Thursday, January 3, 2019

The following test results were conducted by Viavi Solutions Engineers in December of 2018. The tests were performed on a 200 meter (656 feet) channel of Plenum GameChanger (part number 258300336) at 1 Gb/s with very strict pass/fail criteria - zero loss, zero jitter, etc.

Test results may vary from time to time based on the equipment being used and when it was last calibrated.

**Generated by Viavi 5800v2**

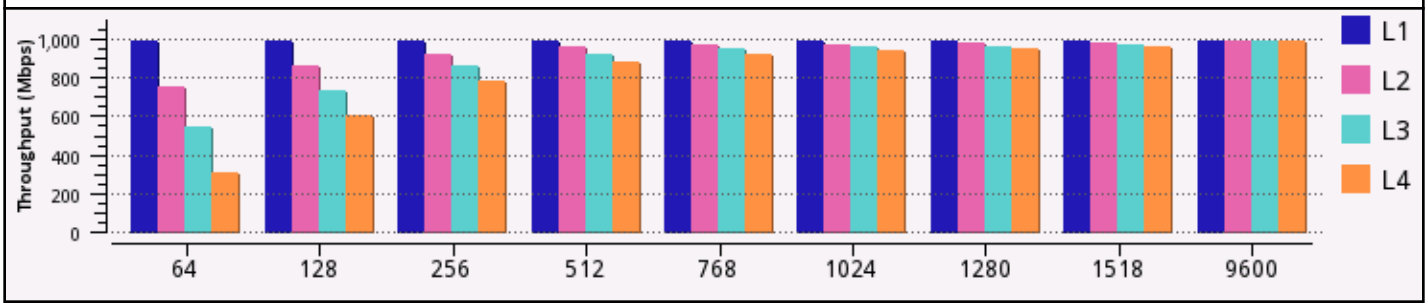
# Enhanced RFC 2544 Test

| Overall Test Result: Pass |
|---|


| | |
|---|---|
| Mode | Symmetric Loopback |
| Tests to Run | Throughput, Latency, Packet Jitter, Frame Loss |
| Customer Name | Paige DataCom |
| Technician ID | -- |
| Test Location | -- |
| Work Order | -- |
| Comments/Notes | -- |

| | |
|---|---|
| Instrument | T-BERD5800V2 |
| Serial Number | WMME0132270097 |
| SW Version | 26.3.1 |
| Start Date | 12/17/2018 |
| End Date | 12/17/2018 |
| Start Time | 8:25:36 AM PST |
| End Time | 8:58:46 AM PST |

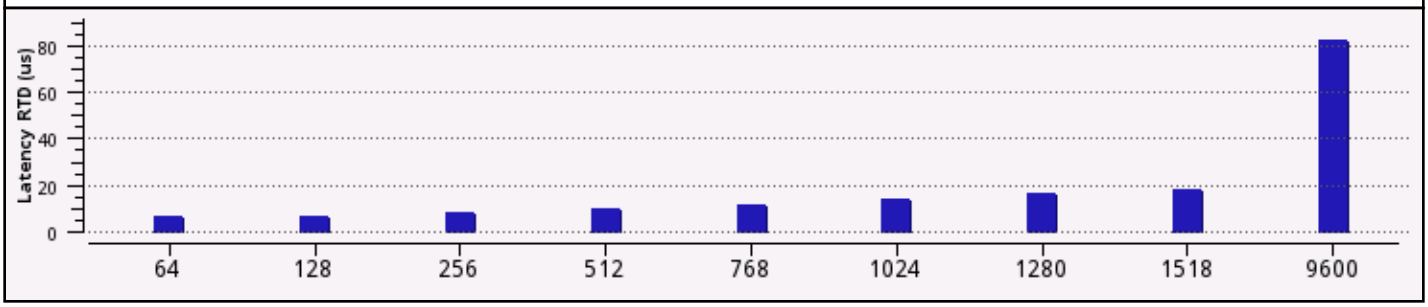
**Enhanced RFC 2544: Throughput Test Graph**




