



Packet Blazer 10GigE

Job Information

Job ID	1
Contractor	University of Washington
Customer	evergreen-vancouver-k12
Report Date	2018-10-30 12:54:59
Operator Name	daniel dh
Circuit ID	zayo:OGYX/172818//ZYO

File Name: C:\inetpub\wwwroot\k20_performance_reports\evergreen-van-k12\2018-10-19_evergreen-van-k12_RFC2544_fail.pdf

Comment: FAIL

Table of Contents

1. Setup	3
2. Summary	4
3. Optical [P1]/Port	7
4. Optical [P1]/Ethernet Framed Layer 2/Traffic Stream/Stream Generation	10
5. RFC 2544	11
6. Optical [P1]/Ethernet Framed Layer 2/Traffic Analyzer	23
7. Optical [P1]/Ethernet Framed Layer 2/Expert Mode	26
8. Clock Synchronization	33
9. Software Options	35
10. Ping [P1]/Ping	36

1. Setup

1.1. IPversion Status

Port	IP Version
Port1	IPv4

1.2. Transceiver Mode

Item	Value
Transceiver Mode	10GigE LAN

2. Summary

2.1. Alarm

2.1.1. Alarms

2.1.1.1. Global

Alarm	H
Global	No Fault
Log Full	No Fault

2.1.1.2. Physical

Alarm	H
LOS	No Fault
Frequency	No Fault
LOC	No Fault

Signal Analysis	Value
Pwr (dBm)	-1.8

Frequency Analysis	Value
Freq (bps)	10312524608.0
Offset (ppm)	2

2.1.1.3. WIS

No information is available

2.1.1.4. Ethernet

Alarm	H
Error	No Fault
Link	No Fault
Fault	No Fault

2.1.1.5. Higher Layer Protocol

Alarm	H
Error	No Fault

2.1.1.6. Pattern

No information is available

2.1.1.7. Other

Alarm	H
SDT	No Fault

2.1.2. Logger**2.1.2.1. Logger Events**

ID	Date/Time	Data Path	Event	Duration	Count	Rate
1	2018-10-30 12:14:21	Test 1	Test Started			
2	2018-10-30 12:52:42	Test 1	Test Stopped			

2.2. Test**2.2.1. Test Status**

Item	Value
Start Time:	2018-10-30 12:14:21
Port 1 Link	Up
Expert Mode Verdict	--
RFC 2544	Completed

2.2.2. Test Configuration

Item	Value
Application Type	RFC 2544
Test Name	10G_RFC
Test Description	

2.2.3. Test Preferences

Item	Value
Couple Start/Enable TX	Disabled

2.2.4. Clock Configuration

Item	Value
Clock Mode	Internal

2.2.5. Alarm Analysis

Alarm	H	Seconds
LOC	No Fault	0

2.2.6. Timer Configuration

Item	Value
Start Time Status	Disabled
Start Time	2018-10-30 12:12:25
Stop Time Status	Disabled
Stop Time	2018-10-30 12:12:25
Duration Status	Disabled
Duration	15 minutes
On/Off State	Disabled

3. Optical [P1]/Port

3.1. TX

3.1.1. Signal Analysis

Item	Value
Output Presence	Active

3.1.2. Alarm Generation

No information is available

3.1.3. Frequency

Item	Value
Frequency Offset (ppm)	0
On/Off	Disabled
Actual Frequency (bps)	10312499904
Nominal Frequency (bps)	10312500000

3.2. RX

3.2.1. Signal Analysis

Item	Value
Range (dBm)	-14.0 to 2.0
Power (dBm)	-1.8

3.2.2. Alarm Analysis

Alarm	H	Seconds
LOS	No Fault	0
Frequency	No Fault	0

3.2.3. Frequency Analysis

Item	Value
Frequency (bps)	10312524608
Frequency Offset (bps)	24608
Max. Negative Offset (bps)	0
Max. Positive Offset (bps)	24736

