



**QSFP-ZR-100G**

**OPTICAL TRANSCEIVER  
MODULE**

**Scenario Application Test Report (Cisco)**

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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	/
Module Basic Information	Pass	/
Digital Diagnostic Monitoring	Pass	/

# 3. Test Environment

## 3.1 Test Equipment Used

Table 3-1: Test Equipment Used

Vendor	Device	Soft Version
Cisco Switch	C93180YC-EX	07.69

## 3.2 Test Sample

Table 3-2: Test Sample

Product ID	P/N	Serial Number
#301395	QSFP-ZR-100G	2515M007G

## 4. Test Data

### 4.1 Test Scenario

Table 4-1: Test Scenario

<p><b>Test Topology</b></p>	
<p><b>Test Premise</b></p>	<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>  <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>
<p><b>Test Method</b></p>	<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>	<p>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).</p> <p>② Enter the test interface, input the account and password, log in to the switch and enter privileged mode.</p> <p>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.</p>
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## 4.2 Test Result

Table 4-2: Test Result

<b>Test Information</b>	<p>1. Read the switch model name and software version, and read the status of all ports on the switch</p> <pre>Cisco_C93180YC-EX# show version Cisco Nexus Operating System (NX-OS) Software TAC support: http://www.cisco.com/tac Copyright (C) 2002-2023, Cisco and/or its affiliates. All rights reserved. The copyrights to certain works contained in this software are owned by other third parties and used and distributed under their own licenses, such as open source. This software is provided "as is," and unless otherwise stated, there is no warranty, express or implied, including but not limited to warranties of merchantability and fitness for a particular purpose. Certain components of this software are licensed under the GNU General Public License (GPL) version 2.0 or GNU General Public License (GPL) version 3.0 or the GNU Lesser General Public License (LGPL) Version 2.1 or Lesser General Public License (LGPL) Version 2.0. A copy of each such license is available at http://www.opensource.org/licenses/gpl-2.0.php and http://opensource.org/licenses/gpl-3.0.html and http://www.opensource.org/licenses/lgpl-2.1.php and http://www.gnu.org/licenses/old-licenses/library.txt.</pre> <p>Software</p> <pre>BIOS: version 07.69 NXOS: version 10.2(5) [Maintenance Release] BIOS compile time: 04/07/2021 NXOS image file is: bootflash:///nxos64-cs.10.2.5.M.bin NXOS compile time: 3/10/2023 12:00:00 [03/03/2023 12:00:11]</pre> <p>Hardware</p> <pre>cisco Nexus9000 C93180YC-EX chassis Intel(R) Xeon(R) CPU @ 1.80GHz with 24617876 kB of memory. Processor Board ID FDO221418Y5 Device name: Cisco_C93180YC-EX bootflash: 7906304 kB</pre>
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Kernel uptime is 0 day(s), 0 hour(s), 11 minute(s), 10 second(s)

Last reset at 788597 usecs after Mon Nov 11 01:08:04 2024

Reason: Module PowerCycled

System version:

Service: HW check by card-client

plugin

Core Plugin, Ethernet Plugin

Active Package(s):

Cisco\_C93180YC-EX#

Cisco\_C93180YC-EX# show inventory

NAME: "Chassis", DESCR: "Nexus9000 C93180YC-EX chassis"

PID: N9K-C93180YC-EX , VID: V02 , SN: FDO221418Y5

NAME: "Slot 1", DESCR: "48x10/25G + 6x40/100G Ethernet Module"

PID: N9K-C93180YC-EX , VID: V02 , SN: FDO221418Y5

NAME: "Power Supply 1", DESCR: "Nexus9000 C93180YC-EX chassis Power Supply"

PID: NXA-PAC-650W-PI , VID: V02 , SN: DCC2243242H

NAME: "Power Supply 2", DESCR: "Nexus9000 C93180YC-EX chassis Power Supply"

PID: NXA-PAC-650W-PI , VID: V02 , SN: DCC2243242B

NAME: "Fan 1", DESCR: "Nexus9000 C93180YC-EX chassis Fan Module"

PID: NXA-FAN-30CFM-B , VID: V01 , SN: N/A

NAME: "Fan 2", DESCR: "Nexus9000 C93180YC-EX chassis Fan Module"

PID: NXA-FAN-30CFM-B , VID: V01 , SN: N/A

NAME: "Fan 3", DESCR: "Nexus9000 C93180YC-EX chassis Fan Module"

PID: NXA-FAN-30CFM-B , VID: V01 , SN: N/A

NAME: "Fan 4", DESCR: "Nexus9000 C93180YC-EX chassis Fan Module"

