



# FTBx-8870 Report

| snoqualmievalley-k12 |

PASS

|                |                      |
|----------------|----------------------|
| Report Header: | EXFO Inc.            |
| Report Title:  | snoqualmievalley-k12 |
| Report Date:   | 5/25/2022 3:39:04 PM |
| Type:          | EtherSAM (Y.1564)    |

## Job Information

|                  |                         |
|------------------|-------------------------|
| Job ID:          | RTASK2168488            |
| Circuit ID:      | KCINet:INET.K20.SVSD.35 |
| Contractor Name: |                         |
| Customer Name:   | snoqualmievalley-k12    |
| Operator Name:   | daniel dh               |
| Comment:         |                         |

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## SUMMARY

### Results Summary

| Test Status                       |                       |
|-----------------------------------|-----------------------|
| Service Configuration Test Status | Completed, Pass       |
| Service Performance Test Status   | Completed, Pass       |
| Pass/Fail Verdict                 | PASS                  |
| Start Time                        | 5/25/2022 03:14:37 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         | 0.04403         | 2.17619          | 9499.99                 | 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         | 0.05596         | 2.17588          | 9499.99                 | PASS            |

|                          |                      |
|--------------------------|----------------------|
| <b>VLAN Preservation</b> | No Mismatch Detected |
|--------------------------|----------------------|

| RX Power Level       |       |      |
|----------------------|-------|------|
|                      | Min   | Max  |
| Power Range (dBm)    | -19.0 | -1.0 |
| RX Power Level (dBm) | -2.2  | -2.2 |

| RX Frequency           |                     |                     |
|------------------------|---------------------|---------------------|
|                        | Max Negative Offset | Max Positive Offset |
| Frequency Offset (ppm) | 0.0                 | 0.0                 |

## 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

|                         |                   |
|-------------------------|-------------------|
| <b>Application Type</b> | EtherSAM (Y.1564) |
|-------------------------|-------------------|

| Interface             | Port 1   |
|-----------------------|----------|
| <b>Interface/Rate</b> | 10GE LAN |
| <b>Connector</b>      | SFP+     |

|                     |      |
|---------------------|------|
| <b>Flow Control</b> | 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) | 9500.00 |
|----------------------------------|---------|

| 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               | 9500.00      | 2.00000         | 28.00000         | 1.0E-04         | --          |

## TEST RESULTS

### Ethernet Traffic

| Frame Type  | TX Count  | RX Count  |
|-------------|-----------|-----------|
| Multicast   | 0         | 24        |
| Broadcast   | 2         | 0         |
| Unicast     | 354606282 | 354606282 |
| Non-Unicast | 2         | 24        |
| Total       | 354606284 | 354606306 |

| Frame Size (Bytes) | RX Count  | %    |
|--------------------|-----------|------|
| < 64               | 0         | 0.0  |
| 64                 | 0         | 0.0  |
| 65 - 127           | 59101047  | 16.6 |
| 128 - 255          | 59101047  | 16.6 |
| 256 - 511          | 24        | 0.0  |
| 512 - 1023         | 59101047  | 16.6 |
| 1024 - 1518        | 118202094 | 33.3 |
| > 1518             | 59101047  | 16.6 |
| Total              | 354606306 |      |

## 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         | 0.04403         | 2.17619          | PASS    | 4749.95                 |
| 2-75%CIR        | 0.0E-00         | 0.00650         | 2.17594          | PASS    | 7124.99                 |
| 3-90%CIR        | 0.0E-00         | 0.00422         | 2.17510          | PASS    | 8549.99                 |
| CIR             | 0.0E-00         | 0.00335         | 2.17598          | PASS    | 9499.99                 |

### Service Performance Test

#### Service 1 : Service 1

|                     | Average | Minimum   | Maximum | Estimate |
|---------------------|---------|-----------|---------|----------|
| Throughput (Mbit/s) | 9499.99 | 9499.91   | 9500.01 | N/A      |
| Jitter (ms)         | 0.00015 | < 0.00001 | 0.05596 | 0.00011  |
| Latency (ms)        | 2.17242 | 2.11033   | 2.17588 | 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



