX FDX	Yes	1000BaseTX HDX	Yes	•	
	Fallback Duplex	Half (802.3)				
	Polarity Correction					
	CENTRAL Enable Polarity Corr	ection				
Reset Test to						

Figure 7: Setup, Interface/Physical Layer



Figure 8: Setup, Profile

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



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



#### Packet Capture/Decode:

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



- 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.



6. View the Traffic Profile.





Figure 10: Check LEDs



Figure 11: Deselect Columns

System 🔛 Tests	迷 Fiber Optics 🛛 🔽 🛷 🎅 🌒 🔰 🛽								
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- No messages	# Analyzed Streams 2 Traffic grouped by: VLAN ID								
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	1	0	100.00	10.00	16,259,381	512	512	Restart	
Ethernet	4	4	200.00	20.00	11,219,184	1.522	1,522		
VIAN Frame Detect     VIAN Frame Detect     VIAN Frame Detect     Stacked VIAN Detect     MILS Frame Detect     UDP Packet Detect     UDP Packet Detect     History							Þ	Toolist	
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Reports Tools View Help	Laser On					*			

Figure 12: Traffic Profile

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