



FTB-880 Report

| RFC2544-2.8km-jumbo |

Report Header:	EXFO Inc.
Report Title:	RFC2544-2.8km-jumbo
Report Date:	2/13/2015 1:11:41 PM
Type:	RFC 2544

Job Information

Job ID:	FSO Artolink 02.2015 testing set
Circuit ID:	M1-10GE
Contractor Name:	CJSC Mostcom
Customer Name:	internal test
Operator Name:	Mostcom R&D department
Comment:	Field testing Artolink M1-10GE at distance 1.8km (Ryazan)

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SUMMARY

Setup Summary

Application Type	RFC 2544
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Interface	Port 1
Interface/Rate	10GE LAN
Connector	SFP+

Framing: MAC/IP/UDP

IP Version	IPv4
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	MAC	IP Address	UDP Port
Source	00:03:01:FD:29:A1	10.10.10.1 / 255.255.255.0	49184
Destination	00:03:01:FE:37:EA	10.10.10.2	7

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

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Frame Size Distribution (Bytes)						
1522	2048	4096	5000	7000	8500	9600

Enabled Subtests		
Throughput	Max. Rate (%)	Accuracy (%)
	100.0000	1.00
Back-to-Back	Burst Time (MM:SS)	Accuracy (Frames)
	00:01	1
Frame Loss	Max. Rate (%)	Granularity (%)
	100.0000	10
Latency	Max. Rate (%)	
	100	

Results Summary

Test Status	
Throughput	Completed 00d:00:02:01
Back-to-Back	Completed 00d:00:01:20
Frame Loss	Completed 00d:00:02:28
Latency	Completed 00d:00:01:20
Pass/Fail Verdict	PASS
Start Time	2/13/2015 01:01:28 PM
Power Recovery	0

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Pass/Fail Verdict	
Throughput	PASS
Back-to-Back	PASS
Frame Loss	PASS
Latency	PASS

Throughput (Mbit/s)			
Layer			
	All	Ethernet	IP
1522	10000.00	9870.29	9753.56
2048	10000.00	9903.28	9816.24
4096	10000.00	9951.40	9907.67
5000	10000.00	9960.15	9924.30
7000	10000.00	9971.50	9945.86
8500	10000.00	9976.52	9955.39
9600	10000.00	9979.20	9960.49

Back-to-Back (Mbit/s)			
Layer			
	All	Ethernet	IP
1522	10000.00	9870.29	9753.56
2048	10000.00	9903.28	9816.24
4096	10000.00	9951.40	9907.67
5000	10000.00	9960.15	9924.30
7000	10000.00	9971.50	9945.86
8500	10000.00	9976.52	9955.39
9600	10000.00	9979.20	9960.49

	Frame Loss (% ,100.0000 % Step)	Latency (ms, Cut Through) Mode
1522	0.000	0.03478
2048	0.000	0.03673
4096	0.000	0.04347
5000	0.000	0.04651
7000	0.000	0.05335
8500	0.000	0.05839
9600	0.000	0.06225

RX Power Level		
	Min	Max
Power Range (dBm)	-20.00	1.00
RX Power Level (dBm)	-0.20	-0.20

RX Frequency		
	Max Negative Offset	Max Positive Offset
Frequency Offset (ppm)	0.0	19.2

Alarms/Errors

Alarms/Errors List	
Active/Historical Alarms/Errors	None

Interface	
Alarms	Seconds
LOS	0
Frequency	0

Clock Sync	
Alarms	Seconds
LOC	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	

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

TEST SETUP

Clock Synchronization

Clock Mode	Internal
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Frame Size Distribution (Bytes)

1522	2048	4096	5000	7000	8500	9600
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Enabled Subtests

Throughput	Max. Rate (%)	Trial Duration (MM:SS)	Trials	Accuracy (%)	Acceptable Errors	Validations
	100.0000	00:01	1	1.00	0	1
Back-to-Back		Burst Time (MM:SS)	Trials	Accuracy (Frames)	Acceptable Errors	Bursts
		00:01	1	1	0	1
Frame Loss	Max. Rate (%)	Trial Duration (MM:SS)	Trials	Granularity (%)		
	100.0000	00:01	1	10		
Latency	Max. Rate (%)	Trial Duration (MM:SS)	Trials			
	100.0000	00:01	1			

TEST RESULTS

Ethernet Traffic

Frame Type	TX Count	RX Count
Multicast	0	0
Broadcast	42	0
Unicast	14292731	14292773
Non-Unicast	42	0
Total	14292773	14292773