**Enhanced RFC 2544: Throughput Test Results**

| *Pass/Fail* | *Frame Length (Bytes)* | *Measured L1 Rate (Mbps)* | *Measured L2 Rate (Mbps)* | *Measured L3 Rate (Mbps)* | *Measured L4 Rate (Mbps)* | *Measured Rate (frms/sec)* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|---|---|---|---|
| Pass | 64 | 999.90 | 761.83 | 547.56 | 309.49 | 1,487,945 | No | 1000.00 |
| Pass | 128 | 999.90 | 864.78 | 743.17 | 608.05 | 844,510 | No | 1000.00 |
| Pass | 256 | 999.90 | 927.44 | 862.23 | 789.78 | 452,853 | No | 1000.00 |
| Pass | 512 | 999.90 | 962.31 | 928.48 | 890.89 | 234,939 | No | 1000.00 |
| Pass | 768 | 999.90 | 974.52 | 951.68 | 926.30 | 158,614 | No | 1000.00 |
| Pass | 1024 | 999.90 | 980.74 | 963.51 | 944.35 | 119,720 | No | 1000.00 |
| Pass | 1280 | 999.91 | 984.53 | 970.68 | 955.30 | 96,145 | No | 1000.00 |
| Pass | 1518 | 999.91 | 986.91 | 975.20 | 962.20 | 81,267 | No | 1000.00 |
| Pass | 9600 | 999.94 | 997.86 | 995.99 | 993.91 | 12,993 | No | 1000.00 |

**Enhanced RFC 2544: Latency Test Graph**

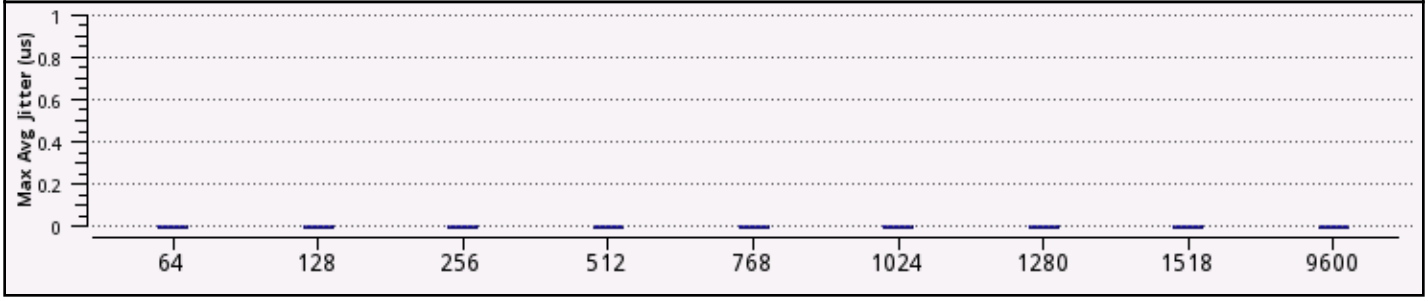



**Enhanced RFC 2544: Latency Test Results**

| *Pass/Fail* | *Frame Length (Bytes)* | *Latency RTD (us)* | *Measured L1 Rate (Mbps)* | *Measured L1 (% Line Rate)* | *Measured Rate (frms/sec)* | *Pause Detect* |
|---|---|---|---|---|---|---|
| Pass | 64 | 6.75 | 999.90 | 99.990 | 1,487,945 | No |

| | | | | | | |
|---|---|---|---|---|---|---|
| Pass | 128 | 7.33 | 999.90 | 99.990 | 844,510 | No |
| Pass | 256 | 8.32 | 999.90 | 99.990 | 452,853 | No |
| Pass | 512 | 10.31 | 999.90 | 99.990 | 234,939 | No |
| Pass | 768 | 12.32 | 999.90 | 99.990 | 158,614 | No |
| Pass | 1024 | 14.43 | 999.90 | 99.990 | 119,720 | No |
| Pass | 1280 | 16.53 | 999.91 | 99.991 | 96,145 | No |
| Pass | 1518 | 18.33 | 999.91 | 99.991 | 81,267 | No |
| Pass | 9600 | 82.98 | 999.94 | 99.994 | 12,993 | No |

