SFP-10G-BX (10km)
TEST REPORT (Cisco)

Content

1.Test Purpose

By building test scenarios and simulating the customer's usage environment, we test whether the module 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

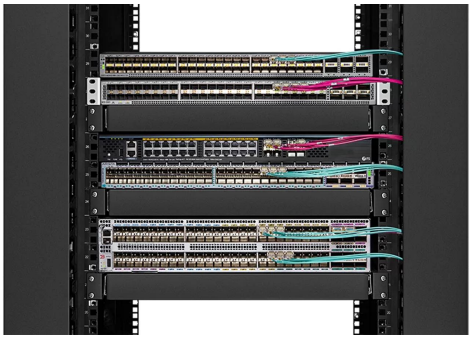
Table 3-1: Test Equipment Used

Vendor	Device	Soft Version/Compatible Brand	Serial Number
Cisco Switch	C9300X-12Y	17.12.03	/
FS Optical Transceiver Module	SFP-10G-BX (10km)	Cisco Compatible	Y2311282625 Y2311282879

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 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

```
Switch#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
```

```
Switch#show interfaces status

Port      Name               Status       Vlan       Duplex  Speed Type
Twe1/0/1                     connected    1            full   10G SFP-10G-BX-UI
Twe1/0/2                     connected    1            full   10G SFP-10G-BX-UI
Twe1/0/3                     err-disabled 1            full   25G unknown
Twe1/0/4                     err-disabled 1            full   25G unknown
Twe1/0/5                     notconnect   1            full   auto unknown
Twe1/0/6                     notconnect   1            full   auto unknown
Twe1/0/7                     notconnect   1            auto   auto unknown
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    10G unknown
Twe1/0/12                    notconnect   1            auto    10G unknown
Ap1/0/1                      connected    1          a-full  a-10G App-hosting port
Ap1/0/2                      connected    1          a-full  a-10G App-hosting port
```

Test Information	2.Read the module's basic information from the switch side Switch#show idprom interface twe1/0/1 detail General SFP Information ----------

```
Identifier          :  SFP/SFP+
Ext.Identifier      :  SFP function is defined by two-wire interface ID only
Connector           :  LC connector
Transceiver
 10/40GE Comp code      :  Unknown
 SONET Comp code     :  Unknown
 GE Comp code        :  Unknown
 Link length         :  Unknown
 Technology          :  Unknown
 Media               :  Unknown
 Speed               :  Unknown
Encoding            :  64B/66B
BR_Nominal          :  10300 Mbps
Length(9um)-km      :  10 km
Length(9um)         :  10000 m
Length(50um)        :  GBIC does not support 50 micron multi mode OM2 fibre
Length(62.5um)      :  GBIC does not support 62.5 micron multi mode OM1 fibre
Length(Copper)      :  GBIC does not support 50 micron multi mode OM4 fibre
Vendor Name         :  FS
Vendor Part Number  :  SFP-10G-BX
Vendor Revision     :  0x20 0x20 0x20 0x20
Vendor Serial Number :  Y2311282625
Wavelength          :  1270.00 nm
CC_BASE             :  0x01
----------

Extended ID Fields
----------
Options             :  0x00 0x1A
BR, max             :  0x00
BR, min             :  0x00
Date code           :  231213
Diag monitoring     :  Implemented
Internally calibrated :  Yes
Exeternally calibrated:  No
Rx.Power measurement :  Avg.Power
Address Change      :  Not Required
CC_EXT              :  0xDA
----------

Other Information
----------
Chk for link status  : 00
Flow control Receive  : ON
Flow control Send     : Off
Administrative Speed  : 10000
Administrative Duplex : full
```