Frame Size (Bytes)	RX Count	%
< 64	0	0
64	42	0
65 – 127	0	0
128 – 255	0	0
256 – 511	0	0
512 – 1023	0	0
1024 – 1518	0	0
> 1518	14292731	99
Total	14292773	

Flow Control Monitoring

Frame Count	
Pause Frames	0
Abort Frames	0
Frames RX	0
Frames TX	0

Pause Time (Quanta)	
Total Pause Time	0
Last Pause Time	0
Minimum Pause Time	0
Maximum Pause Time	0

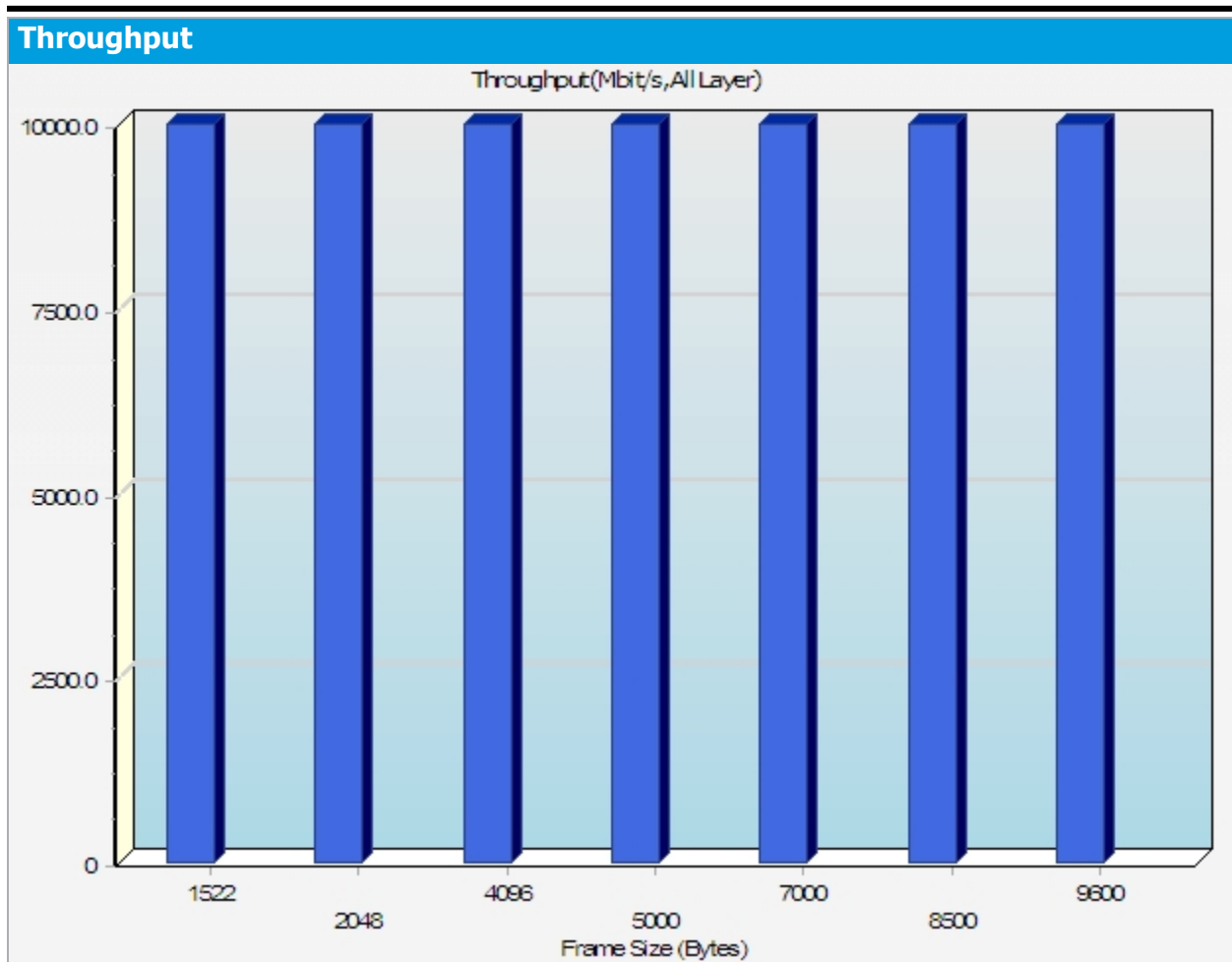
RFC 2544

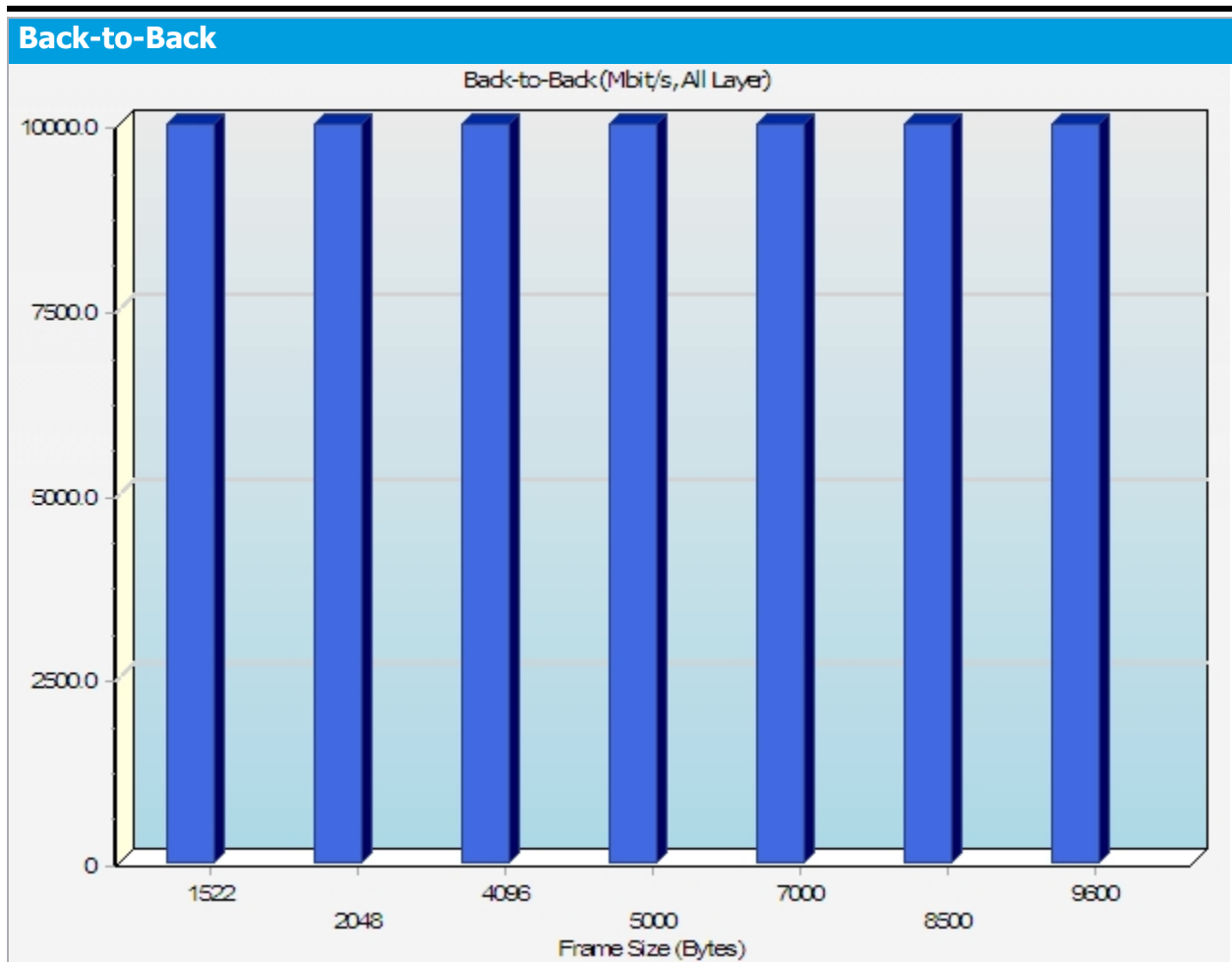
Pass/Fail Verdict	
Throughput	PASS
Back-to-Back	PASS
Frame Loss	PASS
Latency	PASS

