



QSFP28-SFP28-CVR

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

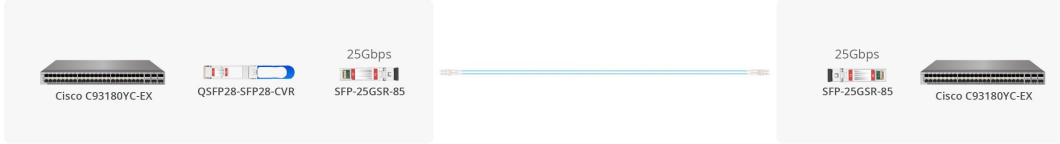

3.2 Test Sample

Table 3-2: Test Sample

Product ID	P/N	Serial Number
#178074	QSFP28-SFP28-CVR	A1930008986

4. Test Data

Table 4: Scenario Application Testing

Test Topology	
Test Premise	<ol style="list-style-type: none"> 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.  <ol style="list-style-type: none"> 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	<p>Click to open the SecureCRT Portable software and enter the quick connection interface.</p> <ol style="list-style-type: none"> 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 <p>The remaining configurations can keep the default values.</p>
Test Steps	<ol style="list-style-type: none"> 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.

Test Information

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

Cisco_C93180YC-EX# show version
Cisco Nexus Operating System (NX-OS) Software
TAC support: <http://www.cisco.com/tac>
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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>.

Software
BIOS: version 07.69
NXOS: version 10.2(1) [Feature Release]
BIOS compile time: 04/07/2021
NXOS image file is: bootflash:///nxos64.10.2.1.F.bin
NXOS compile time: 8/23/2021 17:00:00 [08/24/2021 03:42:46]

Hardware
cisco Nexus9000 C93180YC-EX chassis
Intel(R) Xeon(R) CPU @ 1.80GHz with 24627780 kB of memory.
Processor Board ID FDO221418Y5
Device name: Cisco_C93180YC-EX
bootflash: 7906304 kB

Kernel uptime is 0 day(s), 0 hour(s), 7 minute(s), 29 second(s)

Last reset at 46738 usecs after Tue Jun 27 08:58:00 2023
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 interface status

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

Port	Name	Status	Vlan	Duplex	Speed	Type
Eth1/1	--	xcvrAbsen	1	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	--

Test Information

```

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 auto --
Eth1/21 -- xcvrAbsen 1 auto auto --
Eth1/22 -- xcvrAbsen 1 auto auto --
Eth1/23 -- xcvrAbsen 1 auto auto --
Eth1/24 -- xcvrAbsen 1 auto auto --
Eth1/25 -- xcvrAbsen 1 auto auto --
Eth1/26 -- xcvrAbsen 1 auto auto --
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 -- xcvrAbsen 3 auto auto --
Eth1/50 -- xcvrAbsen 3 auto auto --
Eth1/51 -- xcvrAbsen 4 auto auto --
Eth1/52/1 -- xcvrAbsen 1 auto auto --
Eth1/52/2 -- xcvrAbsen 1 auto auto --
Eth1/52/3 -- xcvrAbsen 1 auto auto --
Eth1/52/4 -- xcvrAbsen 1 auto auto --
Eth1/53/1 -- connected 1 full 25G QSFP-100G-S
R4
Eth1/53/2 -- notconnec 1 auto auto QSFP-100G-S
R4
Eth1/53/3 -- notconnec 1 auto auto QSFP-100G-S
R4
Eth1/53/4 -- notconnec 1 auto auto QSFP-100G-S
R4
Eth1/54/1 -- connected 1 full 25G QSFP-100G-S
R4
Eth1/54/2 -- notconnec 1 auto auto QSFP-100G-S
R4
Eth1/54/3 -- notconnec 1 auto auto QSFP-100G-S
R4
Eth1/54/4 -- notconnec 1 auto auto QSFP-100G-S
R4

```

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

```

Cisco_C93180YC-EX#
Cisco_C93180YC-EX#
Cisco_C93180YC-EX# show interface ethernet 1/53/1
Ethernet1/53/1 is up
admin state is up, Dedicated Interface
Hardware: 25000 Ethernet, address: 700f.6a4d.df80 (bia 700f.6a4d.df80)
MTU 1500 bytes, BW 25000000 Kbit , DLY 10 usec
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, medium is broadcast
Port mode is access
full-duplex, 25 Gb/s, media type is 100G

```


Test Information

Beacon is turned off
Auto-Negotiation is turned off FEC mode is Auto
Input flow-control is off, output flow-control is off
Auto-mdix is turned off
Rate mode is dedicated
Switchport monitor is off
EtherType is 0x8100
EEE (efficient-ethernet) : n/a
admin fec state is auto, oper fec state is Fc-fec
Last link flapped 00:00:08
Last clearing of "show interface" counters never
2 interface resets
Load-Interval #1: 30 seconds
30 seconds input rate 0 bits/sec, 0 packets/sec
30 seconds output rate 0 bits/sec, 0 packets/sec
input rate 0 bps, 0 pps; output rate 0 bps, 0 pps
Load-Interval #2: 5 minute (300 seconds)
300 seconds input rate 0 bits/sec, 0 packets/sec
300 seconds output rate 0 bits/sec, 0 packets/sec
input rate 0 bps, 0 pps; output rate 0 bps, 0 pps
RX
0 unicast packets 0 multicast packets 0 broadcast packets
0 input packets 0 bytes
0 jumbo packets 0 storm suppression bytes
0 runs 0 giants 0 CRC 0 no buffer
0 input error 0 short frame 0 overrun 0 underrun 0 ignored
0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop
0 input with dribble 0 input discard
0 Rx pause
0 Stomped CRC
TX
0 unicast packets 0 multicast packets 0 broadcast packets
0 output packets 0 bytes
0 jumbo packets
0 output error 0 collision 0 deferred 0 late collision
0 lost carrier 0 no carrier 0 babble 0 output discard
0 Tx pause

