



QSFP-BIDI-100G

**OPTICAL TRANSCEIVER
MODULE**

Scenario Application Test Report (Juniper)

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1. Test Purpose

By building test scenarios and simulating the customer's usage environment, we test whether the module's performance meets the customer's requirements.

2. Test Results Summary

Table 2: Test Results

Items	Test Data	Remarks
Multi-Version	Pass	/
Connectivity	Pass	/
BER	Pass	/

3. Test Environment

3.1 Test Equipment Used

Table 3-1: Test Equipment Used

Vendor	Device	Soft Version
Juniper Switch	MX204	20.4R2.7
NVIDIA NICs	MCX623106AN-CDAT	22.43.1014
DELL Server	PowerEdge R860	/

3.2 Test Sample

Table 3-2: Test Sample

Product ID	P/N	Serial Number
#135558	QSFP-BIDI-100G	A2310220507

4. Test Data

Table 4: Scenario Application Testing

Test Topology	
Test Premise	1. Confirm the brand, quantity and placement of the switches to be tested. 2. Prepare control cables, test software and optical fiber patch cords. Power on the switches in advance. 3. Locate the Console port on the switch, which is usually marked as "CON" on the switch, although some switches may display it as "IOIOI" or a computer monitor icon, etc. Use a control cable to connect the switch to the computer.  4. Before connecting the software, it is necessary to confirm the connection port of the control cable. Go to the computer device manager, click on the ports (COM and LPT) to view the ports. After confirming the ports, proceed with the next step.
Test Method	Click to open the SecureCRT Portable software and enter the quick connection interface. ① Protocol selection: Serial ② Port selection: The same as the port you viewed in the previous step ③ Baud rate selection: The same as the baud rate of the port on the target switch ④ Flow control: Do not check this option The remaining configurations can keep the default values.
Test Steps	① Insert the module into the corresponding rate port of the switch, and connect the TX-RX ends with an optical fiber jumper or an MTP self-loop device. Observe whether the module is connected. If not connected, please check the jumper connection or the switch port configuration (login to the switch is required). ② Enter the test interface, input the account and password, log in to the switch and enter privileged mode. ③ According to the switch command configuration table, input the corresponding test command and view the relevant information: port status (connectivity), connection rate, alarm status, module basic information, DDM information, etc. Determine whether it meets the requirements.

1. Read the switch model name and software version, and read the status of all ports on the switch

```
root>
```

```
root> show version
```

```
Model: mx204
Junos: 20.4R2.7
JUNOS OS Kernel 64-bit [20210220.a5d6a89_builder_stable_11]
JUNOS OS libs [20210220.a5d6a89_builder_stable_11]
JUNOS OS runtime [20210220.a5d6a89_builder_stable_11]
JUNOS OS time zone information [20210218.a5d6a89_builder_stable_11]
JUNOS network stack and utilities [20210414.022657_builder_junos_204_r2]
JUNOS libs [20210414.022657_builder_junos_204_r2]
JUNOS OS libs compat32 [20210220.a5d6a89_builder_stable_11]
JUNOS OS 32-bit compatibility [20210220.a5d6a89_builder_stable_11]
JUNOS libs compat32 [20210414.022657_builder_junos_204_r2]
JUNOS runtime [20210414.022657_builder_junos_204_r2]
Junos vmguest package [20210414.022657_builder_junos_204_r2]
JUNOS sflow mx [20210414.022657_builder_junos_204_r2]
JUNOS py extensions2 [20210414.022657_builder_junos_204_r2]
JUNOS py extensions [20210414.022657_builder_junos_204_r2]
JUNOS py base2 [20210414.022657_builder_junos_204_r2]
JUNOS py base [20210414.022657_builder_junos_204_r2]
JUNOS OS vmguest [20210218.a5d6a89_builder_stable_11]
JUNOS OS crypto [20210218.a5d6a89_builder_stable_11]
JUNOS OS boot-ve files [20210218.a5d6a89_builder_stable_11]
JUNOS na telemetry [20.4R2.7]
```

```
> show interfaces et-0/0/1 detail
```

```
Interface: et-0/0/1, Enabled, Physical link is Up
Interface index: 150, SNMP ifIndex: 575, Generation: 193
Link-level type: Ethernet, MTU: 1514, MRU: 1522, Speed: 100Gbps,
Duplex: Full, Loop Detect PDU Error: None, Loopback: Disabled,
Flow control: Disabled, Flow control: Enabled
Minimum frame size: Disabled
Link flags : Present Running
Interface flags: SNMP-Traps Internal: 0x4000
Link flags : None
Statistics : 8 supported, 8 maximum usable queues
Schedulers : 0
Link times : Up 0 ms, Down 0 ms
Link half-life: 0 sec, max-suppress: 0 sec, reuse: 0, suppress: 0, state: unsuppressed
Current address: c4:09:b7:ad:13:77, Hardware address: c4:09:b7:ad:13:77
Last flapped : 2025-05-16 08:22:17 UTC (02:43:27 ago)
Statistics last cleared: Never
Link statistics:
Input bytes : 0 0 bps
Output bytes : 0 0 bps
Input packets : 0 0 pps
Output packets : 0 0 pps
IPv6 transit statistics:
Input bytes : 0
Output bytes : 0
Input packets : 0
Output packets : 0
Queue counters: 8 supported, 4 in use
Queue counters: Queued packets Transmitted packets Dropped packets
0 0 0 0
1 0 0 0
2 0 0 0
3 0 0 0
Queue number: Mapped forwarding classes
0 best-effort
1 expedited-forwarding
2 assured-forwarding
3 network-control
Link alarms : None
Link defects : None
Link statistics Seconds
Bit errors 7
Errored blocks 14
Ethernet FEC Mode : NONE
Ethernet FEC statistics Errors
FEC Corrected Errors 0
FEC Uncorrected Errors 0
FEC Corrected Errors Rate 0
FEC Uncorrected Errors Rate 0
Classifier statistics:
Traffic Class Received Packets Transmitted Packets Dropped Packets
real-time 0 0 0
network-control 6090 6090 0
best-effort 0 0 0
Interface transmit statistics: Disabled
```