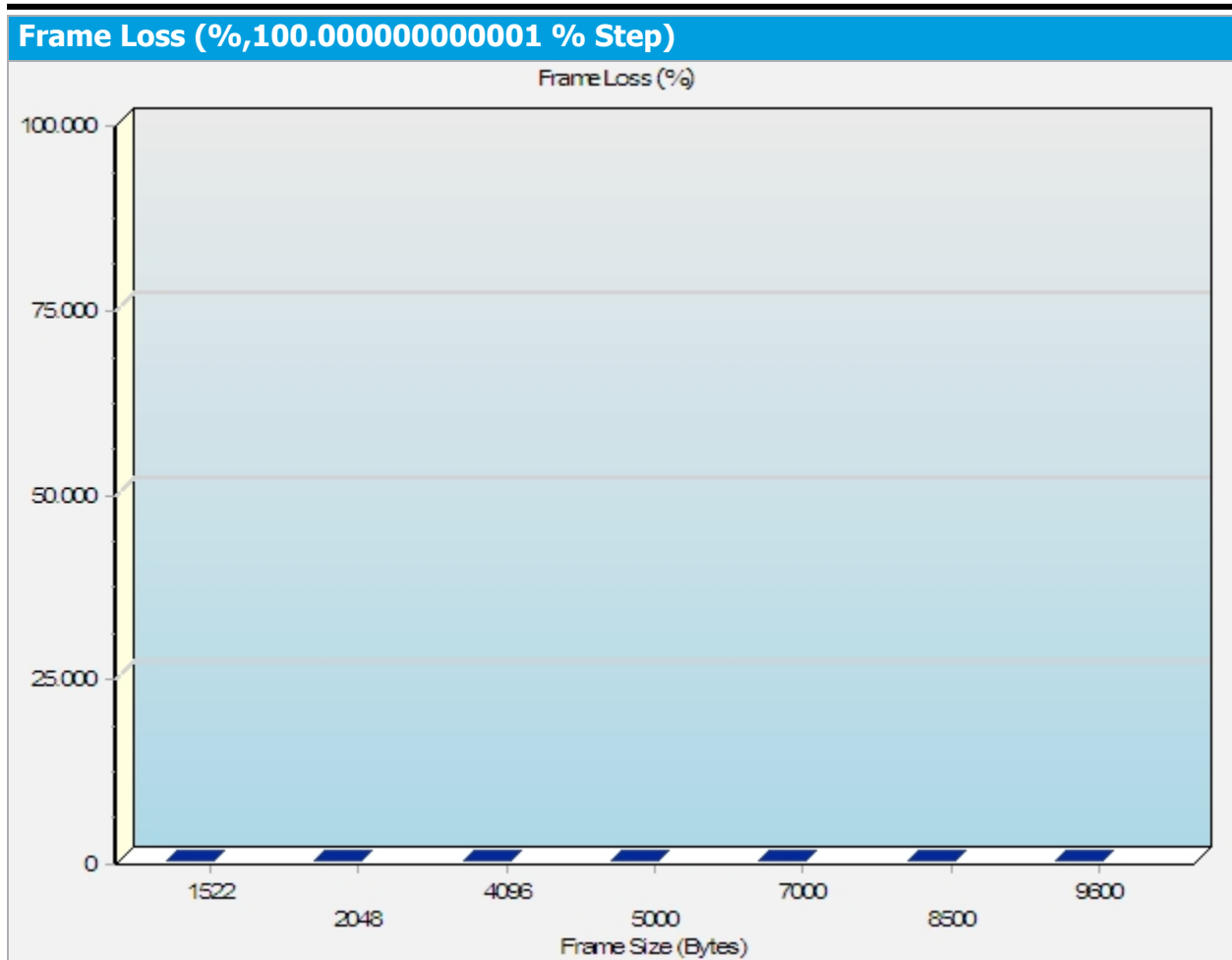
Throughput (Mbit/s)				
		Layer		
		All	Ethernet	IP
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	Max.	10000.00	9870.29	9753.56
	Avg.	10000.00	9870.29	9753.56
2048	Min.	10000.00	9903.28	9816.24
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	Max.	10000.00	9951.40	9907.67
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	Max.	10000.00	9976.52	9955.39
	Avg.	10000.00	9976.52	9955.39
9600	Min.	10000.00	9979.20	9960.49
	Max.	10000.00	9979.20	9960.49
	Avg.	10000.00	9979.20	9960.49

