

# Xena2544 Test Report

## Test Summary

Test company: Xena Networks  
Customer: Xena Networks  
Test Date and Time: 2016-04-15, 03:18  
Test Duration: 00:08:48 (h:m:s)  
Generated By: Xena2544 v2.33 on Windows

## Test Setup

### Test Configuration

#### Main Test Options

Topology: Blocks  
Direction: Bidirectional  
Frame Size Type: IEEE Default  
Frame Sizes Used: 64,128,256,512,1024,1280,1518  
Toggle Port Sync: Yes  
Sync Off Duration: 1 seconds  
Sync On Delay: 1 seconds  
Flow Creation Type: Stream-based  
Enable Multi-Stream: No

#### Test Type Selection

Throughput Test: Enabled  
Latency and Jitter Test: Enabled  
Frame Loss Rate Test: Enabled  
Back-to-Back Test: Enabled

## Port Configuration

### Used Chassis Summary

Chassis ID	Chassis Name	Address and Port
C-0	New chassis	172.16.255.200:22606

### Used Ports Summary

Port ID	Interface Type	Port Group	Port Peer	Port Speed	Port Rate
P-0-4-4	SFP-O LR 1310 nm	West	N/A	AUTO	488 M
P-0-4-5	SFP-O LR 1310 nm	East	N/A	AUTO	500 M

### Port Traffic Setup

Port ID	IP Address & Gateway	Protocol Segment Profile
P-0-4-4	No address specified	1: Ethernet
P-0-4-5	No address specified	1: Ethernet

## Throughput Test Results

### Test Setup

Duration: 1 seconds  
 Iteration: 1  
 Initial Rate: 100.000 %  
 Maximum Rate: 100.000 %  
 Minimum Rate: 0.100 %  
 Resolution: 0.500 %  
 Use Pass Threshold: No  
 Pass Threshold: 0.000 %  
 Acceptable Loss: 0.000 %  
 Rate Result Scope: Common Result  
 Use Fast Binary Search: No