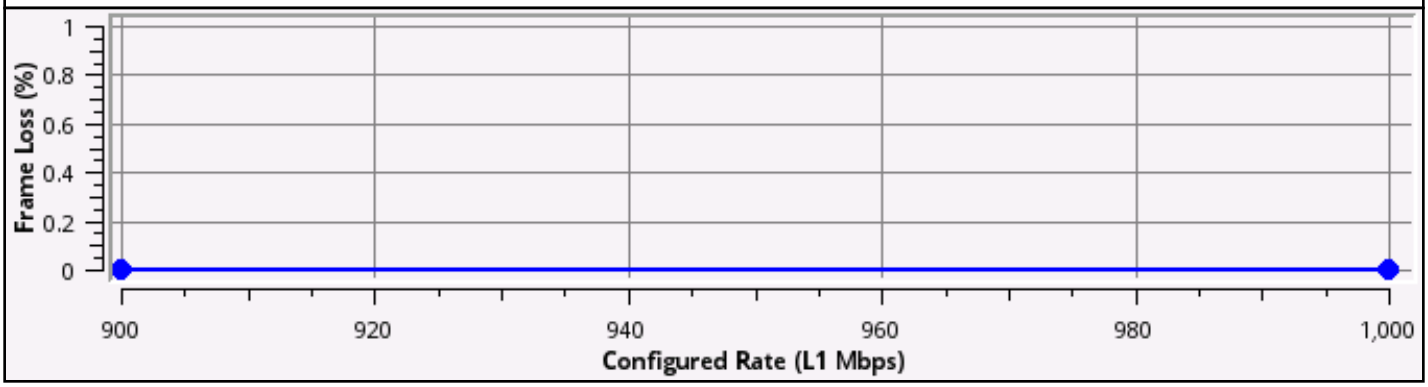
**Enhanced RFC 2544: Jitter Test Graph**




**Enhanced RFC 2544: Jitter Test Results**

| *Pass/Fail* | *Frame Length (Bytes)* | *Max Avg Jitter (us)* | *Measured L1 Rate (Mbps)* | *Measured L1 (% Line Rate)* | *Measured Rate (frms/sec)* | *Pause Detect* |
|---|---|---|---|---|---|---|
| Pass | 64 | 0.00 | 999.90 | 99.990 | 1,487,945 | No |
| Pass | 128 | 0.00 | 999.90 | 99.990 | 844,510 | No |
| Pass | 256 | 0.00 | 999.90 | 99.990 | 452,853 | No |
| Pass | 512 | 0.00 | 999.90 | 99.990 | 234,939 | No |
| Pass | 768 | 0.00 | 999.90 | 99.990 | 158,614 | No |
| Pass | 1024 | 0.00 | 999.90 | 99.990 | 119,720 | No |
| Pass | 1280 | 0.00 | 999.91 | 99.991 | 96,145 | No |
| Pass | 1518 | 0.00 | 999.91 | 99.991 | 81,267 | No |
| Pass | 9600 | 0.00 | 999.94 | 99.994 | 12,993 | No |

