

FTBx-8870 Report

| K-20 Layer-2 Test Results |

PASS

Report Header:	EXFO Inc.
Report Title:	K-20 Layer-2 Test Results
Report Date:	5/29/2025 6:54:55 PM
Type:	EtherSAM (Y.1564)

Job Information

Job ID:	RTASK4485810
Circuit ID:	Ziplay: 86/L4XN/717452/ /NWFC
Contractor Name:	University of Washington
Customer Name:	snohomish-k12
Operator Name:	dwebb71
Comment:	

Table of contents

SUMMARY	1
TEST RESULTS	5
TEST SETUP	6
FUNCTIONS	9
SYSTEM INFORMATION	9
LOGGER	12

SUMMARY

Results Summary

Test Status	
Service Configuration Test Status	Completed, Pass
Service Performance Test Status	Completed, Pass
Pass/Fail Verdict	PASS
Start Time	5/29/2025 06:34:55 PM
Duration	00d:00:10:48
Test Recovery	0

EtherSAM

Services Summary			
	Service Name	Service Configuration Test	Service Performance Test
1	Service 1	PASS	PASS

Service Configuration Summary						
	Service Name	Frame Loss Rate	Max Jitter (ms)	Max Latency (ms)	Max Throughput (Mbit/s)	Service Verdict
1	Service 1	0.0E-00	0.03970	1.22747	9749.95	PASS

Service Performance Summary						
	Service Name	Frame Loss Rate	Max Jitter (ms)	Max Latency (ms)	Avg Throughput (Mbit/s)	Service Verdict
1	Service 1	0.0E-00	0.02774	1.23566	9749.99	PASS

VLAN Preservation	No Mismatch Detected
--------------------------	----------------------

RX Power Level		
	Min	Max
Power Range (dBm)	-15.0	0.5
RX Power Level (dBm)	-3.1	-3.1

RX Frequency		
	Max Negative Offset	Max Positive Offset
Frequency Offset (ppm)	0.0	0.1

Alarms/Errors

Alarms/Errors List	
Active/Historical Alarms/Errors	None

Interface	
Alarms	Seconds
LOS	0
Frequency	0

Ethernet	
Alarms	Seconds
Link Down	0
Local Fault Detected	0
Local Fault Received	0
Remote Fault	0

Errors	Seconds	Count	Rate
Block	0	0	0.00E00
FCS	0	0	0.00E00
Jabber	0	0	0.00E00
Oversize	Disabled		
Runt	0	0	0.00E00
Undersize	0	0	0.00E00
Total		0	

Clock Sync	
Alarm	Seconds
LOC	0

IP/UDP/TCP			
Errors	Seconds	Count	Rate
IP Checksum	0	0	0.00E00
UDP Checksum	0	0	0.00E00
TCP Checksum	0	0	0.00E00
Total		0	

Setup Summary

Application Type	EtherSAM (Y.1564)
-------------------------	-------------------

Topology	Single Port
-----------------	-------------

Interface	Port 1
Interface/Rate	10GE LAN
Connector	SFP+

Flow Control	None
---------------------	------

EtherSAM

Pass/Fail Verdict	Enabled
-------------------	---------

Sub-Tests			
Service Configuration Test		Service Performance Test	
Ramp Test	Enabled	Status	Enabled
Burst selection	Disabled	Duration	00d:00:10:00
Duration	00:00:20		

Ramp	
Step Time (s)	5
Step Values	
1	50 %
2	75 %
3	90 %
4	100 %

Services

Total Committed TX Rate (Mbit/s)	9750.00
----------------------------------	---------

Services Summary								
	Service Name	Profile	Frame Size (Bytes)	CIR (Mbit/s)	Max Jitter (ms)	Max Latency (ms)	Frame Loss Rate	CBS (Bytes)
1	Service 1	Data	EMIX	9750.00	2.00000	28.00000	1.0E-04	--

TEST RESULTS

Ethernet Traffic

Frame Type	TX Count	RX Count
Multicast	0	24
Broadcast	2	0
Unicast	1119393444	1119393444
Non-Unicast	2	24
Total	1119393446	1119393468

Frame Size (Bytes)	RX Count	%
< 64	0	0.0
64	0	0.0
65 - 127	223878689	20.0
128 - 255	223878689	20.0
256 - 511	24	0.0
512 - 1023	223878689	20.0
1024 - 1518	447757377	40.0
> 1518	0	0.0
Total	1119393468	