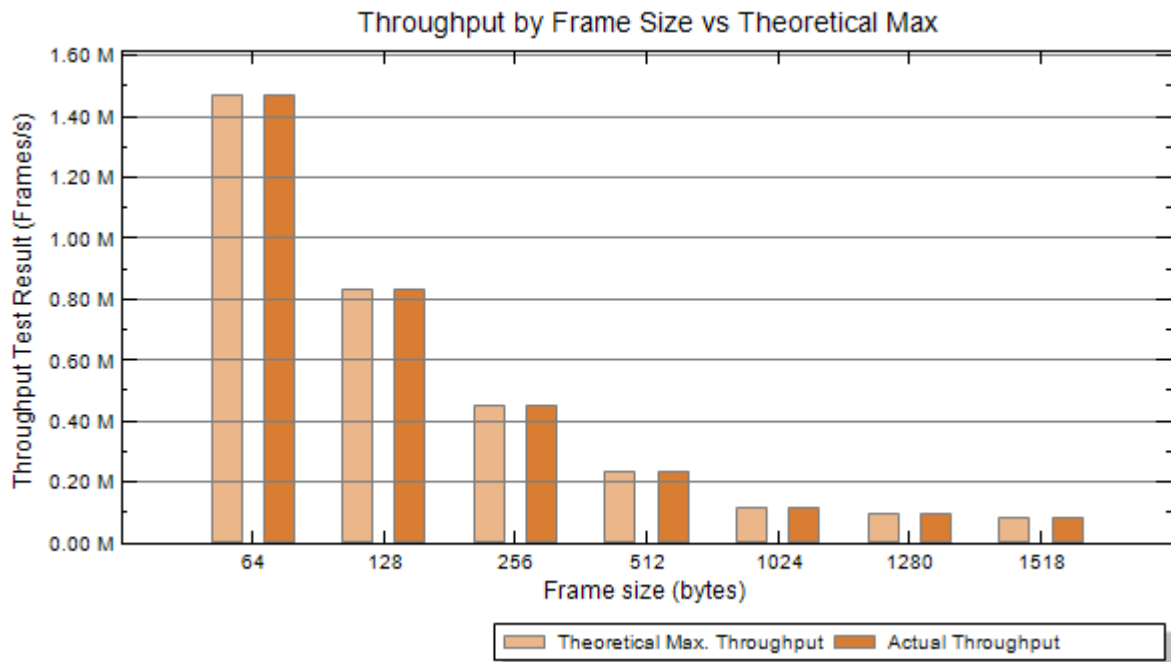
### Test Results

Frame Size	64	128	256	512	1024	1280
Result State	PASS	PASS	PASS	PASS	PASS	PASS
Tx Rate (Percent)	100 %	100 %	100 %	100 %	100 %	100 %
Tx (Frames)	1,470,237	834,459	447,463	232,142	118,294	94,999
Tx Rate (L1) (Bit/s)	988 M	988 M	988 M	988 M	987.99 M	987.99 M
Tx Rate (L2) (Bit/s)	752.76 M	854.49 M	916.4 M	950.85 M	969.06 M	972.79 M
Tx Rate (Fps)	1,470,237	834,459	447,463	232,142	118,294	94,999
Rx (Frames)	1,470,237	834,459	447,463	232,142	118,294	94,999
Loss (Frames)	0	0	0	0	0	0
Loss Rate (Percent)	0 %	0 %	0 %	0 %	0 %	0 %
P-0-4-4						
- Tx (Frames)	726,190	412,162	221,014	114,661	58,429	46,923
- Tx Rate (L1) (Bit/s)	488 M	488 M	488 M	488 M	488 M	488 M
- Tx Rate (L2) (Bit/s)	371.81 M	422.05 M	452.64 M	469.65 M	478.65 M	480.49 M
- Tx Rate (Fps)	726,190	412,162	221,014	114,661	58,429	46,923
- Rx (Frames)	744,047	422,297	226,449	117,481	59,865	48,076
- Rx Rate (L1) (Bit/s)	500 M	500 M	500 M	500 M	499.99 M	499.99 M
- Rx Rate (L2) (Bit/s)	380.95 M	432.43 M	463.77 M	481.2 M	490.41 M	492.3 M
- Rx Rate (Fps)	744,047	422,297	226,449	117,481	59,865	48,076
P-0-4-5						
- Tx (Frames)	744,047	422,297	226,449	117,481	59,865	48,076
- Tx Rate (L1) (Bit/s)	500 M	500 M	500 M	500 M	499.99 M	499.99 M
- Tx Rate (L2) (Bit/s)	380.95 M	432.43 M	463.77 M	481.2 M	490.41 M	492.3 M
- Tx Rate (Fps)	744,047	422,297	226,449	117,481	59,865	48,076
- Rx (Frames)	726,190	412,162	221,014	114,661	58,429	46,923
- Rx Rate (L1) (Bit/s)	488 M	488 M	488 M	488 M	488 M	488 M
- Rx Rate (L2) (Bit/s)	371.81 M	422.05 M	452.64 M	469.65 M	478.65 M	480.49 M
- Rx Rate (Fps)	726,190	412,162	221,014	114,661	58,429	46,923

Frame Size	1518
Result State	PASS
Tx Rate (Percent)	100 %
Tx (Frames)	80,298
Tx Rate (L1) (Bit/s)	987.99 M
Tx Rate (L2) (Bit/s)	975.14 M
Tx Rate (Fps)	80,298
Rx (Frames)	80,298
Loss (Frames)	0
Loss Rate (Percent)	0 %
P-0-4-4	
- Tx (Frames)	39,661
- Tx Rate (L1) (Bit/s)	487.99 M
- Tx Rate (L2) (Bit/s)	481.64 M
- Tx Rate (Fps)	39,661
- Rx (Frames)	40,637
- Rx Rate (L1) (Bit/s)	500 M
- Rx Rate (L2) (Bit/s)	493.5 M

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- Rx Rate (Fps)	40,637
P-0-4-5	
- Tx (Frames)	40,637
- Tx Rate (L1) (Bit/s)	500 M
- Tx Rate (L2) (Bit/s)	493.5 M
- Tx Rate (Fps)	40,637
- Rx (Frames)	39,661
- Rx Rate (L1) (Bit/s)	487.99 M
- Rx Rate (L2) (Bit/s)	481.64 M
- Rx Rate (Fps)	39,661