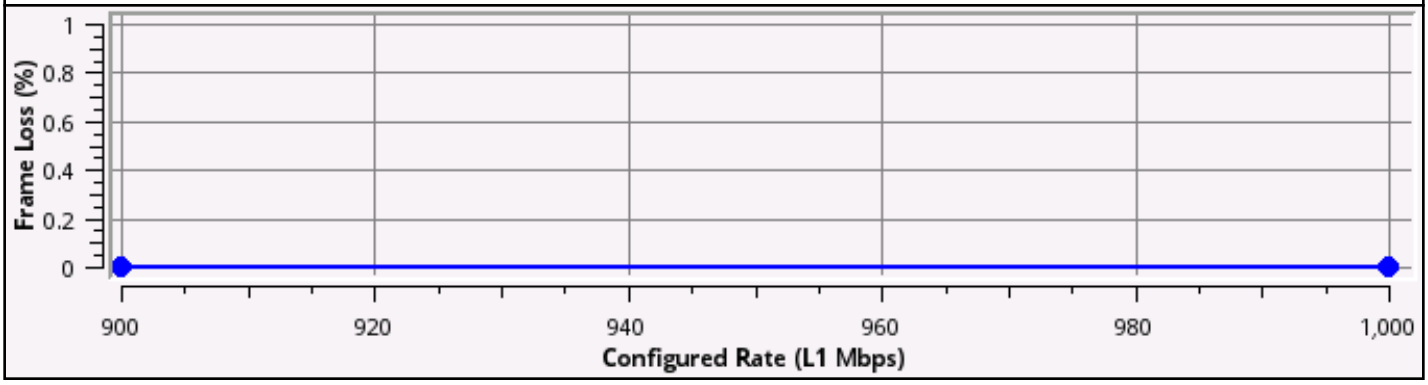
**Enhanced RFC 2544: 64 Byte Frame Loss Test Graph**




**Enhanced RFC 2544: 64 Byte Frame Loss Test Results**

| *Throughput Rate (L1 Mbps)* | *Frame Loss Rate (%)* | *Frames Lost* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|
| 999.90 | 0.00 | 0 | No | 1000.00 |
| 900.00 | 0.00 | 0 | No | 900.00 |

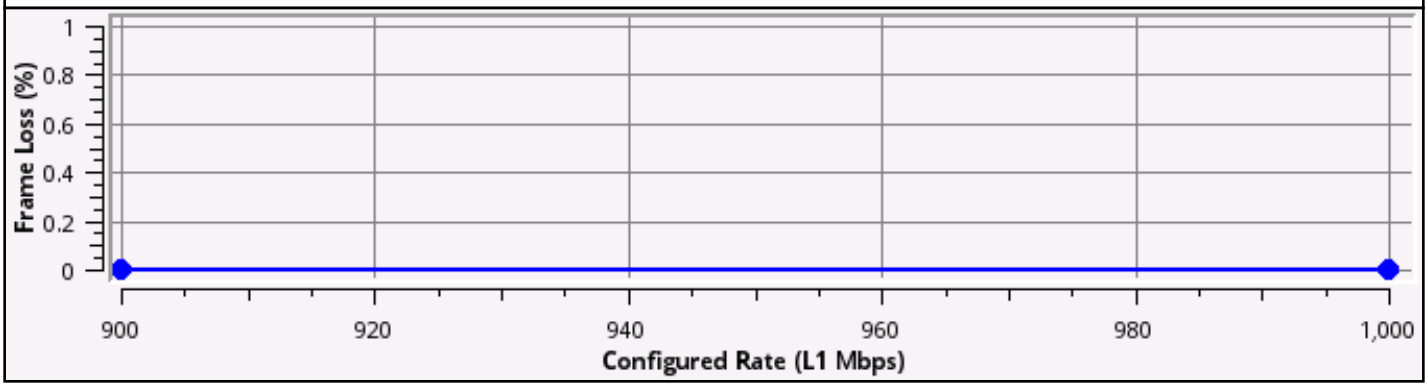
**Enhanced RFC 2544: 128 Byte Frame Loss Test Graph**




**Enhanced RFC 2544: 128 Byte Frame Loss Test Results**

| *Throughput Rate (L1 Mbps)* | *Frame Loss Rate (%)* | *Frames Lost* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|
| 999.90 | 0.00 | 0 | No | 1000.00 |
| 900.00 | 0.00 | 0 | No | 900.00 |