3.3. Interface

3.3.1. Configuration

Item	Value
Flow Control	None

3.3.2. Status

Item	Value
Link	Up

3.4. Network

3.4.1. MAC Configuration

Item	Value
MAC Address	00:03:01:08:9E:3D

3.4.1.1. VLAN

Item	Value
Enable VLAN	Disabled

3.4.2. IP Configuration

Item	Value
IP Address	10.112.114.01
Subnet Mask	255.255.255.0
Enable DHCP	Disabled
Enable Default Gateway	Disabled
Default Gateway	N/A

3.4.3. Frame Format

Item	Value
Format	Ethernet II
OUI	N/A

4. Optical [P1]/Ethernet Framed Layer 2/Traffic Stream/Stream Generation

5. RFC 2544

5.1. Global

5.1.1. Configuration

Item	Value
Frame Size Distribution	RFC 2544
Quantity	7
Frame Size 1	64
Frame Size 2	128
Frame Size 3	256
Frame Size 4	512
Frame Size 5	1024
Frame Size 6	1280
Frame Size 7	1518

5.1.2. Test Procedure

Test	Status	State
Throughput	Enabled	Completed
Back-to-Back	Enabled	Completed
Frame Loss	Enabled	Completed
Latency	Enabled	Completed

5.2. Throughput

5.2.1. Configuration

Item	Value
Test Time (MM:SS)	00:10
Accuracy (%)	1
Nb. of Acceptable Errors	0
Nb. of Trials to Average	1
Nb. of Validations	1
Maximum Rate TX-to-RX (%)	90
Minimum Test Time (Seconds)	--

5.2.2. Results

Item	Value
Test State	Completed
Status Message	None

5.2.2.1. Frame Count

	TX-to-RX
TX	7314219
RX	7314219

5.2.2.2. Throughput Results**5.2.2.2.1. Current**

Frame Size	TX-to-RX-Layer 1-2-3 (Mbps)	TX-to-RX-Layer 2-3 (Mbps)	TX-to-RX-Layer 3 (Mbps)
64	6829.268293	5203.252033	3739.837398
128	7914.438503	6844.919786	5882.352941
256	8046.64723	7463.556851	6938.77551
512	8837.209302	8504.983389	8205.980066
1024	8892.674617	8722.316865	8568.994889
1280	9002.770083	8864.265928	8739.612188
1518	8999.414862	8882.387361	8777.06261

5.2.2.2.2. Minimum

Frame Size	TX-to-RX-Layer 1-2-3 (Mbps)	TX-to-RX-Layer 2-3 (Mbps)	TX-to-RX-Layer 3 (Mbps)
64	6829.268293	5203.252033	3739.837398
128	7914.438503	6844.919786	5882.352941
256	8046.64723	7463.556851	6938.77551
512	8837.209302	8504.983389	8205.980066
1024	8892.674617	8722.316865	8568.994889
1280	9002.770083	8864.265928	8739.612188
1518	8999.414862	8882.387361	8777.06261

5.2.2.2.3. Maximum

Frame Size	TX-to-RX-Layer 1-2-3 (Mbps)	TX-to-RX-Layer 2-3 (Mbps)	TX-to-RX-Layer 3 (Mbps)
64	6829.268293	5203.252033	3739.837398
128	7914.438503	6844.919786	5882.352941
256	8046.64723	7463.556851	6938.77551
512	8837.209302	8504.983389	8205.980066
1024	8892.674617	8722.316865	8568.994889
1280	9002.770083	8864.265928	8739.612188
1518	8999.414862	8882.387361	8777.06261

5.2.2.2.4. Average

Frame Size	TX-to-RX-Layer 1-2-3 (Mbps)	TX-to-RX-Layer 2-3 (Mbps)	TX-to-RX-Layer 3 (Mbps)
64	6829.268293	5203.252033	3739.837398
128	7914.438503	6844.919786	5882.352941
256	8046.64723	7463.556851	6938.77551
512	8837.209302	8504.983389	8205.980066
1024	8892.674617	8722.316865	8568.994889
1280	9002.770083	8864.265928	8739.612188
1518	8999.414862	8882.387361	8777.06261