## Latency and Jitter Test Results

### Test Setup

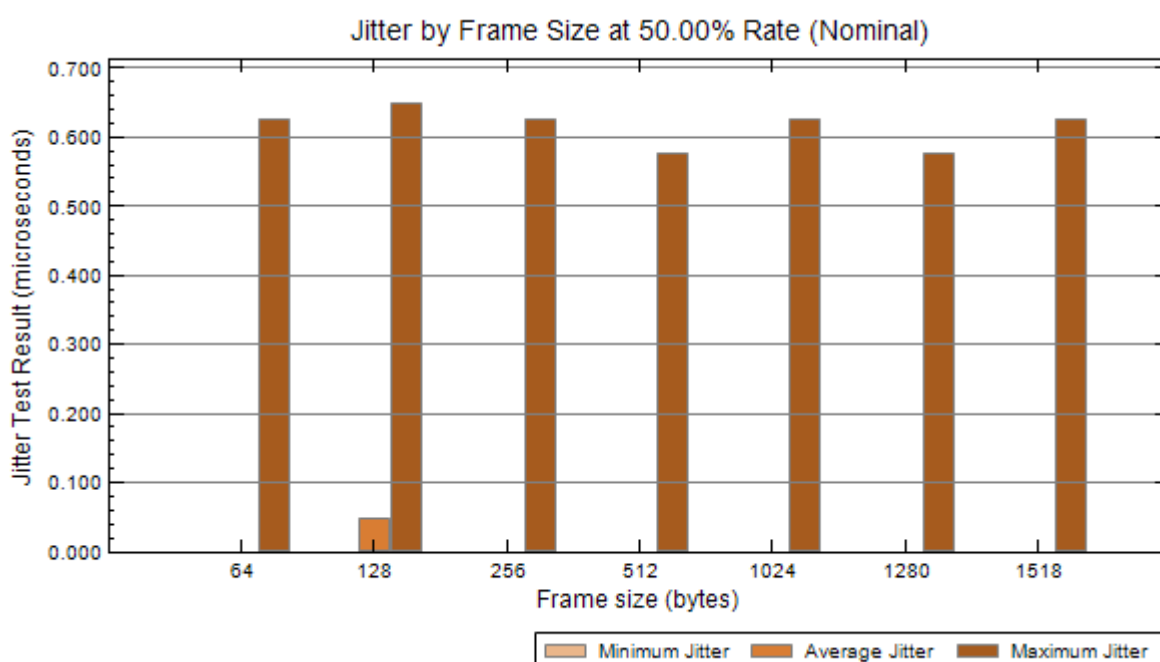
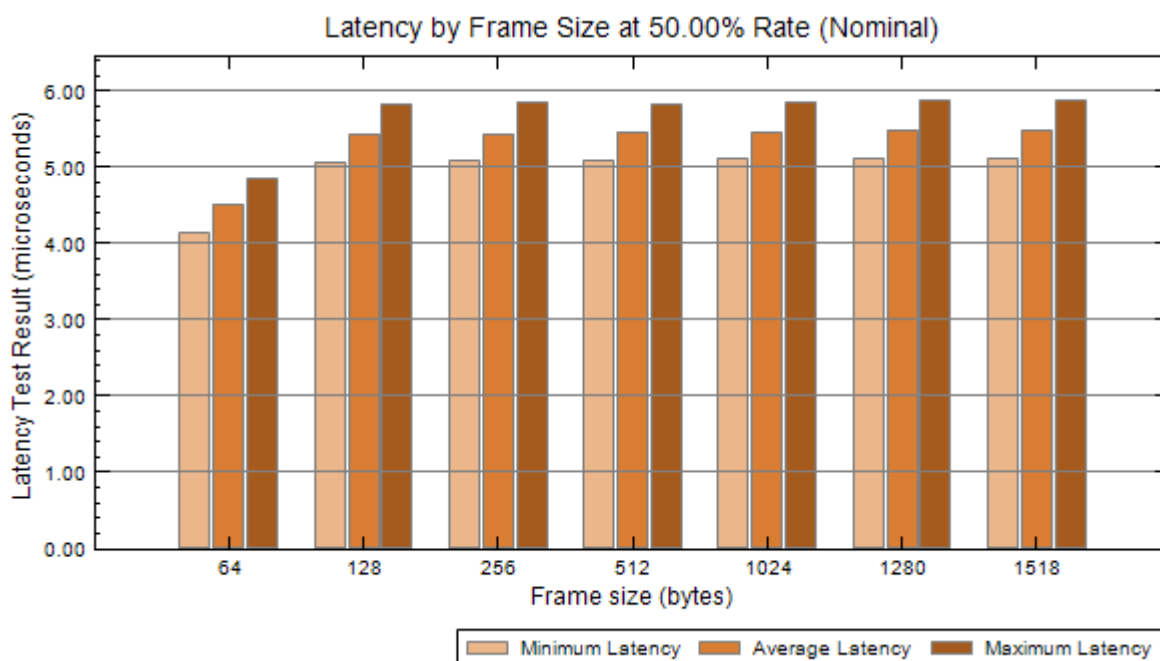
Duration: 1 seconds  
 Iteration: 1  
 Latency Mode: Last-To-Last  
 Relative to Throughput: Yes

### Test Results

#### Results for 50.00% Rate (Nominal)

Frame Size	64	128	256	512	1024	1280
Result State	PASS	PASS	PASS	PASS	PASS	PASS
Tx Rate (Percent)	50 %	50 %	50 %	50 %	50 %	50 %
Tx Rate (L1) (Bit/s)	494 M	494 M	494 M	493.99 M	493.99 M	493.99 M
Tx Rate (Fps)	735,118	417,229	223,731	116,070	59,146	47,499
Tx (Frames)	735,118	417,229	223,731	116,070	59,146	47,499
Rx (Frames)	735,118	417,229	223,731	116,070	59,146	47,499
P-0-4-4						
- Tx (Frames)	363,095	206,081	110,507	57,330	29,214	23,461
- Rx (Frames)	372,023	211,148	113,224	58,740	29,932	24,038
- Avg Latency (micsec)	4.521	5.432	5.448	5.459	5.467	5.475
- Min Latency (micsec)	4.138	5.061	5.077	5.085	5.101	5.109
- Max Latency (micsec)	4.860	5.830	5.846	5.830	5.822	5.830
- Avg Jitter (micsec)	0.000	0.000	0.000	0.000	0.000	0.000
- Min Jitter (micsec)	0.000	0.000	0.000	0.000	0.000	0.000
- Max Jitter (micsec)	0.601	0.601	0.553	0.529	0.577	0.577
P-0-4-5						
- Tx (Frames)	372,023	211,148	113,224	58,740	29,932	24,038
- Rx (Frames)	363,095	206,081	110,507	57,330	29,214	23,461
- Avg Latency (micsec)	4.518	5.425	5.421	5.432	5.454	5.461
- Min Latency (micsec)	4.138	5.109	5.101	5.085	5.125	5.133
- Max Latency (micsec)	4.836	5.830	5.798	5.806	5.846	5.878
- Avg Jitter (micsec)	0.000	0.097	0.000	0.000	0.000	0.000
- Min Jitter (micsec)	0.000	0.000	0.000	0.000	0.000	0.000
- Max Jitter (micsec)	0.625	0.649	0.625	0.577	0.625	0.577

