

SFP-1G43-BX10

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 Result Summary

Table 2-1: Test Result Summary

Test Items	Test Result
Muti-Version	Pass
Connectivity	Pass
Module Basic Information	Pass
Digital Diagnostic Monitoring	Pass

3. Test Equipment Used

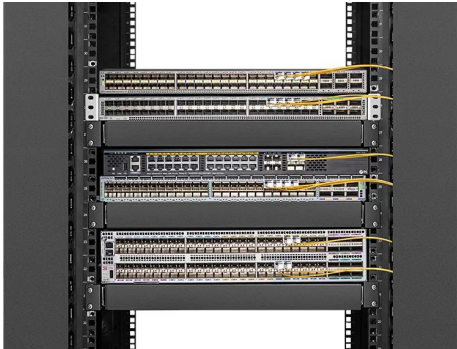
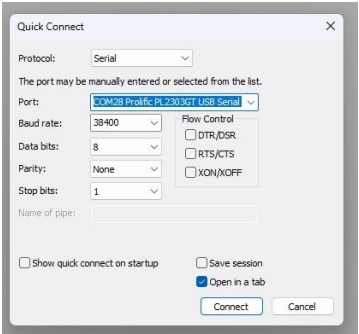
Table 3-1: Test Equipment Used

Vendor	Device	Soft Version/Compatible Brand	Serial Number
Cisco Switch	C9500-24Y4C	17.03.03	/
FS Optical Transceiver Module	SFP-1G43-BX10	Cisco Compatible	A1910000070 A1910000056

4. Test Data

4.1 Test Scenario

Table 4-1: Test Scenario

Test Topology	Network topology :  Interoperability test scenario : 
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 optical 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.
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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 ver
C9500-24Y4C#show version
Cisco IOS XE Software, Version 17.03.03
Cisco IOS Software [Amsterdam], Catalyst L3 Switch Software (CAT9K_IOSXE), Version 17.3.3, RELEASE SOFTWARE (fc7)
Technical Support: <http://www.cisco.com/techsupport>
Copyright (c) 1986-2021 by Cisco Systems, Inc.
Compiled Thu 04-Mar-21 12:32 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 0 minutes
Uptime for this control processor is 2 minutes
System returned to ROM by PowerOn
System image file is "bootflash:cat9k_iosxe.17.03.03.SPA.bin"
Last reload reason: PowerOn

C9500-24Y4C#show interfaces status

Port	Name	Status	Vlan	Duplex	Speed	Type
Twe1/0/1		connected	routed	full	1000	1000BaseBX-10D SFP
Twe1/0/2		notconnect	routed	auto	auto	unknown
Twe1/0/3		connected	1	full	1000	1000BaseBX-10U SFP
Twe1/0/4		notconnect	1	auto	auto	unknown
Twe1/0/5		connected	1	full	1000	1000BaseBX-10D SFP
Twe1/0/6		notconnect	1	auto	auto	unknown
Twe1/0/7		connected	1	full	1000	1000BaseBX-10U SFP
Twe1/0/8		notconnect	1	auto	auto	unknown
Twe1/0/9		notconnect	1	auto	auto	unknown
Twe1/0/10		notconnect	routed	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

Port	Name	Status	Vlan	Duplex	Speed	Type
Twe1/0/18		notconnect	1	auto	auto	unknown
Twe1/0/19		notconnect	1	auto	25G	unknown
Twe1/0/20		notconnect	1	auto	25G	unknown
Twe1/0/21		notconnect	1	auto	25G	unknown
Twe1/0/22		notconnect	1	auto	auto	unknown
Twe1/0/23		notconnect	1	auto	auto	unknown
Twe1/0/24		notconnect	1	auto	auto	unknown
Hu1/0/25		notconnect	routed	auto	auto	unknown
Hu1/0/26		notconnect	routed	auto	auto	unknown
Hu1/0/27		notconnect	routed	auto	auto	unknown
Hu1/0/28		notconnect	routed	auto	auto	unknown

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

C9500-24Y4C#show idprom interface twentyFiveGigE 1/0/1 detail

IDPROM for transceiver TwentyFiveGigE1/0/1:

