SFP-10GLR-31

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

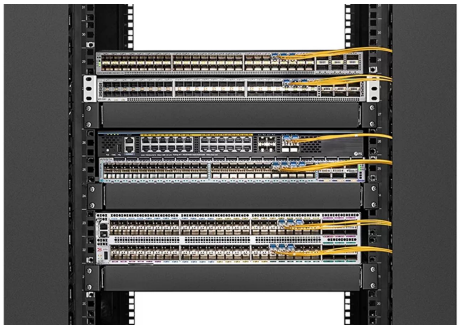
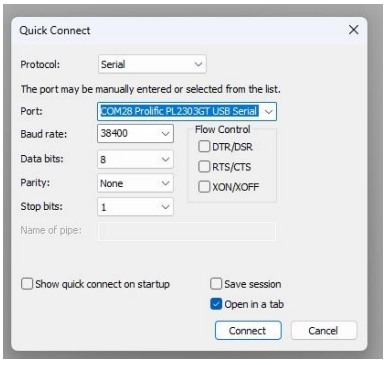
Table 3-1: Test Equipment Used

Vendor	Device	Soft Version/Compatible Brand	Serial Number
Cisco Switch	NCS-55A2-MOD-S	7.7.21	/
FS Optical Transceiver Module	SFP-10GLR-31	Cisco Compatible	A1920000006 A1920000007

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 RP/0/RP0/CPU0:ios#show version Fri Feb 14 03:14:32.926 UTC Cisco IOS XR Software, Version 7.7.21 Copyright (c) 2013-2023 by Cisco Systems, Inc. Build Information: Built By : deenayak Built On : Thu Jun 29 03:55:49 PDT 2023 Built Host : 8ef204814797 Workspace : /auto/srcarchive16/prod/7.7.21/ncs5500/ws Version : 7.7.21 Location : /opt/cisco/XR/packages/ Label : 7.7.21

Test Information

```
RP/0/RP0/CPU0:ios#show interfaces status
                  ^
% Invalid input detected at '^' marker.
RP/0/RP0/CPU0:ios#show interfaces brief
Fri Feb 14 03:14:44.988 UTC

          Intf      Intf      LineP          Encap  MTU      BW
          Name      State     State          Type (byte)   (Kbps)
--------------------------------------------------------------------------------
           Nu0       up        up           Null  1500       0
      Te0/0/0/0      up        up           ARPA  1514   10000000
      Te0/0/0/1      up        up           ARPA  1514   10000000
      Te0/0/0/2  admin-down  admin-down          ARPA  1514   10000000
      Te0/0/0/3  admin-down  admin-down          ARPA  1514   10000000
      Te0/0/0/4  admin-down  admin-down          ARPA  1514   10000000
      Te0/0/0/5  admin-down  admin-down          ARPA  1514   10000000
      Te0/0/0/6  admin-down  admin-down          ARPA  1514   10000000
      Te0/0/0/7  admin-down  admin-down          ARPA  1514   10000000
      Te0/0/0/8  admin-down  admin-down          ARPA  1514   10000000
      Te0/0/0/9  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/10  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/11  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/12  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/13  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/14  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/15  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/16  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/17  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/18  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/19  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/20  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/21  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/22  admin-down  admin-down          ARPA  1514   10000000
     Te0/0/0/23  admin-down  admin-down          ARPA  1514   10000000
     TF0/0/0/24  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/25  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/26  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/27  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/28  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/29  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/30  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/31  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/32  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/33  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/34  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/35  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/36  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/37  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/38  admin-down  admin-down          ARPA  1514   25000000
     TF0/0/0/39  admin-down  admin-down          ARPA  1514   25000000
      Hu0/0/1/2  admin-down  admin-down          ARPA  1514  100000000
      Hu0/0/1/3  admin-down  admin-down          ARPA  1514  100000000
    Te0/0/1/1/0  admin-down  admin-down          ARPA  1514   10000000
    Te0/0/1/1/1  admin-down  admin-down          ARPA  1514   10000000
    Te0/0/1/1/2  admin-down  admin-down          ARPA  1514   10000000
    Te0/0/1/1/3  admin-down  admin-down          ARPA  1514   10000000
    TF0/0/1/0/0  admin-down  admin-down          ARPA  1514   25000000
    TF0/0/1/0/1  admin-down  admin-down          ARPA  1514   25000000
    TF0/0/1/0/2  admin-down  admin-down          ARPA  1514   25000000
    TF0/0/1/0/3  admin-down  admin-down          ARPA  1514   25000000
      Fo0/0/2/1       down       down          ARPA  1514   40000000
      Fo0/0/2/2       down       down          ARPA  1514   40000000
      Hu0/0/2/0  admin-down  admin-down          ARPA  1514  100000000
      Hu0/0/2/3       down       down          ARPA  1514  100000000
Mg0/RP0/CPU0/0  admin-down  admin-down          ARPA  1514    1000000
```