Detailed EtherSAM Results

Service Configuration Test

Service 1 : Service 1

Committed Steps					
Committed Step	Frame Loss Rate	Max Jitter (ms)	Max Latency (ms)	Verdict	Avg Throughput (Mbit/s)
1-50%CIR	0.0E-00	0.03970	1.20697	PASS	4874.96
2-75%CIR	0.0E-00	0.03325	1.20994	PASS	7312.49
3-90%CIR	0.0E-00	0.02788	1.21503	PASS	8775.00
CIR	0.0E-00	0.02297	1.22747	PASS	9749.95

Service Performance Test

Service 1 : Service 1

	Average	Minimum	Maximum	Estimate
Throughput (Mbit/s)	9749.99	9749.74	9750.24	N/A
Jitter (ms)	0.00003	< 0.00001	0.02774	0.00001
Latency (ms)	1.19559	1.15447	1.23566	N/A
	Seconds	Count	Rate	
Frame Loss	0	0	0.0E00	
Out-of-Sequence	0	0	0.0E00	

TEST SETUP

Clock Synchronization	
Clock Mode	Internal

Detailed Services Configuration

Layer Mode	Mixed
IP Version	IPv4
Global Pass/Fail Verdict	Enabled
Total Committed TX Rate (Mbit/s)	9750.00

Service 1

Service Profile	
Service Name	Service 1
Profile	Data
Frame Size Type	EMIX
Frame Size (Bytes)	70, 128, 512, 1024, 1518

SLA Parameters	
Information Rate	
CIR (Mbit/s)	9750.00
Performance Criteria	
Max Jitter (ms)	2.00000
Max Latency (ms)	28.00000
Frame Loss Rate	1.0E-04

Test Parameters

Framing	
Frame Format	Ethernet II
Network Layer	IPv4
Transport Layer	UDP
VLAN	None
MPLS	Disabled

Addressing

	MAC	IP Address	UDP Port
Source	00:03:01:F8:22:D8	10.112.0.1 / 255.255.255.0	49184
Destination	00:03:01:14:61:16	10.112.0.100	7

EtherType	0x0800
Automatic IP (DHCP)	Disabled
TTL	128
TOS	0x00
Default Gateway	Disabled

FUNCTIONS

Ping & Trace Route

Network	
Source MAC Address	00:03:01:F8:22:D8
Source IP Address	10.112.0.1 (Stream 1)
Destination IP Address	0.0.0.0

Ping	
Timeout (ms)	4000
Delay (ms)	1000
Data Size (Bytes)	32
TTL	128
Type Of Service (TOS)	0x00

Ping Results		
No.	Status	Reply Details
1	Successful	IP=10.112.0.100, Bytes=32, Time=1 ms, TTL=127

Ping Statistics	
Packets Transmitted	1
Packets Received	1
Percentage Lost (%)	0.0
Minimum Round Trip Time (ms)	1
Maximum Round Trip Time (ms)	1
Average Round Trip Time (ms)	1

Trace Route	
Timeout (ms)	4000
Max Hop Count	128

SYSTEM INFORMATION

Product Name	Power Blazer Series
Version	Power Blazer Series 1.130
Module ID	FTBx-8870
Slot ID	1
Software Product Version	1.130.0.89
	Power Blazer Series 1.130
Assembly Hardware Revision	B
Serial Number	1343184
Calibration Date	4/20/2020 8:28:00 PM

Pluggable Module

Module ID	SFP+
Vendor Name	WFS
Part Number	WFSP-1396-10-J
Serial Number	3172922861
Hardware Revision	1.0
Connector Type	LC
Speed	10G
Type/Compliance Code	LR, 10.0 km (SMF)
Wavelength	1310 nm
Mode	Single-Mode Fiber
Power Class	Power Class 1 Module (<= 1W max)
Temperature (Max)	34.8 °C