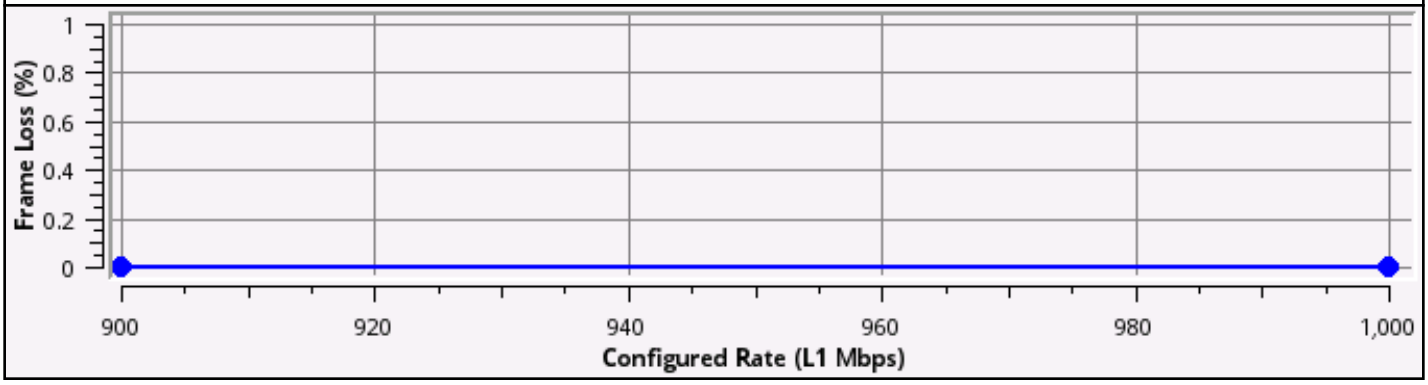
**Enhanced RFC 2544: 256 Byte Frame Loss Test Graph**




**Enhanced RFC 2544: 256 Byte Frame Loss Test Results**

| *Throughput Rate (L1 Mbps)* | *Frame Loss Rate (%)* | *Frames Lost* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|
| 999.90 | 0.00 | 0 | No | 1000.00 |
| 900.00 | 0.00 | 0 | No | 900.00 |

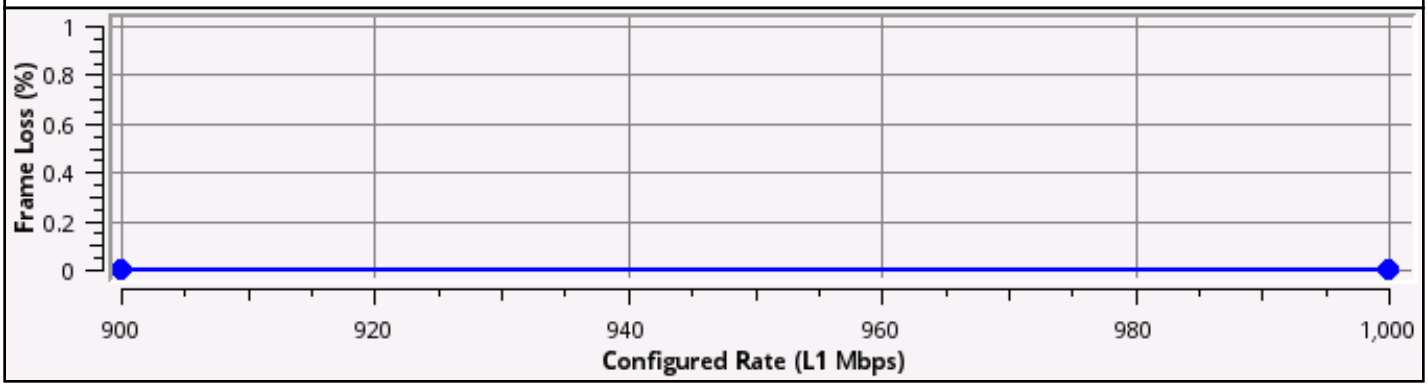
**Enhanced RFC 2544: 512 Byte Frame Loss Test Graph**