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Description                = SFP or SFP+ optics (type 3)
Transceiver Type:          = 1000BASE BX10-D (260)
Product Identifier (PID)    = GLC-BX-D
Vendor Revision             = A0
Serial Number (SN)          = A1910000070
Vendor Name                 = FS
Vendor OUI (IEEE company ID) = 00.00.00 (0)
CLEI code                   = IPU1AG6RAB
Cisco part number           = 10-2093-02
Device State                = Enabled.
Date code (yy/mm/dd)       = 19/02/20
Connector type              = LC.
Encoding                    = 8B10B (1)
Nominal bitrate              = GE (1300 Mbits/s)
Minimum bit rate as % of nominal bit rate = not specified
Maximum bit rate as % of nominal bit rate = not specified
The transceiver type is 260
Link reach for 9u fiber (m) = 1xFC, 2xFC-SM(10km) (100)
Link reach for 50u fiber (m) = SR(2km) (0)
                             IR-1(15km) (0)
                             IR-2(40km) (0)
                             LR-1(40km) (0)
                             LR-2(80km) (0)
                             LR-3(80km) (0)
                             DX(40KM) (0)
                             HX(40km) (0)
                             ZX(80km) (0)
                             VX(100km) (0)
                             1xFC, 2xFC-SM(10km) (0)
                             ESCON-SM(20km) (0)
Link reach for 62.5u fiber (m) = SR(2km) (0)
                             IR-1(15km) (0)
                             IR-2(40km) (0)
                             LR-1(40km) (0)
                             LR-2(80km) (0)
                             LR-3(80km) (0)
                             DX(40KM) (0)
                             HX(40km) (0)
                             ZX(80km) (0)
                             VX(100km) (0)
                             1xFC, 2xFC-SM(10km) (0)
                             ESCON-SM(20km) (0)
Nominal laser wavelength    = 1490 nm.
DWDM wavelength fraction    = 1490.0 nm.
Supported options            = Tx disable
                             Tx fault signal
                             Loss of signal (standard implementation)
Supported enhanced options  = Alarms for monitored parameters
                             Software Tx disable
                             Software Tx fault monitoring
                             Software Rx LOS monitoring
Diagnostic monitoring        = Digital diagnostics supported
                             Diagnostics are internally calibrated
                             Rx power measured is "Average power"
Transceiver temperature operating range = not specified
Minimum operating temperature = 0 C
Maximum operating temperature = 70 C
High temperature alarm threshold = +75.000 C
High temperature warning threshold = +70.000 C
Low temperature warning threshold = +0.000 C
Low temperature alarm threshold = -5.000 C
High voltage alarm threshold = 3630.0 mVolts
High voltage warning threshold = 3460.0 mVolts
Low voltage warning threshold = 3130.0 mVolts
Low voltage alarm threshold = 2970.0 mVolts
High laser bias current alarm threshold = 110.000 mAmps
High laser bias current warning threshold = 100.000 mAmps
Low laser bias current warning threshold = 2.000 mAmps
Low laser bias current alarm threshold = 1.000 mAmps
High transmit power alarm threshold = -1.0 dBm
High transmit power warning threshold = -2.0 dBm
Low transmit power warning threshold = -10.0 dBm
Low transmit power alarm threshold = -11.0 dBm
High receive power alarm threshold = -1.0 dBm
High receive power warning threshold = -2.0 dBm
Low receive power warning threshold = -24.0 dBm
Low receive power alarm threshold = -24.9 dBm
External Calibration: bias current slope = 1.000
External Calibration: bias current offset = 0