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|                                  |         |
|----------------------------------|---------|
| Layer Mode                       | Mixed   |
| IP Version                       | IPv4    |
| Global Pass/Fail Verdict         | Enabled |
| Total Committed TX Rate (Mbit/s) | 9500.00 |

## Service 1

| Service Profile    |                                |
|--------------------|--------------------------------|
| Service Name       | Service 1                      |
| Profile            | Data                           |
| Frame Size Type    | EMIX                           |
| Frame Size (Bytes) | 70, 128, 512, 1024, 1518, 9000 |

| SLA Parameters       |          |
|----------------------|----------|
| Information Rate     |          |
| CIR (Mbit/s)         | 9500.00  |
| 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:DD | 10.112.0.1 / 255.255.255.0 | 7        |
| Destination | 00:03:01:F8:29:85 | 10.112.0.100               | 49184    |

|                     |          |
|---------------------|----------|
| 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:DD     |
| Source IP Address      | 10.112.0.1 (Stream 1) |
| Destination IP Address | 10.112.0.100          |

| 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            | Timeout |               |
| 2            | Timeout |               |
| 3            | Timeout |               |
| 4            | Timeout |               |
| 5            | Timeout |               |
| 6            | Timeout |               |
| 7            | Timeout |               |
| 8            | Timeout |               |
| 9            | Timeout |               |
| 10           | Timeout |               |
| 11           | Timeout |               |
| 12           | Timeout |               |
| 13           | Timeout |               |
| 14           | Timeout |               |
| 15           | Timeout |               |
| 16           | Timeout |               |
| 17           | Timeout |               |
| 18           | Timeout |               |
| 19           | Timeout |               |
| 20           | Timeout |               |
| 21           | Timeout |               |
| 22           | Timeout |               |
| 23           | Timeout |               |

|    |            |                                               |
|----|------------|-----------------------------------------------|
| 24 | Timeout    |                                               |
| 25 | Timeout    |                                               |
| 26 | Timeout    |                                               |
| 27 | Timeout    |                                               |
| 28 | Timeout    |                                               |
| 29 | Timeout    |                                               |
| 30 | Timeout    |                                               |
| 31 | Timeout    |                                               |
| 32 | Timeout    |                                               |
| 33 | Timeout    |                                               |
| 34 | Timeout    |                                               |
| 35 | Timeout    |                                               |
| 36 | Timeout    |                                               |
| 37 | Timeout    |                                               |
| 38 | Timeout    |                                               |
| 39 | Timeout    |                                               |
| 40 | Timeout    |                                               |
| 41 | Timeout    |                                               |
| 42 | Timeout    |                                               |
| 43 | Timeout    |                                               |
| 44 | Timeout    |                                               |
| 45 | Timeout    |                                               |
| 46 | Timeout    |                                               |
| 47 | Timeout    |                                               |
| 48 | Timeout    |                                               |
| 49 | Timeout    |                                               |
| 50 | Timeout    |                                               |
| 51 | Timeout    |                                               |
| 52 | Timeout    |                                               |
| 53 | Timeout    |                                               |
| 54 | Timeout    |                                               |
| 55 | Timeout    |                                               |
| 56 | Timeout    |                                               |
| 57 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 58 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 59 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 60 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 61 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 62 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 63 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 64 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 65 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 66 | Successful | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |

|    |              |                                               |
|----|--------------|-----------------------------------------------|
| 67 | Successful   | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 68 | Successful   | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 69 | Successful   | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 70 | Successful   | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 71 | Successful   | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 72 | Successful   | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 73 | Successful   | IP=10.112.0.100, Bytes=32, Time=2 ms, TTL=127 |
| 74 | User aborted |                                               |

### Ping Statistics

|                                     |      |
|-------------------------------------|------|
| <b>Packets Transmitted</b>          | 73   |
| <b>Packets Received</b>             | 17   |
| <b>Percentage Lost (%)</b>          | 76.7 |
| <b>Minimum Round Trip Time (ms)</b> | 2    |
| <b>Maximum Round Trip Time (ms)</b> | 2    |
| <b>Average Round Trip Time (ms)</b> | 2    |