Test Information

2. Read the NIC model and the status of all ports

```
[root@localhost ~]#  
[root@localhost ~]# mlxfwmanager -d mlx5_8  
Querying Mellanox devices firmware ...  
  
Device #1:  
-----  
  
Device Type:      ConnectX6DX  
Part Number:      MCX623106AN-CDA_Ax  
Description:      ConnectX-6 Dx EN adapter card; 100GbE; Dual-port QSFP56; PCIe 4.0/3.0 x16;  
PSID:             MT_0000000359  
PCI Device Name:  mlx5_8  
Base GUID:        e8ebd303009c65e0  
Base MAC:         e8ebd39c65e0  
Versions:         Current      Available  
FW                22.43.1014    N/A  
PXE               3.7.0500     N/A  
UEFI              14.36.0016    N/A  
  
Status:           No matching image found  
  
[root@localhost ~]# mlxlink -d mlx5_8 -c  
  
Operational Info  
-----  
State                : Active  
Physical state       : ETH_AN_FSM_ENABLE  
Speed                : 100G  
Width                : 4x  
FEC                  : No FEC  
Loopback Mode        : No Loopback  
Auto Negotiation     : ON  
  
Supported Info  
-----  
Enabled Link Speed (Ext.) : 0x000007f2 (100G_2X,100G_4X,50G_1X,50G_2X,40G,25G,10G,1G)  
Supported Cable Speed (Ext.) : 0x00000200 (100G_4X)  
  
Troubleshooting Info  
-----  
Status Opcode        : 0  
Group Opcode         : N/A  
Recommendation       : No issue was observed  
  
Tool Information  
-----  
Firmware Version     : 22.43.1014  
amBER Version        : 3.2  
MFT Version          : mft 4.28.0-92
```

Test Information

3. Read the Module BER

```
[root@localhost ~]# mlxlink -d mlx5_8 -c  
  
Operational Info  
-----  
State                : Active  
Physical state       : ETH_AN_FSM_ENABLE  
Speed                : 100G  
Width                : 4x  
FEC                  : No FEC  
Loopback Mode        : No Loopback  
Auto Negotiation     : ON  
  
Supported Info  
-----  
Enabled Link Speed (Ext.) : 0x000007f2 (100G_2X,100G_4X,50G_1X,50G_2X,40G,25G,10G,1G)  
Supported Cable Speed (Ext.) : 0x00000200 (100G_4X)  
  
Troubleshooting Info  
-----  
Status Opcode        : 0  
Group Opcode         : N/A  
Recommendation       : No issue was observed  
  
Tool Information  
-----  
Firmware Version     : 22.43.1014  
amBER Version        : 3.2  
MFT Version          : mft 4.28.0-92  
  
Physical Counters and BER Info  
-----  
Time Since Last Clear [Min] : 3.0  
Effective Physical Errors    : 0  
Effective Physical BER       : 15E-255  
Raw Physical Errors Per Lane : 0,0,0,0  
Raw Physical BER             : 15E-255
```

Test Conclusion	After completing the above test content, all the test information should be copied and pasted into a TXT document.
Remarks	/