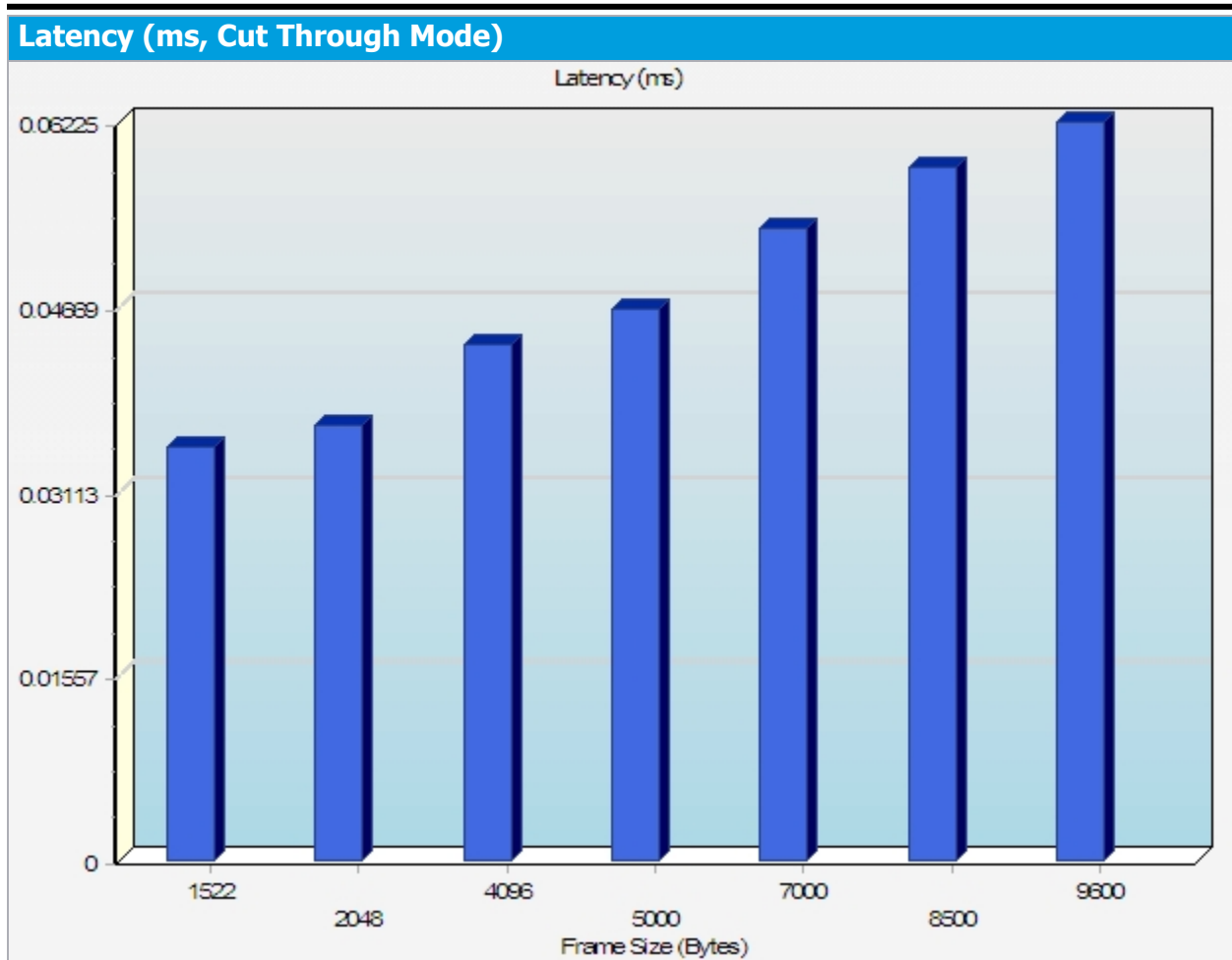
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		Layer		
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	Max.	10000.00	9976.52	9955.39
	Avg.	10000.00	9976.52	9955.39
9600	Min.	10000.00	9979.20	9960.49
	Max.	10000.00	9979.20	9960.49
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		Frame Loss (% ,100.0000 % Step)	Latency (ms, Cut Through) Mode
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2048	Min.	0.000	0.03673
	Max.	0.000	0.03673
	Avg.	0.000	0.03673
4096	Min.	0.000	0.04347
	Max.	0.000	0.04347
	Avg.	0.000	0.04347
5000	Min.	0.000	0.04651
	Max.	0.000	0.04651
	Avg.	0.000	0.04651
7000	Min.	0.000	0.05335
	Max.	0.000	0.05335
	Avg.	0.000	0.05335
8500	Min.	0.000	0.05839
	Max.	0.000	0.05839
	Avg.	0.000	0.05839
9600	Min.	0.000	0.06225
	Max.	0.000	0.06225
	Avg.	0.000	0.06225