**Enhanced RFC 2544: 512 Byte Frame Loss Test Results**

| *Throughput Rate (L1 Mbps)* | *Frame Loss Rate (%)* | *Frames Lost* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|
| 999.90 | 0.00 | 0 | No | 1000.00 |
| 900.00 | 0.00 | 0 | No | 900.00 |

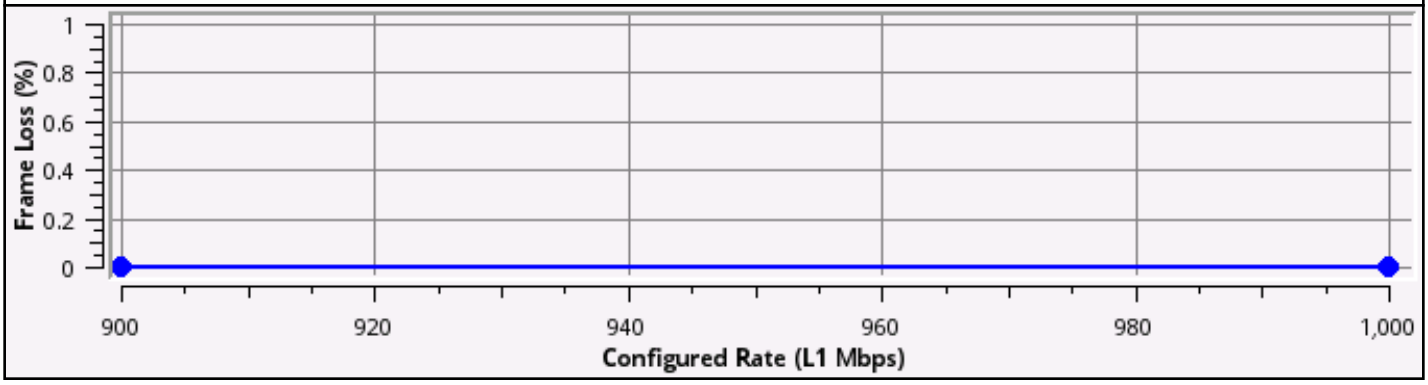
**Enhanced RFC 2544: 768 Byte Frame Loss Test Graph**




**Enhanced RFC 2544: 768 Byte Frame Loss Test Results**

| *Throughput Rate (L1 Mbps)* | *Frame Loss Rate (%)* | *Frames Lost* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|
| 999.90 | 0.00 | 0 | No | 1000.00 |
| 900.00 | 0.00 | 0 | No | 900.00 |

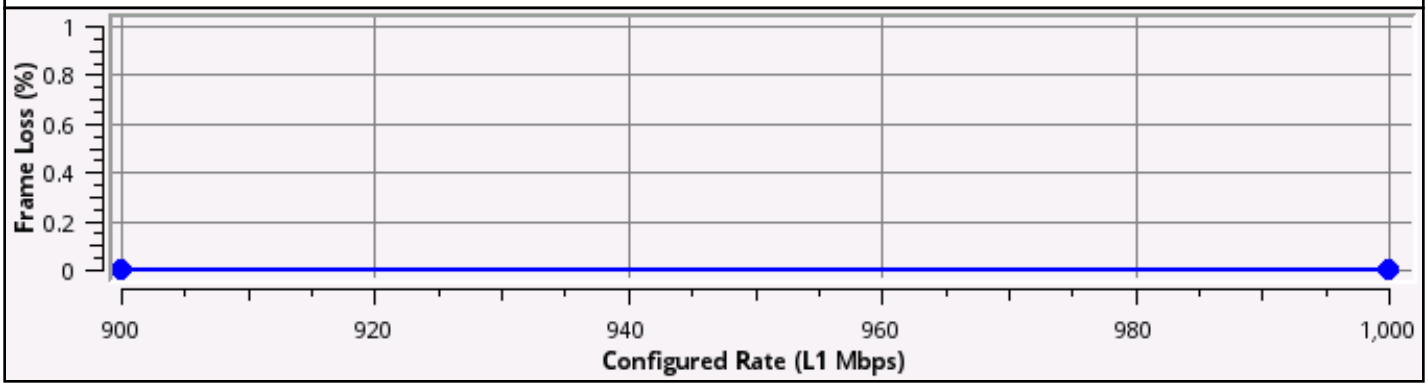
**Enhanced RFC 2544: 1024 Byte Frame Loss Test Graph**