5.3. Back-to-Back**5.3.1. Configuration**

Item	Value
Max. Time Worth of Frames (MM:SS)	00:01
Accuracy (Frames)	1
Nb. of Acceptable Errors	0
Nb. of Trials to Average	1
Nb. of Bursts	1
Minimum Test Time (Seconds)	--

5.3.2. Results

Item	Value
Test State	Completed
Status Message	None

5.3.2.1. Frame Count

	TX-to-RX
TX	812744
RX	812744

5.3.2.2. Back-to-Back Results**5.3.2.2.1. Current**

Frame Size	TX-to-RX-Layer 1-2-3 (Mbps)	TX-to-RX-Layer 2-3 (Mbps)	TX-to-RX-Layer 3 (Mbps)
64	3123.746846	2379.997597	1710.623273
128	4006.348134	3464.949738	2977.691181
256	6243.724313	5791.280522	5384.08111
512	9121.1704	8778.269257	8469.658228
1024	10000	9808.429119	9636.015326
1280	9999.9896	9846.143606	9707.682212
1518	10000	9869.960988	9752.925878

5.3.2.2.2. Minimum

Frame Size	TX-to-RX-Layer 1-2-3 (Mbps)	TX-to-RX-Layer 2-3 (Mbps)	TX-to-RX-Layer 3 (Mbps)
64	3123.746846	2379.997597	1710.623273
128	4006.348134	3464.949738	2977.691181
256	6243.724313	5791.280522	5384.08111
512	9121.1704	8778.269257	8469.658228
1024	10000	9808.429119	9636.015326
1280	9999.9896	9846.143606	9707.682212
1518	10000	9869.960988	9752.925878

5.3.2.2.3. Maximum

Frame Size	TX-to-RX-Layer 1-2-3 (Mbps)	TX-to-RX-Layer 2-3 (Mbps)	TX-to-RX-Layer 3 (Mbps)
64	3123.746846	2379.997597	1710.623273
128	4006.348134	3464.949738	2977.691181
256	6243.724313	5791.280522	5384.08111
512	9121.1704	8778.269257	8469.658228
1024	10000	9808.429119	9636.015326
1280	9999.9896	9846.143606	9707.682212
1518	10000	9869.960988	9752.925878

5.3.2.2.4. Average

Frame Size	TX-to-RX-Layer 1-2-3 (Mbps)	TX-to-RX-Layer 2-3 (Mbps)	TX-to-RX-Layer 3 (Mbps)
64	3123.746846	2379.997597	1710.623273
128	4006.348134	3464.949738	2977.691181
256	6243.724313	5791.280522	5384.08111
512	9121.1704	8778.269257	8469.658228
1024	10000	9808.429119	9636.015326
1280	9999.9896	9846.143606	9707.682212
1518	10000	9869.960988	9752.925878

5.4. Frame Loss**5.4.1. Configuration**

Item	Value
Test Time (MM:SS)	00:10
Test Granularity (%)	10
Nb. of Trials to Average	1
Maximum Rate TX-to-RX (%)	100
Minimum Test Time (Seconds)	--

5.4.2. Results

Item	Value
Test State	Completed
Status Message	None

5.4.2.1. Frame Count

	TX-to-RX
TX	5689577
RX	5689577

5.4.2.2. Frame Loss Results**5.4.2.2.1. Current**

Frame Size	TX-to-RX - Step 100% (% Loss)
64	24.690662944395946
128	17.19312812553062
256	13.597990101756786
512	9.6157338529171525
1024	7.4732276638286521
1280	6.9103525235858942
1518	6.0794557891428962

5.4.2.2.2. Minimum

Frame Size	TX-to-RX - Step 100% (% Loss)
64	24.690662944395946
128	17.19312812553062
256	13.597990101756786
512	9.6157338529171525
1024	7.4732276638286521
1280	6.9103525235858942
1518	6.0794557891428962