### Trace Route

|                      |      |
|----------------------|------|
| <b>Timeout (ms)</b>  | 4000 |
| <b>Max Hop Count</b> | 128  |

## SYSTEM INFORMATION

|                                   |                          |
|-----------------------------------|--------------------------|
| <b>Product Name</b>               | Power Blazer Series      |
| <b>Version</b>                    | Power Blazer Series 1.93 |
| <b>Module ID</b>                  | FTBx-8870                |
| <b>Slot ID</b>                    | 1                        |
| <b>Software Product Version</b>   | 1.93.0.28                |
|                                   | Power Blazer Series 1.93 |
| <b>Assembly Hardware Revision</b> | B                        |
| <b>Serial Number</b>              | 1343183                  |
| <b>Calibration Date</b>           | 4/20/2020 9:30:00 PM     |

## Pluggable Module

|                             |                                  |
|-----------------------------|----------------------------------|
| <b>Module ID</b>            | SFP+                             |
| <b>Vendor Name</b>          | WFS                              |
| <b>Part Number</b>          | 10GB-SFP-LR-JN                   |
| <b>Serial Number</b>        | WFJNXPL917                       |
| <b>Hardware Revision</b>    | 1.0                              |
| <b>Connector Type</b>       | LC                               |
| <b>Speed</b>                | 10G                              |
| <b>Type/Compliance Code</b> | LR, 10.0 km (SMF)                |
| <b>Wavelength</b>           | 1310 nm                          |
| <b>Mode</b>                 | Single-Mode Fiber                |
| <b>Power Class</b>          | Power Class 1 Module (<= 1W max) |
| <b>Temperature (Max)</b>    | 27.7 °C                          |

## Software Options

|                 |                                               |          |
|-----------------|-----------------------------------------------|----------|
| DS1-FDL         | DS1/1.5M Facility Data Link                   | Disabled |
| CPRI-10.1G      | CPRI 10.1376 Gbit/s                           | Disabled |
| SDH             | Synchronous Digital Hierarchy                 | Enabled  |
| SONET           | Synchronous Optical Network                   | Enabled  |
| 622M            | 622 Mbit/s                                    | Disabled |
| eCPRI-10G       | eCPRI over 10G Ethernet                       | Disabled |
| DSn             | Digital Signal (DS1, DS3)                     | Disabled |
| PDH             | Plesiochronous Digital Hierarchy (E1, E3, E4) | Disabled |
| 155M            | 155 Mbit/s                                    | Disabled |
| 2488M           | 2.488 Gbit/s                                  | Disabled |
| 10G_LAN         | Ethernet 10G LAN optical interface            | Enabled  |
| 10G_WAN         | Ethernet 10G WAN optical interface            | Enabled  |
| L2-Transparency | L2CP Handling Test in EtherSAM                | Disabled |
| TCM             | Tandem Connection Monitoring HO/LO            | Disabled |