Frame Size	1518
Result State	PASS
Tx Rate (Percent)	50 %
Tx Rate (L1) (Bit/s)	493.98 M
Tx Rate (Fps)	40,148
Tx (Frames)	40,148
Rx (Frames)	40,148
P-0-4-4	
- Tx (Frames)	19,830
- Rx (Frames)	20,318
- Avg Latency (micsec)	5.485
- Min Latency (micsec)	5.117
- Max Latency (micsec)	5.862
- Avg Jitter (micsec)	0.000
- Min Jitter (micsec)	0.000
- Max Jitter (micsec)	0.625
P-0-4-5	
- Tx (Frames)	20,318
- Rx (Frames)	19,830
- Avg Latency (micsec)	5.456
- Min Latency (micsec)	5.141
- Max Latency (micsec)	5.838
- Avg Jitter (micsec)	0.000
- Min Jitter (micsec)	0.000
- Max Jitter (micsec)	0.553



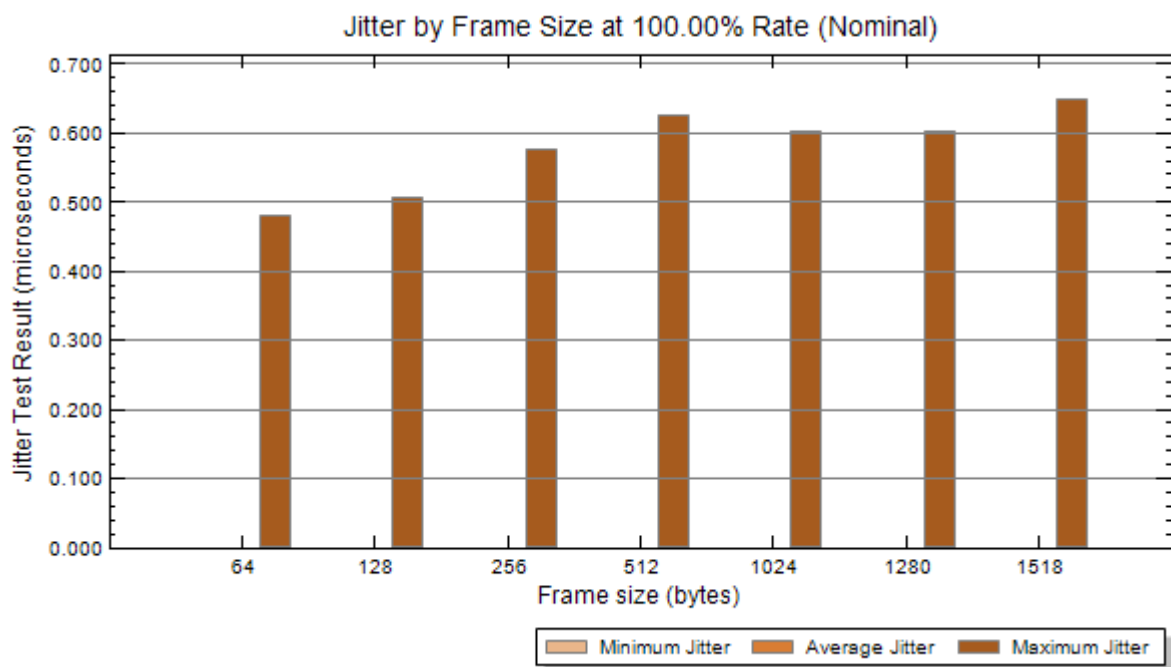
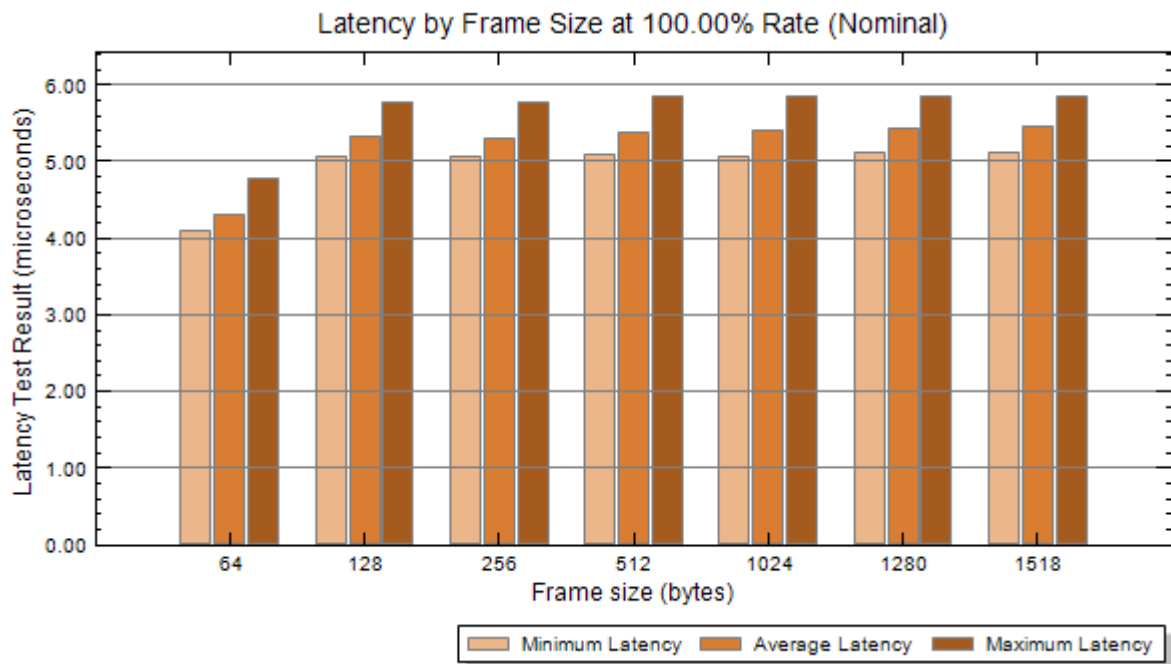
### Results for 100.00% Rate (Nominal)

