



**QSFP-BIDI-100G**

**OPTICAL TRANSCEIVER  
MODULE**

**Scenario Application Test Report (Arista)**

**CONTENTS**

**1. Test Purpose ..... 2**

**2. Test Results Summary .....2**

**3. Test Environment .....2**

    3.1 Test Equipment Used .....2

    3.2 Test Sample ..... 2

**4. Test Data .....3**

## 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
Arista Switch	DCS-7060SX2-48YC6-R	4.30.1F
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
#135559	QSFP-BIDI-100G	A2310220507

## 4. Test Data

Table 4: Scenario Application Testing

<b>Test Topology</b>	 A diagram showing the test topology. On the left is an Arista DCS-7060SX2-48YC6-R switch. A yellow optical fiber jumper connects it to a QSFP-BIDI-100G module. This module is connected to another QSFP-BIDI-100G module, which is then connected to an MCX623106AN-CDAT module. Finally, a black cable connects the MCX623106AN-CDAT module to a PowerEdge R860 server.
<b>Test Premise</b>	<ol style="list-style-type: none"><li>1. Confirm the brand, quantity and placement of the switches to be tested.</li><li>2. Prepare control cables, test software and optical fiber patch cords. Power on the switches in advance.</li><li>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.</li></ol>  A close-up photograph showing a console cable connected to the console port of a switch. The port is labeled 'CON' and 'IOIOI'. A laptop keyboard is visible in the foreground. <ol style="list-style-type: none"><li>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.</li></ol>
<b>Test Method</b>	<p>Click to open the SecureCRT Portable software and enter the quick connection interface.</p> <ol style="list-style-type: none"><li>① Protocol selection: Serial</li><li>② Port selection: The same as the port you viewed in the previous step</li><li>③ Baud rate selection: The same as the baud rate of the port on the target switch</li><li>④ Flow control: Do not check this option</li></ol> <p>The remaining configurations can keep the default values.</p>
<b>Test Steps</b>	<ol style="list-style-type: none"><li>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).</li><li>② Enter the test interface, input the account and password, log in to the switch and enter privileged mode.</li><li>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.</li></ol>

## Test Information

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

```
DCS-7060SX2-48YC6-R#
DCS-7060SX2-48YC6-R#show version
Arista DCS-7060SX2-48YC6-R
Hardware version: 11.50
Serial number: SSJ18236106
Hardware MAC address: 7483.efd7.78a7
System MAC address: 7483.efd7.78a7

Software image version: 4.30.1F
Architecture: i686
Internal build version: 4.30.1F-32315456.4301F
Internal build ID: e459ae2a-b8aa-4673-b865-e0936c7b6ebf
Image format version: 3.0
Image optimization: Strata-4GB

Uptime: 1 day, 3 hours and 46 minutes
Total memory: 8062968 kB
Free memory: 6445068 kB

DCS-7060SX2-48YC6-R#
DCS-7060SX2-48YC6-R#show interfaces et49/1
Ethernet49/1 is up, line protocol is up (connected)
  Hardware is Ethernet, address is 7483.efd7.78d8 (bia 7483.efd7.78d8)
  Ethernet MTU 9214 bytes, BW 100000000 kbit
  Full-duplex, 100Gb/s, auto negotiation: off, uni-link: n/a
  Up 5 minutes, 5 seconds
  Loopback Mode : None
  58 link status changes since last clear
  Last clearing of "show interface" counters 1 day, 3:47:21 ago
  5 minutes input rate 0 bps (0.0% with framing overhead), 0 packets/sec
  5 minutes output rate 352 bps (0.0% with framing overhead), 0 packets/sec
    0 packets input, 0 bytes
    Received 0 broadcasts, 0 multicast
    0 runs, 0 giants
    0 input errors, 0 CRC, 0 alignment, 0 symbol, 0 input discards
    0 PAUSE input
  6918 packets output, 886674 bytes
  Sent 0 broadcasts, 6918 multicast
  0 output errors, 0 collisions
  0 late collision, 0 deferred, 0 output discards
  0 PAUSE output
```

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:
  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)
```

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