5.4.2.2.3. Maximum

Frame Size	TX-to-RX - Step 100% (% Loss)
64	24.690662944395946
128	17.19312812553062
256	13.597990101756786
512	9.6157338529171525
1024	7.4732276638286521
1280	6.9103525235858942
1518	6.0794557891428962

5.4.2.2.4. Average

Frame Size	TX-to-RX - Step 100% (% Loss)
64	24.690662944395946
128	17.19312812553062
256	13.597990101756786
512	9.6157338529171525
1024	7.4732276638286521
1280	6.9103525235858942
1518	6.0794557891428962

5.5. Latency

5.5.1. Configuration

Item	TX-to-RX
Test Time (MM:SS)	00:10
Nb. of Trials to Average	1
Maximum Rate - Frame Size 64	N/A
Maximum Rate - Frame Size 128	N/A
Maximum Rate - Frame Size 256	N/A
Maximum Rate - Frame Size 512	N/A
Maximum Rate - Frame Size 1024	N/A
Maximum Rate - Frame Size 1280	N/A
Maximum Rate - Frame Size 1518	N/A
Unit	%
Minimum Test Time (Seconds)	--
Copy From Throughput Test	Enabled
Margin (%)	0

5.5.2. Results

Item	Value
Test State	Completed
Status Message	None

5.5.2.1. Frame Count

	TX-to-RX
TX	7314219
RX	7314219

5.5.2.2. Latency Results

5.5.2.2.1. Current

Frame Size	TX-to-RX Rate (%)	TX-to-RX - Cut Through (ms)
64	68.2927	11.229578
128	79.1444	115.95951699999999
256	80.4665	45.565585999999996
512	88.3721	10.196759
1024	88.9267	47.843261999999996
1280	90.0277	98.30720199999999
1518	89.9941	32.568211

5.5.2.2.2. Minimum

Frame Size	TX-to-RX Rate (%)	TX-to-RX - Cut Through (ms)
64	68.2927	11.229578
128	79.1444	115.95951699999999
256	80.4665	45.565585999999996
512	88.3721	10.196759
1024	88.9267	47.843261999999996
1280	90.0277	98.30720199999999
1518	89.9941	32.568211

5.5.2.2.3. Maximum

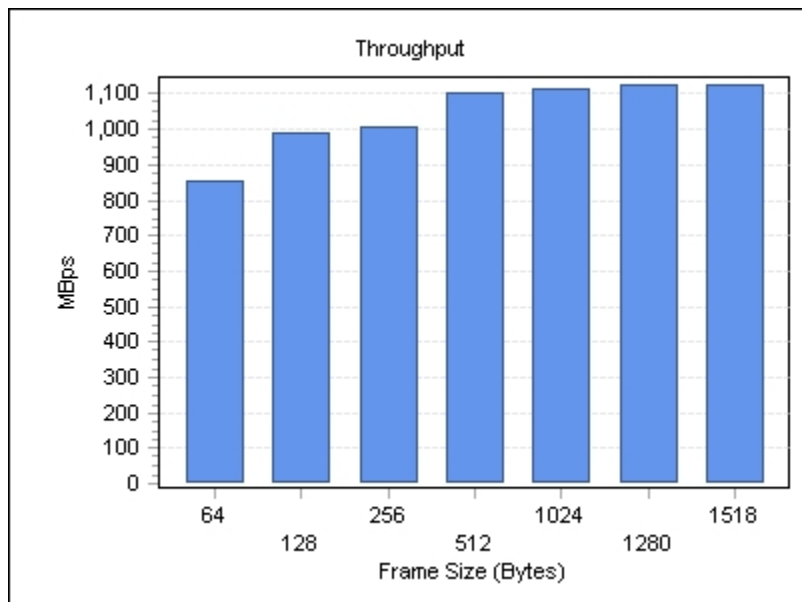
Frame Size	TX-to-RX Rate (%)	TX-to-RX - Cut Through (ms)
64	68.2927	11.229578
128	79.1444	115.95951699999999
256	80.4665	45.565585999999996
512	88.3721	10.196759
1024	88.9267	47.843261999999996
1280	90.0277	98.30720199999999
1518	89.9941	32.568211

