



SFP-25GLR-31

**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	C9500-24Y4C	17.12.03

3.2 Test Sample



Table 3-2: Test Sample

Product ID	P/N	Serial Number
#70382	SFP-25GLR-31	F2130567469

4. Test Data

4.1 Test Scenario

Table 4-1: Test Scenario

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

- 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.

4.2 Test Result

Table 4-2: Test Result

Test Information

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

C9500-24Y4C#show version
Cisco IOS XE Software, Version 17.12.03
Cisco IOS Software [Dublin], Catalyst L3 Switch Software (CAT9K_IOSXE), Version 17.12.3, RELEASE SOFTWARE (fc7)
Technical Support: <http://www.cisco.com/techsupport>
Copyright (c) 1986-2024 by Cisco Systems, Inc.
Compiled Wed 20-Mar-24 15:40 by mcpre

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ROM: IOS-XE ROMMON
BOOTLDR: System Bootstrap, Version 17.8.1r[FC1], RELEASE SOFTWARE (P)

C9500-24Y4C uptime is 1 day, 1 hour, 25 minutes
Uptime for this control processor is 1 day, 1 hour, 27 minutes
System returned to ROM by PowerOn
System image file is "bootflash:packages.conf"
Last reload reason: PowerOn

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
<http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to export@cisco.com.

Technology Package License Information:

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-----
Technology-package      Technology-package
Current                Type      Next reboot
-----
network-advantage      Smart License      network-advantage
dna-advantage          Subscription Smart License      dna-advantage
AIR License Level: AIR DNA Advantage
Next reload AIR license Level: AIR DNA Advantage

```

Smart Licensing Status: Smart Licensing Using Policy

cisco C9500-24Y4C (X86) processor with 2874858K/6147K bytes of memory.
 Processor board ID CAT2249L2AG
 5 Virtual Ethernet interfaces
 24 TwentyFive Gigabit Ethernet interfaces
 4 Hundred Gigabit Ethernet interfaces
 32768K bytes of non-volatile configuration memory.
 15990836K bytes of physical memory.
 11161600K bytes of Bootflash at bootflash:.
 1638400K bytes of Crash Files at crashinfo:.

Base Ethernet MAC Address : 08:ec:f5:da:16:60
 Motherboard Assembly Number : 4874
 Motherboard Serial Number : CAT2249L2AG
 Model Revision Number : V02
 Motherboard Revision Number : 2
 Model Number : C9500-24Y4C
 System Serial Number : CAT2249L2AG

C9500-24Y4C#show interface status

Port	Name	Status	Vlan	Duplex	Speed	Type
Twe1/0/1		notconnect	routed	full	a-10G	unknown
Twe1/0/2		notconnect	routed	auto	auto	unknown
Twe1/0/3		notconnect	routed	full	a-10G	unknown
Twe1/0/4		notconnect	routed	auto	auto	unknown
Twe1/0/5		notconnect	routed	full	a-10G	unknown
Twe1/0/6		notconnect	1	auto	auto	unknown
Twe1/0/7		connected	1	full	25G	SFP-10/25GBase-LR
Twe1/0/8		connected	1	full	25G	SFP-10/25GBase-LR
Twe1/0/9		notconnect	1	auto	auto	unknown
Twe1/0/10		notconnect	1	auto	auto	unknown
Twe1/0/11		notconnect	1	auto	auto	unknown
Twe1/0/12		notconnect	1	auto	auto	unknown
Twe1/0/13		notconnect	1	auto	auto	unknown
Twe1/0/14		notconnect	1	auto	auto	unknown
Twe1/0/15		notconnect	routed	auto	auto	unknown
Twe1/0/16		notconnect	1	auto	auto	unknown
Twe1/0/17		notconnect	1	auto	auto	unknown
Twe1/0/18		notconnect	1	auto	auto	unknown
Twe1/0/19		notconnect	1	auto	10G	unknown

Port	Name	Status	Vlan	Duplex	Speed	Type
Twe1/0/20		notconnect	1	auto	auto	unknown
Twe1/0/21		notconnect	routed	auto	auto	unknown
Twe1/0/22		notconnect	routed	auto	auto	unknown
Twe1/0/23		notconnect	1	auto	auto	unknown
Twe1/0/24		notconnect	1	auto	auto	unknown
Hu1/0/25		notconnect	1	full	auto	unknown
Hu1/0/26		notconnect	1	auto	auto	unknown
Hu1/0/27		notconnect	routed	auto	auto	unknown
Hu1/0/28		notconnect	1	auto	auto	unknown

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