FUNCTIONS

Ping & Trace Route

Network	
Source MAC Address	00:03:01:FD:29:A1
Source IP Address	10.10.10.1
Destination IP Address	192.168.0.2

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

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

SYSTEM INFORMATION

Product Name	NetBlazer Series
Version	NetBlazer Series 2.4 SP1
Module ID	FTB-880
Slot ID	0
Software Product Version	2.4.1.1
Assembly Hardware Revision	NetBlazer Series 2.4 SP1 A
Serial Number	608625
Calibration Date	9/20/2011 3:57:00 PM

Pluggable Module


Module ID	SFP+
Vendor Name	OEM
Part Number	M10GBSFPD40MM55
Serial Number	SX21444300001
Hardware Revision	A
Firmware Version	
Connector Type	LC
Speed	FC-10X, 10G
Type	FC: Very Long Distance, 10G: ER
Wavelength	1560 nm
Mode	FC: Single-Mode Fiber, 10G: Single-Mode Fiber

Software Options

DS1-FDL	DS1/1.5M Facility Data Link	Enabled
DS3-FEAC	DS3/45M Far-End Alarm and Control	Enabled
DS3-G747	ITU-T Recommendation G.747 (E1 in DS3)	Enabled
DSn	Digital Signal (DS1, DS3)	Enabled
PDH	Plesiochronous Digital Hierarchy (E1, E3, E4)	Enabled
DUALRX	Dual RX (DS1, DS3)	Enabled
ISDN-PRI	Primary Rate North American and/or European ISDN	Enabled
NI-CSU	NI/CSU Emulation	Enabled
SDH	Synchronous Digital Hierarchy	Enabled
SONET	Synchronous Optical Network	Enabled
622M	622 Mbit/s	Enabled
155M	155 Mbit/s	Enabled
2488M	2.488 Gbit/s	Enabled
TCM	Tandem Connection Monitoring HO/LO	Enabled
9953M	9.953 Gbit/s	Enabled
52M	52 Mbit/s	Enabled
OTU1	Optical Transport Unit-1 (2.7 Gbit/s)	Enabled
OTU2	Optical Transport Unit-2 (10.7 Gbit/s)	Enabled
OTU2-1e-2e	Optical Transport Unit-2 Overclocked (11.049/11.096 Gbit/s)	Enabled

OTU2-1f-2f	Optical Transport Unit-2 Overclocked (11.270/11.317 Gbit/s)	Enabled
10G_LAN	Ethernet 10G LAN optical interface	Enabled
10G_WAN	Ethernet 10G WAN optical interface	Enabled
FC-10X	Fibre Channel 10X	Enabled
FC-8X	Fibre Channel 8X	Enabled
100optical	Ethernet 100Base-FX (Optical) Interface	Enabled
GigE_Optical	Ethernet 1000Base-X (Optical) Interface	Enabled
GigE_Electrical	Ethernet 1000Base-T (Electrical) Interface	Enabled
FC-1X	Fibre Channel 1X	Enabled
FC-2X	Fibre Channel 2X	Enabled
TCP-THPUT	Tcp Throughput Test Application	Enabled
FC-4X	Fibre Channel 4X	Enabled
MPLS	MPLS Encapsulation	Enabled
IPV6	Internet Protocol Version 6 (IPv6)	Enabled
ETH-THRU	Through Mode Test Application	Enabled
Cable_Test	Cable Test	Enabled
TRAFFIC_GEN	Traffic Generation and Monitoring Test Application	Enabled
CPRI-1.2G	CPRI 1.2288 Gbit/s	Disabled
CPRI	CPRI 2.4576 Gbit/s and 3.072 Gbit/s	Enabled
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
OBSAI	OBSAI 3.072 Gbit/s	Enabled
1588PTP	1588 Precision Time Protocol	Enabled
SyncE	Synchronous Ethernet	Enabled
ETH-OAM	Carrier Ethernet OAM Test Application	Disabled
ETH-CAPTURE	Ethernet Frame Capture for Advanced Troubleshooting	Disabled
ADV-FILTERS	Advanced Filtering	Disabled

LOGGER

ID	Time	Event	Duration	Details
1	02/13 01:01:28 PM	Test Started		2015-02-13
2	02/13 01:08:38 PM	Test Stopped		 PASS