5.5.2.2.4. Average

Frame Size	TX-to-RX Rate (%)	TX-to-RX - Cut Through (ms)
64	68.2927	11.229578
128	79.1444	115.95951699999999
256	80.4665	45.565585999999996
512	88.3721	10.196759
1024	88.9267	47.843261999999996
1280	90.0277	98.30720199999999
1518	89.9941	32.568211

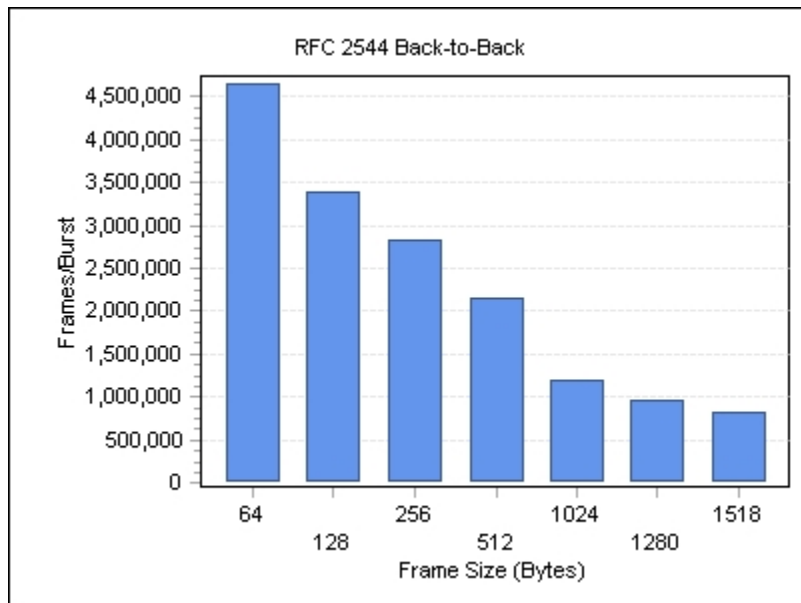
5.6. Graph**5.6.1. Throughput**

Displayed Results	Current
Direction	TX-to-RX
Unit	MBps
Layer	Layer 1-2-3

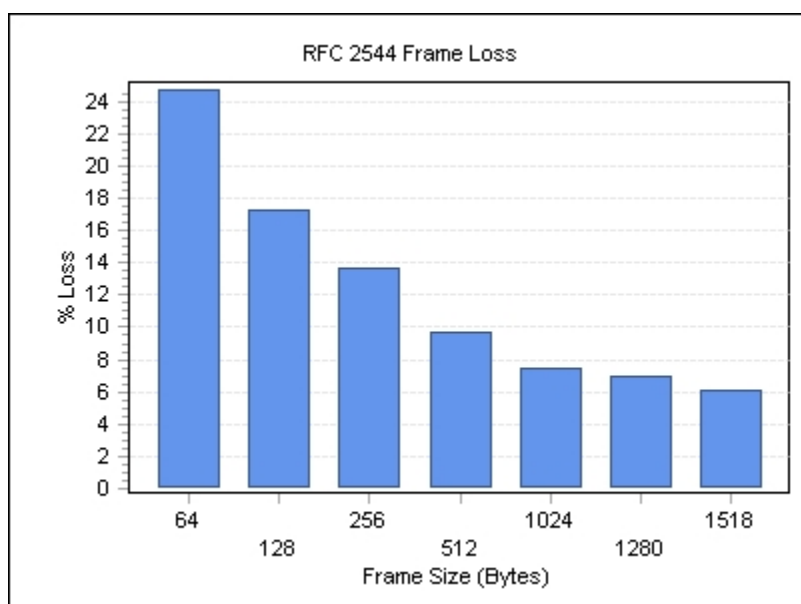


5.6.2. RFC 2544 Back-to-Back

Displayed Results	Current
Direction	TX-to-RX
Unit	Frames/Burst
Layer	Layer 1-2-3

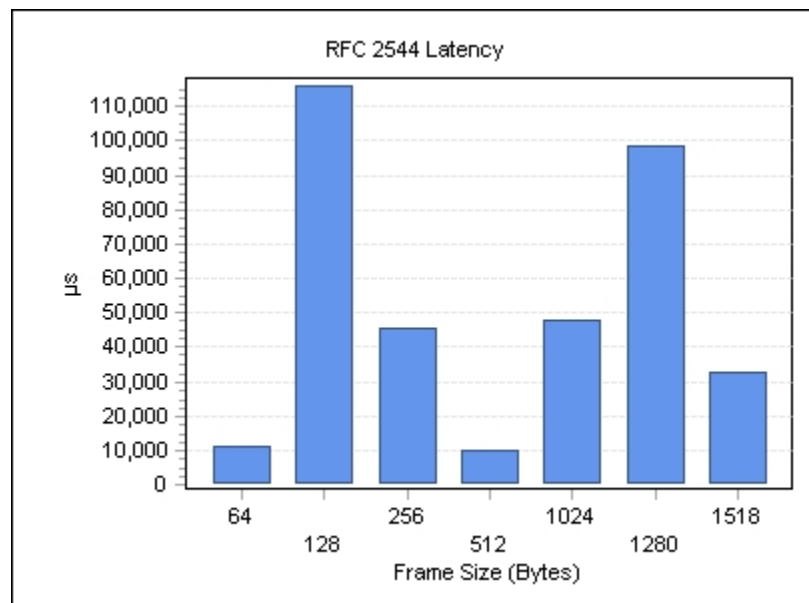
**5.6.3. RFC 2544 Frame Loss**

Displayed Results	Current
Direction	TX-to-RX
Unit	% Loss
Displayed Step	100%



5.6.4. RFC 2544 Latency

Displayed Results	Current
Direction	TX-to-RX
Unit	μ s
Mode	Cut Through



6. Optical [P1]/Ethernet Framed Layer 2/Traffic Analyzer

6.1. Eth. RX

6.1.1. Configuration

Item	Value
Oversize Monitoring	Disabled

6.1.2. Alarm Analysis

Alarm	H	Seconds
Link Down	No Fault	0
Local Fault	No Fault	0