Cisco_C93180YC-EX#
Cisco_C93180YC-EX#
Cisco_C93180YC-EX# show interface ethernet 1/54/1
Ethernet1/54/1 is up
admin state is up, Dedicated Interface
Hardware: 25000 Ethernet, address: 700f.6a4d.df84 (bia 700f.6a4d.df84)
MTU 1500 bytes, BW 25000000 Kbit , DLY 10 usec
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, medium is broadcast
Port mode is access
full-duplex, 25 Gb/s, media type is 100G
Beacon is turned off
Auto-Negotiation is turned off FEC mode is Auto
Input flow-control is off, output flow-control is off
Auto-mdix is turned off
Rate mode is dedicated
Switchport monitor is off
EtherType is 0x8100
EEE (efficient-ethernet) : n/a
admin fec state is auto, oper fec state is Fc-fec
Last link flapped 00:00:22
Last clearing of "show interface" counters never
2 interface resets
Load-Interval #1: 30 seconds
30 seconds input rate 0 bits/sec, 0 packets/sec
30 seconds output rate 0 bits/sec, 0 packets/sec
input rate 0 bps, 0 pps; output rate 0 bps, 0 pps
Load-Interval #2: 5 minute (300 seconds)
300 seconds input rate 0 bits/sec, 0 packets/sec
300 seconds output rate 0 bits/sec, 0 packets/sec
input rate 0 bps, 0 pps; output rate 0 bps, 0 pps

Test Information

RX
 0 unicast packets 0 multicast packets 0 broadcast packets
 0 input packets 0 bytes
 0 jumbo packets 0 storm suppression bytes
 0 runts 0 giants 0 CRC 0 no buffer
 0 input error 0 short frame 0 overrun 0 underrun 0 ignored
 0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop
 0 input with dribble 0 input discard
 0 Rx pause
 0 Stomped CRC

TX
 0 unicast packets 0 multicast packets 0 broadcast packets
 0 output packets 0 bytes
 0 jumbo packets
 0 output error 0 collision 0 deferred 0 late collision
 0 lost carrier 0 no carrier 0 babble 0 output discard
 0 Tx pause

3. Read the DDM information of the module

Cisco_C93180YC-EX#
 Cisco_C93180YC-EX#
 Cisco_C93180YC-EX# show interface ethernet 1/53/1 transceiver details
 Ethernet1/53/1
 transceiver is present
 type is QSFP-100G-SR4
 name is FS
 part number is QSFP28-SR4-100G
 revision is 04
 serial number is A1930008986
 nominal bitrate is 25500 MBit/sec
 Link length supported for 50/125um OM3 fiber is 70 m
 cisco id is 17
 cisco extended id number is 220

Lane Number:1 Network Lane
 SFP Detail Diagnostics Information (internal calibration)

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	32.46 C	80.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.27 V	3.63 V	2.97 V	3.46 V	3.13 V
Current	7.09 mA	14.00 mA	2.00 mA	13.00 mA	3.00 mA
Tx Power	-0.16 dBm	5.39 dBm	-11.42 dBm	2.39 dBm	-8.41 dBm
Rx Power	-0.28 dBm	5.39 dBm	-13.37 dBm	2.39 dBm	-10.31 dBm
Transmit Fault Count	= 0				

Note: ++ high-alarm; + high-warning; -- low-alarm; - low-warning

Cisco_C93180YC-EX#
 Cisco_C93180YC-EX# show interface ethernet 1/54/1 transceiver details
 Ethernet1/54/1
 transceiver is present
 type is QSFP-100G-SR4
 name is FS
 part number is QSFP28-SR4-100G
 revision is 04
 serial number is A1930008986
 nominal bitrate is 25500 MBit/sec
 Link length supported for 50/125um OM3 fiber is 70 m
 cisco id is 17
 cisco extended id number is 220

Lane Number:1 Network Lane
 SFP Detail Diagnostics Information (internal calibration)

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	27.10 C	80.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.27 V	3.63 V	2.97 V	3.46 V	3.13 V
Current	7.29 mA	14.00 mA	2.00 mA	13.00 mA	3.00 mA
Tx Power	-0.12 dBm	5.39 dBm	-11.42 dBm	2.39 dBm	-8.41 dBm
Rx Power	-0.13 dBm	5.39 dBm	-13.37 dBm	2.39 dBm	-10.31 dBm
Transmit Fault Count	= 0				

Note: ++ high-alarm; + high-warning; -- low-alarm; - low-warning

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