Frame Size	64	128	256	512	1024	1280
Result State	PASS	PASS	PASS	PASS	PASS	PASS
Tx Rate (Percent)	100 %	100 %	100 %	100 %	100 %	100 %
Tx Rate (L1) (Bit/s)	988 M	988 M	988 M	988 M	987.99 M	987.99 M
Tx Rate (Fps)	1,470,237	834,459	447,463	232,142	118,294	94,999
Tx (Frames)	1,470,237	834,459	447,463	232,142	118,294	94,999
Rx (Frames)	1,470,237	834,459	447,463	232,142	118,294	94,999
P-0-4-4						
- Tx (Frames)	726,190	412,162	221,014	114,661	58,429	46,923
- Rx (Frames)	744,047	422,297	226,449	117,481	59,865	48,076

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- Avg Latency (micsec)	4.314	5.312	5.297	5.368	5.373	5.383
- Min Latency (micsec)	4.090	5.085	5.077	5.085	5.077	5.109
- Max Latency (micsec)	4.764	5.710	5.774	5.854	5.846	5.854
- Avg Jitter (micsec)	0.001	0.000	0.000	0.000	0.000	0.000
- Min Jitter (micsec)	0.000	0.000	0.000	0.000	0.000	0.000
- Max Jitter (micsec)	0.457	0.481	0.577	0.625	0.601	0.577
P-0-4-5						
- Tx (Frames)	744,047	422,297	226,449	117,481	59,865	48,076
- Rx (Frames)	726,190	412,162	221,014	114,661	58,429	46,923
- Avg Latency (micsec)	4.321	5.320	5.289	5.404	5.460	5.471
- Min Latency (micsec)	4.114	5.061	5.077	5.085	5.101	5.133
- Max Latency (micsec)	4.788	5.782	5.774	5.830	5.846	5.854
- Avg Jitter (micsec)	0.001	0.000	0.000	0.000	0.000	0.000
- Min Jitter (micsec)	0.000	0.000	0.000	0.000	0.000	0.000
- Max Jitter (micsec)	0.481	0.505	0.553	0.625	0.601	0.601

<b>Frame Size</b>	<b>1518</b>
Result State	PASS
Tx Rate (Percent)	100 %
Tx Rate (L1) (Bit/s)	987.99 M
Tx Rate (Fps)	80,298
Tx (Frames)	80,298
Rx (Frames)	80,298
P-0-4-4	
- Tx (Frames)	39,661
- Rx (Frames)	40,637
- Avg Latency (micsec)	5.458
- Min Latency (micsec)	5.117
- Max Latency (micsec)	5.838
- Avg Jitter (micsec)	0.000
- Min Jitter (micsec)	0.000
- Max Jitter (micsec)	0.649
P-0-4-5	
- Tx (Frames)	40,637
- Rx (Frames)	39,661
- Avg Latency (micsec)	5.458
- Min Latency (micsec)	5.117
- Max Latency (micsec)	5.838
- Avg Jitter (micsec)	0.000
- Min Jitter (micsec)	0.000
- Max Jitter (micsec)	0.649