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Test Information

Test Information	IDPROM for transceiver TwentyFiveGigE1/0/5: Description = SFP or SFP+ optics (type 3) Transceiver Type: = 1000BASE BX10-D (260) Product Identifier (PID) = GLC-BX-D Vendor Revision = A0 Serial Number (SN) = A1910000056 Vendor Name = FS Vendor OUI (IEEE company ID) = 00.00.00 (0) CLEI code = IPU1AG6RAB Cisco part number = 10-2093-02 Device State = Enabled. Date code (yy/mm/dd) = 19/02/20 Connector type = LC. Encoding = 8B10B (1) Nominal bitrate = GE (1300 Mbits/s) Minimum bit rate as % of nominal bit rate = not specified Maximum bit rate as % of nominal bit rate = not specified The transceiver type is 260 Link reach for 9u fiber (m) = 1xFC, 2xFC-SM(10km) (100) Link reach for 50u fiber (m) = SR(2km) (0) IR-1(15km) (0) IR-2(40km) (0) LR-1(40km) (0) LR-2(80km) (0) LR-3(80km) (0) DX(40KM) (0) HX(40km) (0) ZX(80km) (0) VX(100km) (0) 1xFC, 2xFC-SM(10km) (0) ESCON-SM(20km) (0) Link reach for 62.5u fiber (m) = SR(2km) (0) IR-1(15km) (0) IR-2(40km) (0) LR-1(40km) (0) LR-2(80km) (0) LR-3(80km) (0) DX(40KM) (0) HX(40km) (0) ZX(80km) (0) VX(100km) (0) 1xFC, 2xFC-SM(10km) (0) ESCON-SM(20km) (0) Nominal laser wavelength = 1490 nm. DWDM wavelength fraction = 1490.0 nm. Supported options = Tx disable Tx fault signal Loss of signal (standard implementation) Supported enhanced options = Alarms for monitored parameters Software Tx disable Software Tx fault monitoring Software Rx LOS monitoring Diagnostic monitoring = Digital diagnostics supported Diagnostics are internally calibrated Rx power measured is "Average power" Transceiver temperature operating range = not specified Minimum operating temperature = 0 C Maximum operating temperature = 70 C High temperature alarm threshold = +75.000 C High temperature warning threshold = +70.000 C Low temperature warning threshold = +0.000 C Low temperature alarm threshold = -5.000 C High voltage alarm threshold = 3630.0 mVolts High voltage warning threshold = 3460.0 mVolts Low voltage warning threshold = 3130.0 mVolts Low voltage alarm threshold = 2970.0 mVolts High laser bias current alarm threshold = 110.000 mAmps High laser bias current warning threshold = 100.000 mAmps Low laser bias current warning threshold = 2.000 mAmps Low laser bias current alarm threshold = 1.000 mAmps High transmit power alarm threshold = -1.0 dBm High transmit power warning threshold = -2.0 dBm Low transmit power warning threshold = -10.0 dBm Low transmit power alarm threshold = -11.0 dBm High receive power alarm threshold = -1.0 dBm High receive power warning threshold = -2.0 dBm Low receive power warning threshold = -24.0 dBm Low receive power alarm threshold = -24.9 dBm External Calibration: bias current slope = 1.000 External Calibration: bias current offset = 0
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3. Read the DDM information of the module

C9500-24Y4C#show interfaces twentyFiveGigE 1/0/1 transceiver detail

ITU Channel not available (1310.0 nm),

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 Threshold (Celsius)	High Warn Threshold (Celsius)	Low Warn Threshold (Celsius)	Low Alarm Threshold (Celsius)
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Twe1/0/1	32.1	75.0	70.0	0.0	-5.0
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Port	Voltage (Volts)	High Alarm Threshold (Volts)	High Warn Threshold (Volts)	Low Warn Threshold (Volts)	Low Alarm Threshold (Volts)
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Twe1/0/1	3.28	3.63	3.46	3.13	2.97
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Port	Current Lane (milliamperes)	High Alarm Threshold (mA)	High Warn Threshold (mA)	Low Warn Threshold (mA)	Low Alarm Threshold (mA)
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Twe1/0/1	N/A 20.0	110.0	100.0	2.0	1.0
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Port	Optical Transmit Power Lane (dBm)	High Alarm Threshold (dBm)	High Warn Threshold (dBm)	Low Warn Threshold (dBm)	Low Alarm Threshold (dBm)
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Twe1/0/1	N/A -5.3	-1.0	-2.0	-10.0	-11.0
----------	----------	------	------	-------	-------

Port	Optical Receive Power Lane (dBm)	High Alarm Threshold (dBm)	High Warn Threshold (dBm)	Low Warn Threshold (dBm)	Low Alarm Threshold (dBm)
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Twe1/0/1	N/A -5.1	-1.0	-2.0	-24.0	-24.9
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Test Information

Test Information	C9500-24Y4C#show interfaces twentyFiveGigE 1/0/5 transceiver detail																														
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			High Alarm	High Warn	Low Warn	Low Alarm																									
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	(Celsius)	(Celsius)	(Celsius)	(Celsius)	(Celsius)																										
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		High Alarm	High Warn	Low Warn	Low Alarm																										
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	Lane (dBm)	(dBm)	(dBm)	(dBm)	(dBm)																										
Twe1/0/1	N/A -5.1	-1.0	-2.0	-24.0	-24.9																										
Test Conclusion	After completing the above test content, all the test information should be copied and pasted into a TXT document.																														
Remarks																															