Remote Fault	No Fault	0

6.1.3. Error Analysis

Error	H	Seconds	Count	Rate
Block	No Fault	0	0	0.00E00
FCS	No Fault	0	0	0.00E00
Jabber/Giant	No Fault	0	0	0.00E00
Oversize	N/A	N/A	N/A	N/A
Runt	No Fault	0	0	0.00E00
Undersize	No Fault	0	0	0.00E00
Total Error Count			0	

6.2. Eth. Stats

6.2.1. Total Frame Counts

	RX Count	TX Count
Total Count	4337170383	4507721040

6.2.2. Valid Frame Counts

Frames	TX Count	RX Count
Multicast	0	82
Broadcast	208	0
Unicast	4507720832	4337170301
N-Unicast	208	82
Total	4507721040	4337170383

6.2.3. Frame Size

Frame Size	Count	Total (%)
< 64	0	0.000
64	2221279074	51.215
65 - 127	0	0.000
128 - 255	997066279	22.989
256 - 511	539275063	12.434
512 - 1023	306182815	7.060
1024 - 1518	273367152	6.303
> 1518	0	0.000

6.2.4. Throughput

Item	Value
Bandwidth (Mbps)	0.0
Utilization (%)	0.0
Frame Rate (fps)	0

6.3. Higher Layers**6.3.1. Higher Layer Protocol**

Error	H	Seconds	Count	Rate
IP Header Checksum	No Fault	0	0	0.00E00
UDP Checksum	No Fault	0	0	0.00E00
TCP Checksum	N/A	N/A	N/A	N/A