## Frame Loss Rate Test Results

### Test Setup

Duration: 1 seconds  
Iteration: 1

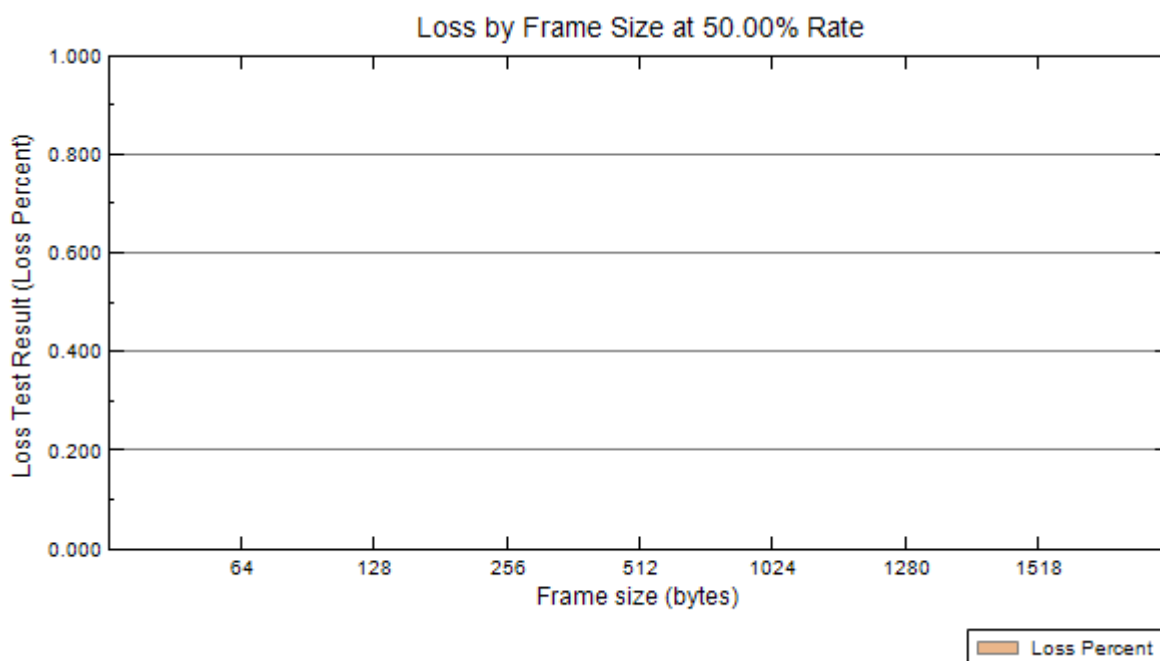
### Test Results

#### Results for 50.00% Rate

Frame Size	64	128	256	512	1024	1280
Result State	PASS	PASS	PASS	PASS	PASS	PASS
Tx (Frames)	735,118	417,229	223,731	116,070	59,146	47,499
Tx Rate (Fps)	735,118	417,229	223,731	116,070	59,146	47,499
Tx Rate (L1) (Bit/s)	494 M	494 M	494 M	493.99 M	493.99 M	493.99 M
Rx (Frames)	735,118	417,229	223,731	116,070	59,146	47,499
Rx Rate (Fps)	735.12 K	417.23 K	223.73 K	116.07 K	59.15 K	47.5 K
Rx Rate (L1) (Bit/s)	494 M	494 M	494 M	493.99 M	493.99 M	493.99 M
Loss (Frames)	0	0	0	0	0	0
Loss Rate (Percent)	0 %	0 %	0 %	0 %	0 %	0 %
P-0-4-4						
- Tx (Frames)	363,095	206,081	110,507	57,330	29,214	23,461
- Tx Rate (L1) (Bit/s)	244 M	244 M	244 M	244 M	244 M	243.99 M
- Tx Rate (Fps)	363,095	206,081	110,507	57,330	29,214	23,461
- Rx (Frames)	372,023	211,148	113,224	58,740	29,932	24,038
- Rx Rate (L1) (Bit/s)	250 M	250 M	250 M	250 M	249.99 M	250 M
- Rx Rate (Fps)	372,023	211,148	113,224	58,740	29,932	24,038
P-0-4-5						
- Tx (Frames)	372,023	211,148	113,224	58,740	29,932	24,038
- Tx Rate (L1) (Bit/s)	250 M	250 M	250 M	250 M	249.99 M	250 M
- Tx Rate (Fps)	372,023	211,148	113,224	58,740	29,932	24,038
- Rx (Frames)	363,095	206,081	110,507	57,330	29,214	23,461
- Rx Rate (L1) (Bit/s)	244 M	244 M	244 M	244 M	244 M	243.99 M
- Rx Rate (Fps)	363,095	206,081	110,507	57,330	29,214	23,461

Frame Size	1518
Result State	PASS
Tx (Frames)	40,148
Tx Rate (Fps)	40,148
Tx Rate (L1) (Bit/s)	493.98 M
Rx (Frames)	40,148
Rx Rate (Fps)	40.15 K
Rx Rate (L1) (Bit/s)	493.98 M
Loss (Frames)	0
Loss Rate (Percent)	0 %
P-0-4-4	
- Tx (Frames)	19,830
- Tx Rate (L1) (Bit/s)	243.99 M
- Tx Rate (Fps)	19,830
- Rx (Frames)	20,318
- Rx Rate (L1) (Bit/s)	249.99 M
- Rx Rate (Fps)	20,318
P-0-4-5	
- Tx (Frames)	20,318
- Tx Rate (L1) (Bit/s)	249.99 M
- Tx Rate (Fps)	20,318
- Rx (Frames)	19,830
- Rx Rate (L1) (Bit/s)	243.99 M
- Rx Rate (Fps)	19,830





