## QUICK CARD

# Ethernet RFC 6349 TrueSpeed Test - Remote 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 the T-BERD 5800 as the remote TCP Server.

## 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 0 Ethernet
  - C510GELAN test option for 10 Gigabit Ethernet 0
  - C5100GE test option for 100 Gigabit Ethernet 0
  - C5LSLAYER4 test option for 1 Gigabit Truespeed 0
  - C510GLAYER4 test option for 10 Gigabit Truespeed 0
  - C5100GLAYER4 test option for 100 Gigabit Truespeed 0
- 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

## 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.

#### 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.



NO

INSPECT

**CLEAN** 



Figure 1: Equipment Requirements

IS IT

CLEAN?

YES

Inspect

Before You

Connect



**VIAVI** Solutions



# T-BERD/MTS 5800 Portable Network Tester



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### LAUNCH TEST

- Press the Power button (b) to turn on the test set.
- 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

System 🗧	🔐 Test	😤 Fiber Optics	🚾 🕩 💦	9:05 Pl
Select v P1: Test	OC-192 STS-19	2c Bulk BERT Term 🗙 🕂 Timing Source	What's This?	10
DS1/DS3 E1/E3/E4 SONET SDH Ethernet Fibre Channel CPRI		<ul> <li>10/100/1000 Eth Layer 2 Traffic Term</li> <li>10/100/1000 L2 Streams SAMComplete</li> <li>10/100/1000 L2 Traffic RFC 2544</li> <li>10/100/1000 L4 TCP Wirespeed RFC 6349 TrueSpe</li> </ul>		
OBSAI OTN C37.94 BERT Timing		1GigE Layer 2 Traffic Term     1GigE L2 Streams SAMComplete     1GigE 12 Traffic REC 2544		

V2 1b5800-93b9e6:0				- 🗆 ×
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Select Test No Running T DS1/DS3 E1/E3/E4 SONET	est 🗙 Timing Sou	Cable Diagnostics QuickCheck RFC 2544 (RFC 5180)	Layer 4 Traffic     Layer 4 Multiple Streams     Layer 4 PTP/1588     G Layer 4 TCP Wirespeed	What's This?
SDH •		RFC 6349 TrueSpeed	IPv4      IPv4      IPv6      I	
Fibre Channel + CPRI +	100M Optical • 1GigE Optical •	SyncE Wander	J-Profile     P2 VNF Test	
OBSAI OTN C37.94 BERT Optical BERT Timing	10GigE LAN >	Layer 2 Trattic Layer 2 Multiple Streams Layer 2 Triple Play Layer 2 MiM Traffic Layer 2 MPLS-TP Traffic Layer 2 PTP/1588	,	
Dark Fiber/Unf BERT   Add Test  Remove Test  Load Test  Load Test	K Hide Menu	Layer 3 Ping Layer 3 Traceroute Layer 3 Traffic Layer 3 Multiple Streams Layer 3 Triple Play	· · ·	



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

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TrueSpeed	Port 1: 10/100/1000 Eth Layer 4 TCP Wirespeed Term
Configure	Go To
Not Running	
🌼 Configure	
Configure Test Settings Manually	Go 🗪
Load Configuration from a Profile	
Start a New Configuration (reset to defaults)	Go 🗪
+∏ Exit	
4 · · · · · · · · · · · · · · · · · · ·	

Figure 4: Configure

# T-BERD/MTS 5800 Portable Network Tester



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#### CONFIGURE TEST

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

 Select My downstream and upstream throughputs are the same option and tap the Next button to advance to the Connect to Remote Instrument screen.

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	Not Running						
Mana will some							
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How will your	throughput be configured?						
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	throughput be configured? My downstream and upstream My downstream and upstream	m throughputs are <b>the same</b> . m throughputs are <b>different</b> .		Next	, 	ĸ	

Figure 6: Symmetry

 Use the Local Settings configuration section to fill in this T-BERD's IP address, Subnet Mask and Default Gateway. If VLAN tagging is used, set the Encapsulation option to VLAN and provide the appropriate VLAN ID. Leave the Remote Settings section set to defaults.

TrueSpeed Connect	2 Channel	Port 1: 1	IOGigE LAN Layer 4 T Go	CP Wirespeed Te To		
ocal Settings	it Kunning					
Р Туре	Static - Single	IP Address	192.168.1.5			
Default Gateway	192.168.1.1	Subnet Mask	255.255.255	255.255.255.0		
Encapsulation	None	•				
IP Address Local Port	192.168.1.58	Auto Negotiation:				
UP (10000 /	FD)	N/A	Help me find the	Connect		
Communications	Channel:		Destination IP	to Remote		
Status Unkn	own			k		
all rule		<b>4</b> ci	kin Connect			



# T-BERD/MTS 5800 Portable Network Tester



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### **CONFIGURE TEST - Continued**



Figure 8: Exit to underlying TCP test engine

 Check the Sync Acquired and Link Active LEDs to ensure the unit is connected to the network under test. The remote (far-end) T-BERD unit is now ready for RFC 6349 TrueSpeed test to be executed from a local (near-end) T-BERD unit.

V2 tb5800-92e16e:0		10 B.	* L		or Autor aut	IC III III	1.1.4.1		(1) <b>X</b>
😇 System 🔛 Tests 🗧	Fiber Optics				6		nc 🔷	40) 🔒	11:37 AM 04/10/2018
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	Actions P	eak IFG	Errors	Capture	6			-	
Reports Tools View Help	Start Traffic	Loop Up	Loop Down	LLB	Pause Frame Insert TO	Start P Server			TrueSpeed Test

Figure 9: Ready