**Enhanced RFC 2544: 1024 Byte Frame Loss Test Results**

| *Throughput Rate (L1 Mbps)* | *Frame Loss Rate (%)* | *Frames Lost* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|
| 999.90 | 0.00 | 0 | No | 1000.00 |
| 900.00 | 0.00 | 0 | No | 900.00 |

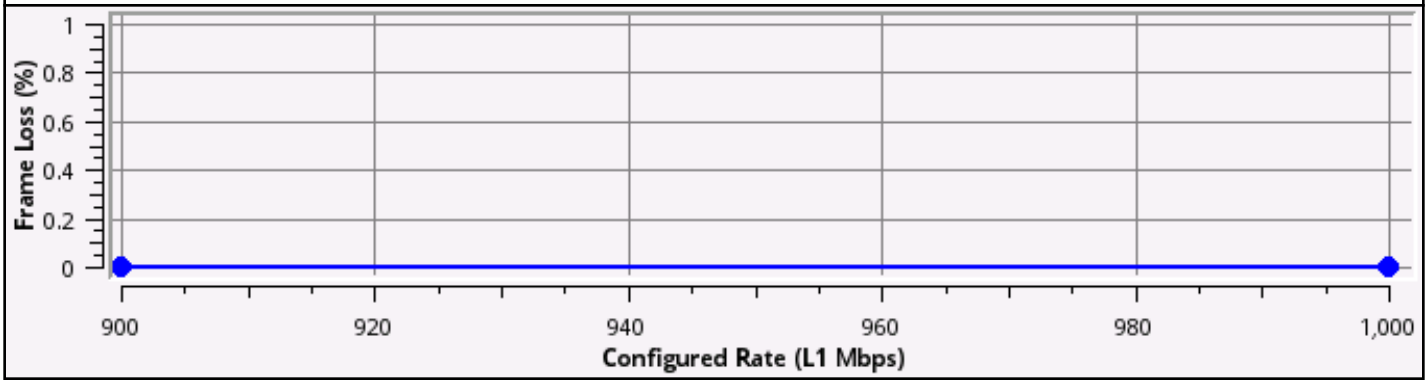
**Enhanced RFC 2544: 1280 Byte Frame Loss Test Graph**




**Enhanced RFC 2544: 1280 Byte Frame Loss Test Results**

| *Throughput Rate (L1 Mbps)* | *Frame Loss Rate (%)* | *Frames Lost* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|
| 999.91 | 0.00 | 0 | No | 1000.00 |
| 900.01 | 0.00 | 0 | No | 900.00 |