```

C9500-24Y4C#show interface twentyFiveGigE 1/0/7
TwentyFiveGigE1/0/7 is up, line protocol is up (connected)
Hardware is Twenty Five Gigabit Ethernet, address is 08ec.f5da.1667 (bia 08ec.f5da.1667)
MTU 1500 bytes, BW 25000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 25Gb/s, link type is force-up, media type is SFP-10/25GBase-LR
Fec is auto
input flow-control is on, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:03, output 00:00:00, output hang never
Last clearing of "show interface" counters 1d01h
Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    19 packets input, 5134 bytes, 0 no buffer
Received 14 broadcasts (14 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 14 multicast, 0 pause input
    0 input packets with dribble condition detected
68 packets output, 9354 bytes, 0 underruns
Output 63 broadcasts (61 multicasts)
    0 output errors, 0 collisions, 2 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
C9500-24Y4C#show interface twentyFiveGigE 1/0/8
TwentyFiveGigE1/0/8 is up, line protocol is up (connected)
Hardware is Twenty Five Gigabit Ethernet, address is 08ec.f5da.1668 (bia 08ec.f5da.1668)
MTU 1500 bytes, BW 25000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 25Gb/s, link type is force-up, media type is SFP-10/25GBase-LR
Fec is auto
input flow-control is on, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:01, output 00:00:06, output hang never
Last clearing of "show interface" counters 1d01h
Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    69 packets input, 9418 bytes, 0 no buffer
Received 64 broadcasts (62 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 62 multicast, 0 pause input
    0 input packets with dribble condition detected
19 packets output, 5134 bytes, 0 underruns
Output 14 broadcasts (14 multicasts)
    0 output errors, 0 collisions, 2 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out

```

3. Read the DDM information of the module

C9500-24Y4C#show interface twentyFiveGigE 1/0/7 transceiver detail
ITU Channel not available (Wavelength not available),
Transceiver is internally calibrated.
mA: milliamperes, dBm: decibels (milliwatts), NA or N/A: not applicable.
++ : high alarm, + : high warning, - : low warning, -- : low alarm.
A2D readouts (if they differ), are reported in parentheses.
The threshold values are calibrated.

Port	Temperature		High Alarm	High Warn	Low Warn	Low Alarm
	(Celsius)		Threshold	Threshold	Threshold	Threshold
		(Celsius)	(Celsius)	(Celsius)	(Celsius)	(Celsius)
Twe1/0/7	33.3		95.0	85.0	-40.0	-50.0

Port	Voltage		High Alarm	High Warn	Low Warn	Low Alarm
	(Volts)		Threshold	Threshold	Threshold	Threshold
		(Volts)	(Volts)	(Volts)	(Volts)	(Volts)
Twe1/0/7	3.28		3.63	3.46	3.13	2.97

Port	Current		High Alarm	High Warn	Low Warn	Low Alarm
	(milliamperes)		Threshold	Threshold	Threshold	Threshold
		(mA)	(mA)	(mA)	(mA)	(mA)
Twe1/0/7	N/A	35.7	100.0	80.0	20.0	10.0

Port	Optical Transmit Power		High Alarm	High Warn	Low Warn	Low Alarm
	(dBm)		Threshold	Threshold	Threshold	Threshold
		(dBm)	(dBm)	(dBm)	(dBm)	(dBm)
Twe1/0/7	N/A	0.1	5.0	2.0	-7.0	-10.0

Port	Optical Receive Power		High Alarm	High Warn	Low Warn	Low Alarm
	(dBm)		Threshold	Threshold	Threshold	Threshold
		(dBm)	(dBm)	(dBm)	(dBm)	(dBm)
Twe1/0/7	N/A	-0.6	5.0	2.0	-13.3	-16.3

C9500-24Y4C#show interface twentyFiveGigE 1/0/8 transceiver detail
ITU Channel not available (Wavelength not available),
Transceiver is internally calibrated.
mA: milliamperes, dBm: decibels (milliwatts), NA or N/A: not applicable.
++ : high alarm, + : high warning, - : low warning, -- : low alarm.
A2D readouts (if they differ), are reported in parentheses.
The threshold values are calibrated.

Port	Temperature (Celsius)	High Alarm	High Warn	Low Warn	Low Alarm
		Threshold (Celsius)	Threshold (Celsius)	Threshold (Celsius)	Threshold (Celsius)
Twe1/0/8	34.4	95.0	85.0	-40.0	-50.0

Port	Voltage (Volts)	High Alarm	High Warn	Low Warn	Low Alarm
		Threshold (Volts)	Threshold (Volts)	Threshold (Volts)	Threshold (Volts)
Twe1/0/8	3.30	3.63	3.46	3.13	2.97

Port	Current Lane (milliamperes)	High Alarm	High Warn	Low Warn	Low Alarm
		Threshold (mA)	Threshold (mA)	Threshold (mA)	Threshold (mA)
Twe1/0/8	N/A 35.7	100.0	80.0	20.0	10.0

Port	Optical Transmit Power Lane (dBm)	High Alarm	High Warn	Low Warn	Low Alarm
		Threshold (dBm)	Threshold (dBm)	Threshold (dBm)	Threshold (dBm)
Twe1/0/8	N/A 0.9	5.0	2.0	-7.0	-10.0

Port	Optical Receive Power Lane (dBm)	High Alarm	High Warn	Low Warn	Low Alarm
		Threshold (dBm)	Threshold (dBm)	Threshold (dBm)	Threshold (dBm)
Twe1/0/8	N/A 0.0	5.0	2.0	-13.3	-16.3

Test Conclusion

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

Remarks

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