6.4. Flow Control

6.4.1. Statistics

Item	Value
Pause Time (Quanta)	0
Last Pause Time (Quanta)	0
Max. Pause Time (Quanta)	0
Min. Pause Time (Quanta)	0
Pause Frames	0
Abort Frames	0
Frames TX	0
Frames RX	0

7. Optical [P1]/Ethernet Framed Layer 2/Expert Mode

7.1. RFC

7.1.1. General Properties

Item	Value
Expert Mode Status	Disabled

7.1.2. Expert Mode Status

	Verdict
Throughput	--
Back-to-Back	--
Frame Loss	--
Latency	--

7.1.3. Throughput

Item	Value
Enable Criteria	Disabled

7.1.3.1. Current

Frame Size	TX-to-RX - Layer 1-2-3 (bps)	TX-to-RX Status
64	0.0	N/A
128	0.0	N/A
256	0.0	N/A
512	0.0	N/A
1024	0.0	N/A
1280	0.0	N/A
1518	0.0	N/A

7.1.3.2. Minimum

Frame Size	TX-to-RX - Layer 1-2-3 (bps)	TX-to-RX Status
64	0.0	N/A
128	0.0	N/A
256	0.0	N/A
512	0.0	N/A
1024	0.0	N/A
1280	0.0	N/A
1518	0.0	N/A

7.1.3.3. Maximum

Frame Size	TX-to-RX - Layer 1-2-3 (bps)	TX-to-RX Status
64	0.0	N/A
128	0.0	N/A
256	0.0	N/A
512	0.0	N/A
1024	0.0	N/A
1280	0.0	N/A
1518	0.0	N/A

7.1.3.4. Average

Frame Size	TX-to-RX - Layer 1-2-3 (bps)	TX-to-RX Status
64	0.0	N/A
128	0.0	N/A
256	0.0	N/A
512	0.0	N/A
1024	0.0	N/A
1280	0.0	N/A
1518	0.0	N/A

7.1.4. Back-to-Back

Item	Value
Enable Criteria	Disabled

7.1.4.1. Current

Frame Size	TX-to-RX - Layer 1-2-3 (Frames/Burst)	TX-to-RX Status
64	100	N/A
128	100	N/A
256	100	N/A
512	100	N/A
1024	100	N/A
1280	100	N/A
1518	100	N/A

7.1.4.2. Minimum

Frame Size	TX-to-RX - Layer 1-2-3 (Frames/Burst)	TX-to-RX Status
64	100	N/A
128	100	N/A
256	100	N/A
512	100	N/A
1024	100	N/A
1280	100	N/A
1518	100	N/A

7.1.4.3. Maximum

Frame Size	TX-to-RX - Layer 1-2-3 (Frames/Burst)	TX-to-RX Status
64	100	N/A
128	100	N/A
256	100	N/A
512	100	N/A
1024	100	N/A
1280	100	N/A
1518	100	N/A

7.1.4.4. Average

Frame Size	TX-to-RX - Layer 1-2-3 (Frames/Burst)	TX-to-RX Status
64	100	N/A
128	100	N/A
256	100	N/A
512	100	N/A
1024	100	N/A
1280	100	N/A
1518	100	N/A

7.1.5. Frame Loss

Item	Value
Enable Criteria	Disabled

7.1.5.1. Current

Frame Size	TX-to-RX - Step 100% (% Loss)	TX-to-RX Status
64	0	N/A
128	0	N/A
256	0	N/A
512	0	N/A
1024	0	N/A
1280	0	N/A
1518	0	N/A

7.1.5.2. Minimum

Frame Size	TX-to-RX - Step 100% (% Loss)	TX-to-RX Status
64	0	N/A
128	0	N/A
256	0	N/A
512	0	N/A
1024	0	N/A
1280	0	N/A
1518	0	N/A

7.1.5.3. Maximum

Frame Size	TX-to-RX - Step 100% (% Loss)	TX-to-RX Status
64	0	N/A
128	0	N/A
256	0	N/A
512	0	N/A
1024	0	N/A
1280	0	N/A
1518	0	N/A