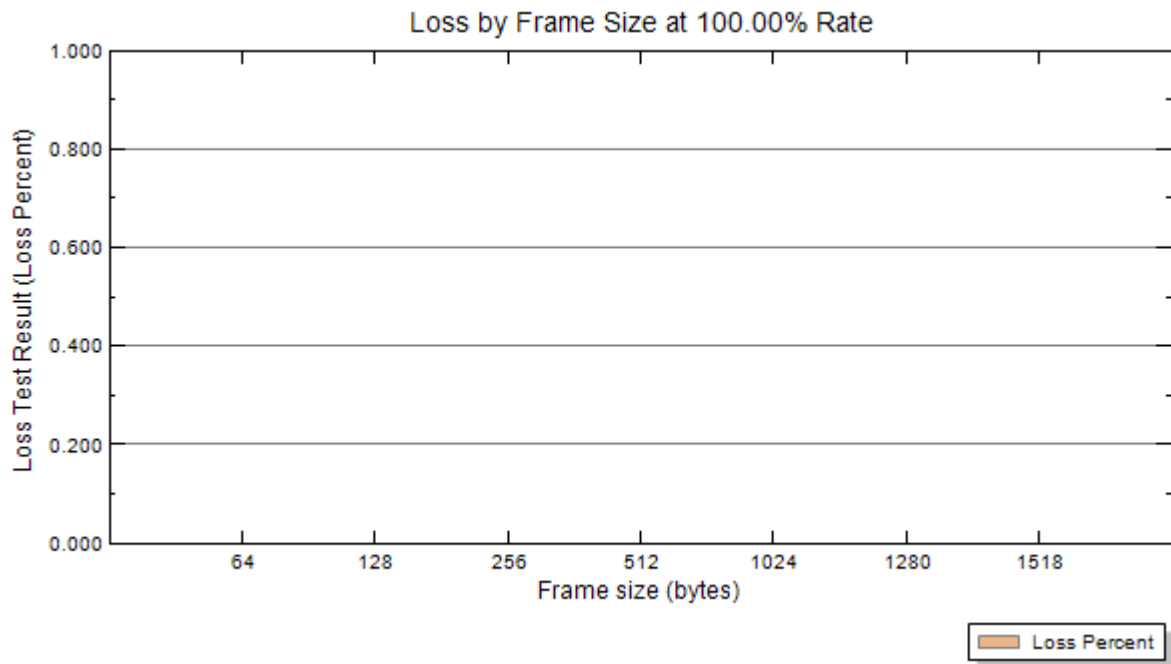
### Results for 100.00% Rate

Frame Size	64	128	256	512	1024	1280
Result State	PASS	PASS	PASS	PASS	PASS	PASS
Tx (Frames)	1,470,237	834,459	447,463	232,142	118,294	94,999
Tx Rate (Fps)	1,470,237	834,459	447,463	232,142	118,294	94,999
Tx Rate (L1) (Bit/s)	988 M	988 M	988 M	988 M	987.99 M	987.99 M
Rx (Frames)	1,470,237	834,459	447,463	232,142	118,294	94,999
Rx Rate (Fps)	1.47 M	834.46 K	447.46 K	232.14 K	118.29 K	95 K
Rx Rate (L1) (Bit/s)	988 M	988 M	988 M	988 M	987.99 M	987.99 M
Loss (Frames)	0	0	0	0	0	0
Loss Rate (Percent)	0 %	0 %	0 %	0 %	0 %	0 %
P-0-4-4						
- Tx (Frames)	726,190	412,162	221,014	114,661	58,429	46,923
- Tx Rate (L1) (Bit/s)	488 M	488 M	488 M	488 M	488 M	488 M
- Tx Rate (Fps)	726,190	412,162	221,014	114,661	58,429	46,923
- Rx (Frames)	744,047	422,297	226,449	117,481	59,865	48,076
- Rx Rate (L1) (Bit/s)	500 M	500 M	500 M	500 M	499.99 M	499.99 M
- Rx Rate (Fps)	744,047	422,297	226,449	117,481	59,865	48,076
P-0-4-5						
- Tx (Frames)	744,047	422,297	226,449	117,481	59,865	48,076
- Tx Rate (L1) (Bit/s)	500 M	500 M	500 M	500 M	499.99 M	499.99 M
- Tx Rate (Fps)	744,047	422,297	226,449	117,481	59,865	48,076
- Rx (Frames)	726,190	412,162	221,014	114,661	58,429	46,923
- Rx Rate (L1) (Bit/s)	488 M	488 M	488 M	488 M	488 M	488 M
- Rx Rate (Fps)	726,190	412,162	221,014	114,661	58,429	46,923