Cisco\_C93180YC-EX# show interface status

Port	Name	Status	Vlan	Duplex	Speed	Type
mgmt0	--	notconnec	routed	auto	auto	--

Port	Name	Status	Vlan	Duplex	Speed	Type
Eth1/1	--	xcvrAbsen	routed	auto	auto	--
Eth1/2	--	xcvrAbsen	1	auto	auto	--
Eth1/3	--	xcvrAbsen	1	auto	auto	--
Eth1/4	--	xcvrAbsen	1	auto	auto	--
Eth1/5	--	xcvrAbsen	1	auto	auto	--
Eth1/6	--	xcvrAbsen	1	auto	auto	--
Eth1/7	--	xcvrAbsen	routed	auto	auto	--
Eth1/8	--	xcvrAbsen	1	auto	auto	--
Eth1/9	--	xcvrAbsen	1	auto	auto	--
Eth1/10	--	xcvrAbsen	1	auto	auto	--
Eth1/11	--	xcvrAbsen	1	auto	auto	--
Eth1/12	--	xcvrAbsen	1	auto	auto	--
Eth1/13	--	xcvrAbsen	1	auto	auto	--
Eth1/14	--	xcvrAbsen	1	auto	auto	--
Eth1/15	--	xcvrAbsen	1	auto	auto	--
Eth1/16	--	xcvrAbsen	1	auto	auto	--
Eth1/17	--	xcvrAbsen	1	auto	auto	--
Eth1/18	--	xcvrAbsen	2	auto	auto	--
Eth1/19	--	xcvrAbsen	1	auto	auto	--

```

Eth1/20  --      xcvrAbsen 2    auto 10G  --
Eth1/21  --      xcvrAbsen 1    auto auto --
Eth1/22  --      xcvrAbsen 1    auto 10G  --
Eth1/23  --      xcvrAbsen 1    auto auto --
Eth1/24  --      xcvrAbsen 1    auto 25G  --
Eth1/25  --      xcvrAbsen 1    auto auto --
Eth1/26  --      xcvrAbsen 1    auto 25G  --
Eth1/27  --      xcvrAbsen 1    auto auto --
Eth1/28  --      xcvrAbsen 2    auto auto --
Eth1/29  --      xcvrAbsen 1    auto auto --
Eth1/30  --      xcvrAbsen 1    auto auto --
Eth1/31  --      xcvrAbsen 1    auto auto --
Eth1/32  --      xcvrAbsen 2    auto auto --
Eth1/33  --      xcvrAbsen 1    auto auto --
Eth1/34  --      xcvrAbsen 1    auto auto --
Eth1/35  --      xcvrAbsen 1    auto auto --
Eth1/36  --      xcvrAbsen 1    auto auto --
Eth1/37  --      xcvrAbsen 1    auto auto --
Eth1/38  --      xcvrAbsen 1    auto auto --
Eth1/39  --      xcvrAbsen 1    auto auto --
Eth1/40  --      xcvrAbsen 1    auto auto --
Eth1/41  --      xcvrAbsen 1    auto auto --
Eth1/42  --      xcvrAbsen 1    auto auto --
Eth1/43  --      xcvrAbsen 1    auto auto --
Eth1/44  --      xcvrAbsen 1    auto auto --
Eth1/45  --      xcvrAbsen 1    auto auto --
Eth1/46  --      xcvrAbsen 1    auto auto --
Eth1/47  --      xcvrAbsen 1    auto auto --
Eth1/48  --      xcvrAbsen 1    auto auto --
Eth1/49  --      connected 1    full 100G QSFP-100G-ERL
Eth1/50  --      xcvrAbsen 1    auto auto --
Eth1/51/1 --      xcvrAbsen 1    auto auto --
Eth1/51/2 --      xcvrAbsen 1    auto auto --
Eth1/51/3 --      xcvrAbsen 1    auto auto --
Eth1/51/4 --      xcvrAbsen 1    auto auto --
Eth1/52  --      xcvrAbsen 1    auto auto --
Eth1/53  --      xcvrAbsen 1    auto auto --
Eth1/54  --      xcvrAbsen 1    auto auto --
    
```

```

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Port      Name      Status  Vlan   Duplex Speed Type
-----
Vlan1    --        down    routed auto   auto  --
    
```

2. Read the module's basic information from the switch side

```

Cisco_C93180YC-EX# show interface ethernet 1/49 transceiver details
Ethernet1/49
  transceiver is present
  type is QSFP-100G-ERL
  name is FS
  part number is QSFP-ZR-100G
  revision is 10
  serial number is CS2024110505
  nominal bitrate is 25500 MBit/sec
  Link length supported for 9/125um fiber is 80 km
  cisco id is 17
  cisco extended id number is 206
    
```

	<p>3. Read the DDM information of the module</p> <p>Lane Number:1 Network Lane</p> <p>SFP Detail Diagnostics Information (internal calibration)</p> <pre> -----           Current      Alarms      Warnings           Measurement  High      Low      High      Low ----- Temperature 31.66 C    75.00 C  -5.00 C  70.00 C    0.00 C Voltage     3.22 V      3.60 V   3.00 V   3.46 V     3.13 V Current     80.00 mA    120.00 mA 60.00 mA 110.00 mA  70.00 mA Tx Power    -6.67 dBm   -3.00 dBm -14.08 dBm -5.00 dBm -12.00 dBm Rx Power    -6.38 dBm   1.99 dBm -23.01 dBm 0.99 dBm  -22.21 dBm Transmit Fault Count = 0 -----           </pre> <p>Note: ++ high-alarm; + high-warning; -- low-alarm; - low-warning</p>
<p><b>Test Conclusion</b></p>	<p>After completing the above test content, all the test information should be copied and pasted into a TXT document.</p>
<p><b>Remarks</b></p>	<p>/</p>