7.1.5.4. Average

Frame Size	TX-to-RX - Step 100% (% Loss)	TX-to-RX Status
64	0	N/A
128	0	N/A
256	0	N/A
512	0	N/A
1024	0	N/A
1280	0	N/A
1518	0	N/A

7.1.6. Latency

Item	Value
Enable Criteria	Disabled

7.1.6.1. Current

Frame Size	TX-to-RX - Store and Forward (ms)	TX-to-RX Status
64	125	N/A
128	125	N/A
256	125	N/A
512	125	N/A
1024	125	N/A
1280	125	N/A
1518	125	N/A

7.1.6.2. Minimum

Frame Size	TX-to-RX - Store and Forward (ms)	TX-to-RX Status
64	125	N/A
128	125	N/A
256	125	N/A
512	125	N/A
1024	125	N/A
1280	125	N/A
1518	125	N/A

7.1.6.3. Maximum

Frame Size	TX-to-RX - Store and Forward (ms)	TX-to-RX Status
64	125	N/A
128	125	N/A
256	125	N/A
512	125	N/A
1024	125	N/A
1280	125	N/A
1518	125	N/A

7.1.6.4. Average

Frame Size	TX-to-RX - Store and Forward (ms)	TX-to-RX Status
64	125	N/A
128	125	N/A
256	125	N/A
512	125	N/A
1024	125	N/A
1280	125	N/A
1518	125	N/A

8. Clock Synchronization

8.1. RX

8.1.1. Configuration

Item	Value
Interface Type	None
Termination Mode	N/A
Line Coding	N/A
Framing	N/A

8.1.2. Alarm Analysis

Alarm	State
LOS	N/A
AIS	N/A
LOF	N/A
Frequency	N/A

8.1.3. Frequency Analysis

Item	Value
Frequency (bps)	--
Frequency Offset (ppm)	--

8.2. Backplane

8.2.1. Configuration

Item	Value
Clock Mode	Internal
Enable	Disabled

8.2.2. Alarm Analysis

Alarm	State
LOC	No Fault

8.3. Clock Out

8.3.1. Configuration

Item	Value
Clock Out Divider	16

9. Software Options

9.1. Available Options

Category	Name	Description	Status
Feature	SK-ADV-FILTERS	Advanced Traffic Filtering	Enabled
Feature	SK-DATA-CAPTURE	Ethernet Frame Capture for Advanced Troubleshooting	Disabled
Feature	SK-ETHERSAM	Ethernet Service Activation Methodology Application Type	Enabled
Feature	SK-IPV6	Internet Protocol Version 6 (IPv6)	Disabled
Feature	SK-MPLS	Multi Protocol Label Switching	Disabled
Feature	SK-PBB-TE	Provider Backbone Bridge with Traffic Engineering	Disabled
Feature	SK-TRAFFIC-SCAN	Traffic Scan Troubleshooting Feature	Disabled
Network	SK-LAN	Local Area Network	Enabled
Network	SK-WAN	Wide Area Network	Enabled

10. Ping [P1]/Ping

10.1. Configuration

10.1.1. Ping

10.1.1.1. Setup

Item	Value
IP Address	10.10.114.172
Run	Disabled

10.1.1.1.1. Configuration

Item	Value
Timeout (ms)	4000
Delay (ms)	1000
Data Size (Bytes)	32
Time To Live (TTL)	128
Attempts	4
Continuous	Disabled
Type Of Service (TOS)	00

10.1.1.2. Results

No information is available

10.1.1.2.1. Statistics

No information is available

10.1.2. TraceRoute

10.1.2.1. Setup

Item	Value
IP Address	10.10.114.172
Run	Disabled

10.1.2.1.1. Configuration

Item	Value
Timeout (ms)	4000
Max. Hop Count	128

10.1.2.2. Results

No information is available

10.1.2.2.1. Statistics

No information is available