<b>Frame Size</b>	<b>1518</b>
Result State	PASS
Tx (Frames)	80,298
Tx Rate (Fps)	80,298
Tx Rate (L1) (Bit/s)	987.99 M
Rx (Frames)	80,298
Rx Rate (Fps)	80.3 K
Rx Rate (L1) (Bit/s)	987.99 M
Loss (Frames)	0
Loss Rate (Percent)	0 %
P-0-4-4	
- Tx (Frames)	39,661
- Tx Rate (L1) (Bit/s)	487.99 M
- Tx Rate (Fps)	39,661

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- Rx (Frames)	40,637
- Rx Rate (L1) (Bit/s)	500 M
- Rx Rate (Fps)	40,637
P-0-4-5	
- Tx (Frames)	40,637
- Tx Rate (L1) (Bit/s)	500 M
- Tx Rate (Fps)	40,637
- Rx (Frames)	39,661
- Rx Rate (L1) (Bit/s)	487.99 M
- Rx Rate (Fps)	39,661



## Back-to-Back Test Results

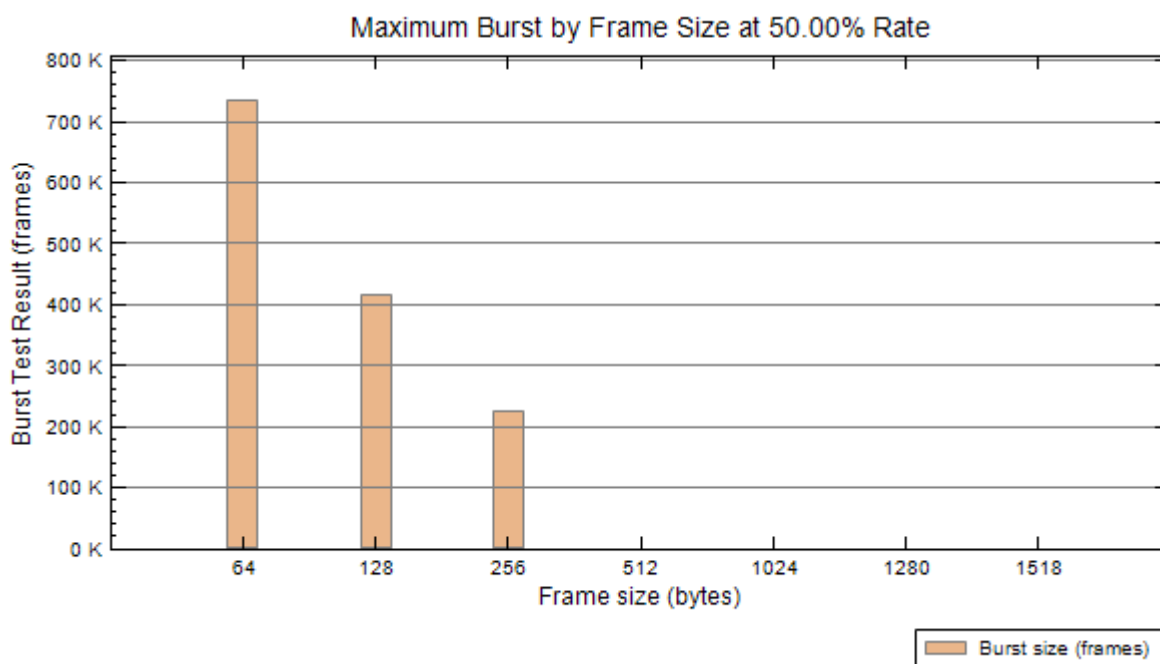
### Test Setup

Duration: 1 seconds  
 Iteration: 1  
 Rate Result Scope: Common Result

### Test Results

#### Results for 50.00% Rate

Frame Size	64	128	256
Result State	PASS	PASS	PASS
Tx Burst (Frames)	735,118	417,229	223,731
Tx Burst (Bytes)	47,047,552	53,405,312	57,275,136
Max Offered Rate (Fps)	735,118	417,229	223,731
Max Offered Rate (Bit/s)	500 M	500 M	500 M
P-0-4-4			
- Tx Burst (Frames)	363,095	206,081	110,507
- Tx Burst (Bytes)	23,238,080	26,378,368	28,289,792
P-0-4-5			
- Tx Burst (Frames)	372,023	211,148	113,224
- Tx Burst (Bytes)	23,809,472	27,026,944	28,985,344



#### Results for 100.00% Rate

Frame Size	64	128	256
Result State	PASS	PASS	PASS
Tx Burst (Frames)	1,470,237	834,459	447,463
Tx Burst (Bytes)	94,095,168	106,810,752	114,550,528
Max Offered Rate (Fps)	1,470,237	834,459	447,463
Max Offered Rate (Bit/s)	988 M	988 M	988 M
P-0-4-4			
- Tx Burst (Frames)	726,190	412,162	221,014
- Tx Burst (Bytes)	46,476,160	52,756,736	56,579,584
P-0-4-5			

Image not found.

- Tx Burst (Frames)	744,047	422,297	226,449
- Tx Burst (Bytes)	47,619,008	54,054,016	57,970,944