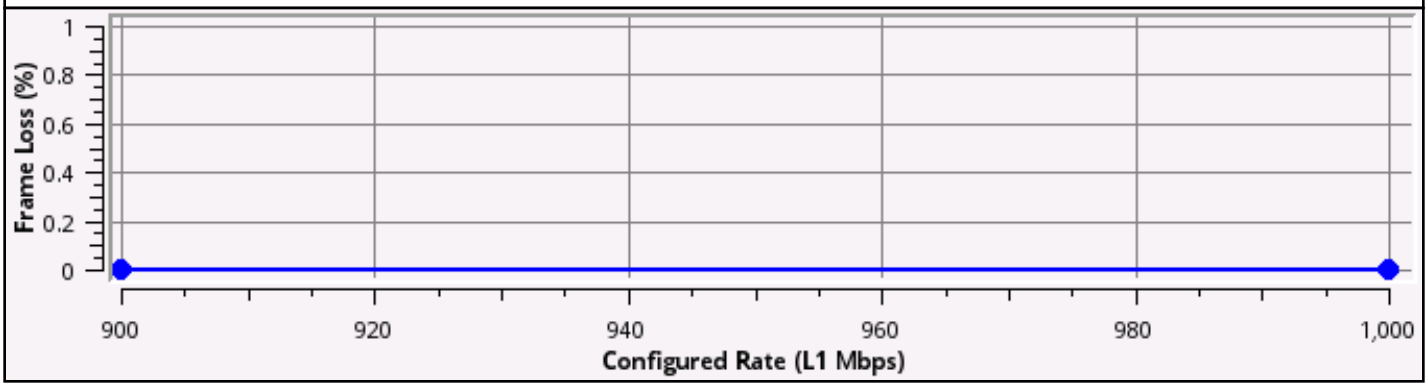
**Enhanced RFC 2544: 1518 Byte Frame Loss Test Graph**




**Enhanced RFC 2544: 1518 Byte Frame Loss Test Results**

| *Throughput Rate (L1 Mbps)* | *Frame Loss Rate (%)* | *Frames Lost* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|
| 999.91 | 0.00 | 0 | No | 1000.00 |
| 900.00 | 0.00 | 0 | No | 900.00 |

**Enhanced RFC 2544: 9600 Byte Frame Loss Test Graph**




**Enhanced RFC 2544: 9600 Byte Frame Loss Test Results**

| *Throughput Rate (L1 Mbps)* | *Frame Loss Rate (%)* | *Frames Lost* | *Pause Detect* | *Cfg Rate (L1 Mbps)* |
|---|---|---|---|---|
| 999.94 | 0.00 | 0 | No | 1000.00 |
| 900.05 | 0.00 | 0 | No | 900.00 |

| **Enhanced RFC 2544: Network Configuration** | |
|---|---|
| Frame Type | DIX |
| Test Mode | Traffic |
| Encapsulation | None |
| Loop Type | Broadcast |
| EtherType | 0x800 |
| Source MAC | 00-80-16-92-FE-5C |
| Auto-increment Source | No |
| Destination MAC | 00-80-16-92-FE-5D |

| **Enhanced RFC 2544: Local Auto Negotiation Status** | |
|---|---|
| Auto Negotiation | On |
| Speed (Mbps) | 1000 |
| Duplex | Full |
| 10Base-TX FDX | Yes |
| 10Base-TX HDX | Yes |
| 100Base-TX FDX | Yes |
| 100Base-TX HDX | Yes |

| | |
|---|---|
| 1000Base-TX FDX | Yes |
| 1000Base-TX HDX | Yes |

| **Enhanced RFC 2544: Test Configuration** | |
|---|---|
| Tests to Run | Throughput, Latency, Packet Jitter, Frame Loss |
| Acterna Payload Version | Version 3 |
| Bandwidth Unit | L1 Mbps |
| Max Test Bandwidth (Mbps) | 1000.00 |
| Frame Lengths Selected (bytes) | 64, 128, 256, 512, 768, 1024, 1280, 1518, 9600 |
| Throughput Measurement Accuracy | To within 10 Mbps |
| Throughput Zeroing-in Process | Viavi Enhanced |
| Throughput Frame Loss Tolerance (%) | 0 |
| All Tests Duration (s) | 60 |
| All Tests Number of Trials | 1 |
| Throughput Pass Threshold | Selected |
| Throughput Pass Threshold (Mbps) | 1000.00 |
| Configure Max Bandwidth per Frame Size | Not Selected |
| Latency Pass Threshold | Selected |
| Latency Pass Threshold (us) | 1000 |
| Packet Jitter Pass Threshold | Selected |
| Packet Jitter Pass Threshold (us) | 0 |
| Frame Loss Test Procedure | RFC 2544 Standard |
| Frame Loss Bandwidth Granularity (Mbps) | 100 |