SFP-1G34-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

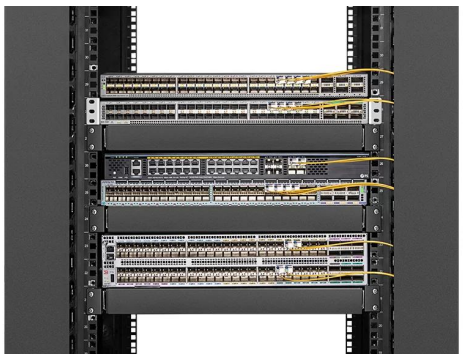
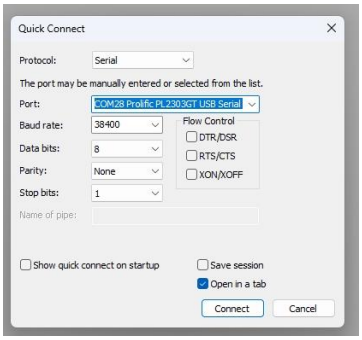
Table 3-1: Test Equipment Used

Vendor	Device	Soft Version/Compatible Brand	Serial Number
Cisco Switch	C9500-24Y4C	17.03.03	/
FS Optical Transceiver Module	SFP-1G34-BX10	Cisco Compatible	A1910000061 A1910000051

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. ③According 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 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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documentation or "License Notice" file accompanying the IOS-XE software,
or the applicable URL provided on the flyer accompanying the IOS-XE
software.


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
```

Test Information	2. Read the module's basic information from the switch side IDPROM for transceiver TwentyFiveGigE1/0/3: Description = SFP or SFP+ optics (type 3) Transceiver Type: = 1000BASE BX10-U (259) Product Identifier (PID) = GLC-BX-U Vendor Revision = A0 Serial Number (SN) = A1910000061 Vendor Name = FS Vendor OUI (IEEE company ID) = 00.00.00 (0) CLEI code = IPUIAG5RAB Cisco part number = 10-2094-02 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 259 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 = 1310 nm. DWDM wavelength fraction = 1310.0 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

Test Information	IDPROM for transceiver TwentyFiveGigE1/0/7: Description = SFP or SFP+ optics (type 3) Transceiver Type: = 1000BASE BX10-U (259) Product Identifier (PID) = GLC-BX-U Vendor Revision = A0 Serial Number (SN) = A1910000051 Vendor Name = FS Vendor OUI (IEEE company ID) = 00.00.00 (0) CLEI code = IPUIAG5RAB Cisco part number = 10-2094-02 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 259 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 = 1310 nm. DWDM wavelength fraction = 1310.0 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

Test Information	3. Read the DDM information of the module

C9500-24Y4C#show interfaces twentyFiveGigE 1/0/3 transceiver detail
ITU Channel not available (1490.0 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)
Twe1/0/3	26.6	75.0	70.0	0.0	-5.0

Port	Voltage (Volts)	High Alarm Threshold (Volts)	High Warn Threshold (Volts)	Low Warn Threshold (Volts)	Low Alarm Threshold (Volts)
Twe1/0/3	3.28	3.63	3.46	3.13	2.97

Port	Lane	Current (milliamperes)	High Alarm Threshold (mA)	High Warn Threshold (mA)	Low Warn Threshold (mA)	Low Alarm Threshold (mA)
Twe1/0/3	N/A	14.9	110.0	100.0	2.0	1.0

Port	Lane	Optical Transmit Power (dBm)	High Alarm Threshold (dBm)	High Warn Threshold (dBm)	Low Warn Threshold (dBm)	Low Alarm Threshold (dBm)
Twe1/0/3	N/A	-5.3	-1.0	-2.0	-10.0	-11.0

Port	Lane	Optical Receive Power (dBm)	High Alarm Threshold (dBm)	High Warn Threshold (dBm)	Low Warn Threshold (dBm)	Low Alarm Threshold (dBm)
Twe1/0/3	N/A	-5.0	-1.0	-2.0	-24.0	-24.9

Test Information

```
C9500-24Y4C#show interfaces twentyFiveGigE 1/0/7 transceiver detail
ITU Channel not available (1490.0 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.

                    High Alarm  High Warn  Low Warn   Low Alarm
          Temperature  Threshold  Threshold  Threshold  Threshold
Port      (Celsius)    (Celsius)  (Celsius)  (Celsius)  (Celsius)
--------- ------------ ---------- ---------- ---------- ----------
Twe1/0/3  26.6         75.0       70.0       0.0        -5.0

                    High Alarm  High Warn  Low Warn   Low Alarm
          Voltage   Threshold   Threshold  Threshold  Threshold
Port      (Volts)   (Volts)     (Volts)    (Volts)    (Volts)
--------- --------- ----------- ---------- ---------- ----------
Twe1/0/3  3.28      3.63        3.46       3.13       2.97

                    High Alarm  High Warn  Low Warn   Low Alarm
          Current   Threshold   Threshold  Threshold  Threshold
Port      Lane (milliamperes)   (mA)       (mA)       (mA)       (mA)
--------- ---- -------------- ---------- ---------- ---------- ----------
Twe1/0/3  N/A  14.9           110.0      100.0      2.0        1.0

          Optical     High Alarm  High Warn  Low Warn   Low Alarm
          Transmit Power Threshold  Threshold  Threshold  Threshold
Port      Lane (dBm)     (dBm)      (dBm)      (dBm)      (dBm)
--------- ---- -------------- ---------- ---------- ---------- ----------
Twe1/0/3  N/A  -5.3           -1.0       -2.0       -10.0      -11.0

          Optical     High Alarm  High Warn  Low Warn   Low Alarm
          Receive Power Threshold  Threshold  Threshold  Threshold
Port      Lane (dBm)     (dBm)      (dBm)      (dBm)      (dBm)
--------- ---- -------------- ---------- ---------- ---------- ----------
Twe1/0/3  N/A  -5.0           -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	