Test Information

```
Switch#show idprom interface twe1/0/2 detail

General SFP Information
---------------------------------------------
Identifier            :  SFP/SFP+
Ext.Identifier        :  SFP function is defined by two-wire interface ID only
Connector             :  LC connector
Transceiver
 10/40GE Comp code    :  Unknown
 SONET Comp code      :  Unknown
 GE Comp code         :  Unknown
 Link length          :  Unknown
 Technology           :  Unknown
 Media                :  Unknown
 Speed                :  Unknown
Encoding              :  64B/66B
BR_Nominal            :  10300 Mbps
Length(9um)-km        :  10 km
Length(9um)           :  10000 m
Length(50um)          :  GBIC does not support 50 micron multi mode OM2 fibre
Length(62.5um)        :  GBIC does not support 62.5 micron multi mode OM1 fibre
Length(Copper)        :  GBIC does not support 50 micron multi mode OM4 fibre
Vendor Name           :  FS
Vendor Part Number    :  SFP-10G-BX
Vendor Revision       :  0x20 0x20 0x20 0x20
Vendor Serial Number  :  Y2311282879
Wavelength            :  1270.00 nm
CC_BASE               :  0x01
---------------------------------------------

Extended ID Fields
---------------------------------------------
Options               :  0x00 0x1A
BR, max               :  0x00
BR, min               :  0x00
Date code             :  231213
Diag monitoring       :  Implemented
Internally calibrated :  Yes
Exeternally calibrated:  No
Rx.Power measurement  :  Avg.Power
Address Change        :  Not Required
CC_EXT                :  0xE5
---------------------------------------------

Other Information
---------------------------------------------
Chk for link status   : 00
Flow control Receive  : ON
Flow control Send     : Off
Administrative Speed  : 10000
Administrative Duplex : full
Operational Speed     : 10000
Operational Duplex    : full
---------------------------------------------
```

3. Read the DDM information of the module

```
Switch#show interfaces twe1/0/1 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.

                     High Alarm  High Warn  Low Warn   Low Alarm
          Temperature  Threshold  Threshold  Threshold  Threshold
Port       (Celsius)   (Celsius)  (Celsius)  (Celsius)  (Celsius)
---------  ----------- ---------- ---------- ---------- ----------
Twe1/0/1    37.1          88.0       85.0      -40.0      -43.0

                     High Alarm  High Warn  Low Warn   Low Alarm
          Voltage    Threshold  Threshold  Threshold  Threshold
Port       (Volts)    (Volts)    (Volts)    (Volts)    (Volts)
---------  ----------- ---------- ---------- ---------- ----------
Twe1/0/1    3.26          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)
--------- ---- ---------- ---------- ---------- ---------- ----------
Twe1/0/1  N/A  42.9          90.0       85.0       15.0       10.0

            Optical        High Alarm  High Warn  Low Warn   Low Alarm
            Transmit Power Threshold  Threshold  Threshold  Threshold
Port      Lane (dBm)       (dBm)      (dBm)      (dBm)      (dBm)
--------- ---- ---------- ---------- ---------- ---------- ----------
Twe1/0/1  N/A  -1.6          2.0        0.5        -8.5       -10.0

            Optical        High Alarm  High Warn  Low Warn   Low Alarm
            Receive Power  Threshold  Threshold  Threshold  Threshold
Port      Lane (dBm)       (dBm)      (dBm)      (dBm)      (dBm)
--------- ---- ---------- ---------- ---------- ---------- ----------
Twe1/0/1  N/A  -1.5          2.5        0.5        -14.1      -16.5
```

Test Information	Switch#show interfaces twe1/0/2 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. High Alarm High Warn Low Warn Low Alarm Temperature Threshold Threshold Threshold Threshold Port (Celsius) (Celsius) (Celsius) (Celsius) (Celsius) --- --- --- --- --- --- Twe1/0/2 36.7 88.0 85.0 -40.0 -43.0 High Alarm High Warn Low Warn Low Alarm Voltage Threshold Threshold Threshold Threshold Port (Volts) (Volts) (Volts) (Volts) (Volts) --- --- --- --- --- --- Twe1/0/2 3.25 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) --- --- --- --- --- --- --- Twe1/0/2 N/A 37.4 90.0 85.0 15.0 10.0 Optical High Alarm High Warn Low Warn Low Alarm Transmit Power Threshold Threshold Threshold Threshold Port Lane (dBm) (dBm) (dBm) (dBm) (dBm) --- --- --- --- --- --- --- Twe1/0/2 N/A -1.8 2.0 0.5 -8.5 -10.0 Optical High Alarm High Warn Low Warn Low Alarm Receive Power Threshold Threshold Threshold Threshold Port Lane (dBm) (dBm) (dBm) (dBm) (dBm) --- --- --- --- --- --- --- Twe1/0/2 N/A -1.2 2.5 0.5 -14.1 -16.5
Test Conclusion	After completing the above test content, all the test information should be copied and pasted into a TXT document.
Remarks	