|                 |                                                             |          |
|-----------------|-------------------------------------------------------------|----------|
| G82752          | ITU-T G.8275.2 Profile                                      | Disabled |
| TunableOptics   | Tunable Wavelength Support for SFP+                         | Disabled |
| 9953M           | 9.953 Gbit/s                                                | Disabled |
| OTU1            | Optical Transport Unit-1 (2.7 Gbit/s)                       | Disabled |
| OTU2            | Optical Transport Unit-2 (10.7 Gbit/s)                      | Disabled |
| 100optical      | Ethernet 100Base-FX (Optical) Interface                     | Disabled |
| GigE_Optical    | Ethernet 1000Base-X (Optical) Interface                     | Enabled  |
| GigE_Electrical | Ethernet 1000Base-T (Electrical) Interface                  | Enabled  |
| FC-1X           | Fibre Channel 1X                                            | Disabled |
| FC-2X           | Fibre Channel 2X                                            | Disabled |
| TCP-THPUT       | Tcp Throughput Test Application                             | Disabled |
| 100electrical   | Ethernet 100Base-TX (Electrical) Interface                  | Enabled  |
| 10electrical    | Ethernet 10Base-T (Electrical) Interface                    | Enabled  |
| ODUMUX          | ODU Multiplexing Payload Type 20 and 21                     | Disabled |
| FC-10X          | Fibre Channel 10X                                           | Disabled |
| OTU2-1e-2e      | Optical Transport Unit-2 Overclocked (11.049/11.096 Gbit/s) | Disabled |
| FC-4X           | Fibre Channel 4X                                            | Disabled |
| ADV-FILTERS     | Advanced Filtering                                          | Disabled |
| MPLS            | MPLS Encapsulation (10GE and less)                          | Disabled |
| IPV6            | Internet Protocol Version 6 (IPv6) (10GE and less)          | Disabled |
| OTN-INTR-THRU   | OTN Intrusive Through Mode                                  | Disabled |
| EoOTN           | Ethernet over Optical Transport Network                     | Disabled |
| ETH-THRU        | Through Mode Test Application                               | Disabled |
| OTU2-1f-2f      | Optical Transport Unit-2 Overclocked (11.270/11.317 Gbit/s) | Disabled |
| Cable_Test      | Cable Test                                                  | Disabled |
| ODU0            | OTN ODU0                                                    | Disabled |
| ETH-CAPTURE     | Ethernet Frame Capture for Advanced Troubleshooting         | Disabled |
| ODUflex         | OTN ODUflex                                                 | Disabled |
| TRAFFIC-SCAN    | Traffic Scan                                                | Disabled |
| 52M             | 52 Mbit/s                                                   | Enabled  |
| NI-CSU          | NI/CSU Emulation                                            | Disabled |
| FC-8X           | Fibre Channel 8X                                            | Disabled |
| CPRI            | CPRI 2.4576 Gbit/s and 3.072 Gbit/s                         | Disabled |
| OBSAI           | OBSAI 3.072 Gbit/s                                          | Disabled |
| 1588PTP         | 1588 Precision Time Protocol                                | Disabled |
| SyncE           | Synchronous Ethernet                                        | Disabled |
| ETH-OAM         | Carrier Ethernet OAM Test Application                       | Disabled |
| CPRI-1.2G       | CPRI 1.2288 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 |
| DUAL-PORT       | Dual Port Test                                              | Disabled |
| RFC6349         | RFC 6349 Test Application (10GE and less)                   | Disabled |
| iSAM            | Intelligent Service Activation Methodology                  | Disabled |
| PoE             | Power Over Ethernet                                         | Disabled |
| LINK-OAM        | Link OAM                                                    | Disabled |

|                  |                                                        |          |
|------------------|--------------------------------------------------------|----------|
| DP-CPRI          | Dual Port CPRI                                         | Disabled |
| TST-OAM          | Test Over Service OAM                                  | Disabled |
| G82751           | ITU-T G.8275.1 Profile                                 | Disabled |
| iOptics          | Intelligent Pluggable Optic Test Application           | Disabled |
| EoE              | Ethernet over Ethernet Encapsulation (10GE and less)   | Disabled |
| PBBTE            | Provider Backbone Bridge Encapsulation (10GE and less) | Disabled |
| RFC6349-EXFOWorx | Enables EXFO Worx Interop Operation Mode               | Disabled |
| GCC-BERT         | OTN Overhead BERT and Synchronization Validation       | Disabled |
| OBSAI-1.5G       | OBSAI 1.536 Gbit/s                                     | Disabled |
| OBSAI-6.1G       | OBSAI 6.144 Gbit/s                                     | Disabled |
| DTS-NAT          | NAT Traversal for DTS applications                     | Disabled |

## LOGGER

| ID | Start Time        | Event                              | Duration | Details                                                                                    |
|----|-------------------|------------------------------------|----------|--------------------------------------------------------------------------------------------|
| 1  | 05/25 03:14:37 PM | Test Started                       |          | 2022-05-25                                                                                 |
| 2  | 05/25 03:14:41 PM | Service Configuration test started |          | 2022-05-25                                                                                 |
| 3  | 05/25 03:15:15 PM | Service Performance test started   |          | 2022-05-25                                                                                 |
| 4  | 05/25 03:25:25 PM | Test Stopped                       |          |  PASS |