Software Options

100electrical	Ethernet 100Base-TX (Electrical) Interface	Enabled
100optical	Ethernet 100Base-FX (Optical) Interface	Disabled
10electrical	Ethernet 10Base-T (Electrical) Interface	Enabled
10G_LAN	Ethernet 10G LAN (Optical) and 10GBASE-T (Electrical) interfaces	Enabled
10G_WAN	Ethernet 10G WAN optical interface	Enabled
155M	155 Mbit/s	Disabled
1588PTP	1588 Precision Time Protocol	Disabled
2.5-5GE	Ethernet 2.5GBASE-T and 5GBASE-T (Electrical) interfaces	Disabled
2488M	2.488 Gbit/s	Disabled
52M	52 Mbit/s	Enabled
622M	622 Mbit/s	Disabled
9953M	9.953 Gbit/s	Disabled
Cable_Test	Cable Test	Disabled
CPRI	CPRI 2.4576 Gbit/s and 3.072 Gbit/s	Disabled
CPRI-1.2G	CPRI 1.2288 Gbit/s	Disabled
CPRI-10.1G	CPRI 10.1376 Gbit/s	Disabled
CPRI-4.9G	CPRI 4.9152 Gbit/s	Disabled
CPRI-6.1G	CPRI 6.144 Gbit/s	Disabled
CPRI-9.8G	CPRI 9.8304 Gbit/s	Disabled
DS1-FDL	DS1/1.5M Facility Data Link	Disabled
DSn	Digital Signal (DS1, DS3)	Disabled
eCPRI-10G	eCPRI over 10G Ethernet	Disabled
EoE	Ethernet over Ethernet Encapsulation (10GE and less)	Disabled
EoOTN	Ethernet over Optical Transport Network	Disabled
ETH-OAM	Carrier Ethernet OAM Test Application	Disabled
FC-10X	Fibre Channel 10X	Disabled
FC-1X	Fibre Channel 1X	Disabled
FC-2X	Fibre Channel 2X	Disabled
FC-4X	Fibre Channel 4X	Disabled
FC-8X	Fibre Channel 8X	Disabled
GCC-BERT	OTN Overhead BERT and Synchronization Validation	Disabled
GigE_Electrical	Ethernet 1000Base-T (Electrical) Interface	Enabled
GigE_Optical	Ethernet 1000Base-X (Optical) Interface	Enabled
iOptics	Intelligent Pluggable Optic Test Application	Disabled
iSAM	Intelligent Service Activation Methodology	Disabled
L2-Transparency	L2CP Handling Test in EtherSAM	Disabled
LINK-OAM	Link OAM	Disabled
LLDP	LLDP Neighbor Discovery	Disabled
MPLS	MPLS Encapsulation (10GE and less)	Disabled
NI-CSU	NI/CSU Emulation	Disabled
OBSAI	OBSAI 3.072 Gbit/s	Disabled
OBSAI-1.5G	OBSAI 1.536 Gbit/s	Disabled
OBSAI-6.1G	OBSAI 6.144 Gbit/s	Disabled
ODU0	OTN ODU0	Disabled
ODUflex	OTN ODUflex	Disabled
ODUMUX	ODU Multiplexing Payload Type 20 and 21	Disabled

OTN-INTR-THRU	OTN Intrusive Through Mode	Disabled
OTU1	Optical Transport Unit-1 (2.7 Gbit/s)	Disabled
OTU2	Optical Transport Unit-2 (10.7 Gbit/s)	Disabled
OTU2-1e-2e	Optical Transport Unit-2 Overclocked (11.049/11.096 Gbit/s)	Disabled
OTU2-1f-2f	Optical Transport Unit-2 Overclocked (11.270/11.317 Gbit/s)	Disabled
PBBTE	Provider Backbone Bridge Encapsulation (10GE and less)	Disabled
PDH	Plesiochronous Digital Hierarchy (E1, E3, E4)	Disabled
RFC6349	RFC 6349 Test Application (25GE and less)	Disabled
SDH	Synchronous Digital Hierarchy	Enabled
SONET	Synchronous Optical Network	Enabled
SyncE	Synchronous Ethernet	Disabled
TCM	Tandem Connection Monitoring HO/LO	Disabled
TCP-THPUT	Tcp Throughput Test Application	Disabled
TST-OAM	Test Over Service OAM	Disabled

LOGGER

ID	Start Time	Event	Duration	Details
1	05/29 06:34:55 PM	Test Started		2025-05-29
2	05/29 06:34:59 PM	Service Configuration test started		2025-05-29
3	05/29 06:35:33 PM	Service Performance test started		2025-05-29
4	05/29 06:45:43 PM	Test Stopped		 PASS