Test Information

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

```
SFP EEPROM  port: 0
        Xcvr Type: SFP
        Xcvr Code: SFP+ 10G LR
        Encoding: 64B66B
        Bit Rate: 10300 Mbps
        Link Reach 9u fiber (Km): 10000 meter
        Link Reach 9u fiber (100m): 10000 meter
        Vendor Name: FS
        Vendor OUI: 00.00.00
        Vendor Part Number: SFP-10GLR-31     (rev.:     )
        Laser wavelength: 1310 nm (fraction: 0.00 nm)
        Optional SFP Signal: Tx_Disable, Tx_Fault, LOS
        Vendor Serial Number: A1920000006
        Date Code (yy/mm/dd): 19/02/21  lot code:
        Diagnostic Monitoring: DOM, Int. Cal.,
        Enhanced Options: SW RX LOS Mon., SW TX Fault Mon, SW TX Disable, Alarm/Warning Flags
```

```
SFP EEPROM  port: 1
        Xcvr Type: SFP
        Xcvr Code: SFP+ 10G LR
        Encoding: 64B66B
        Bit Rate: 10300 Mbps
        Link Reach 9u fiber (Km): 10000 meter
        Link Reach 9u fiber (100m): 10000 meter
        Vendor Name: FS
        Vendor OUI: 00.00.00
        Vendor Part Number: SFP-10GLR-31     (rev.:     )
        Laser wavelength: 1310 nm (fraction: 0.00 nm)
        Optional SFP Signal: Tx_Disable, Tx_Fault, LOS
        Vendor Serial Number: A1920000007
        Date Code (yy/mm/dd): 19/02/21  lot code:
        Diagnostic Monitoring: DOM, Int. Cal.,
        Enhanced Options: SW RX LOS Mon., SW TX Fault Mon, SW TX Disable, Alarm/Warning Flags
```

3. Read the DDM information of the module

```
root> show interfaces diagnostics optics
Physical interface: xe-0/0/16
    Laser bias current                  :  32.880 mA
    Laser output power                  :  0.5610 mW / -2.51 dBm
    Module temperature                  :  33 degrees C / 91 degrees F
    Module voltage                      :  3.2590 V
    Laser receiver power                :  0.6327 mW / -1.99 dBm
    Laser bias current high alarm       :  Off
    Laser bias current low alarm        :  Off
    Laser bias current high warning     :  Off
    Laser bias current low warning      :  Off
    Laser output power high alarm       :  Off
    Laser output power low alarm        :  Off
    Laser output power high warning     :  Off
    Laser output power low warning      :  Off
    Module temperature high alarm       :  Off
    Module temperature low alarm        :  Off
    Module temperature high warning     :  Off
    Module temperature low warning      :  Off
    Module voltage high alarm           :  Off
    Module voltage low alarm            :  Off
    Module voltage high warning         :  Off
    Module voltage low warning          :  Off
    Laser rx power high alarm           :  Off
    Laser rx power low alarm            :  Off
    Laser rx power high warning         :  Off
    Laser rx power low warning          :  Off
    Laser bias current high alarm threshold  :  80.000 mA
    Laser bias current low alarm threshold   :  10.000 mA
    Laser bias current high warning threshold :  75.000 mA
    Laser bias current low warning threshold  :  15.000 mA
    Laser output power high alarm threshold  :  1.7780 mW / 2.50 dBm
    Laser output power low alarm threshold   :  0.0950 mW / -10.22 dBm
    Laser output power high warning threshold :  1.1220 mW / 0.50 dBm
    Laser output power low warning threshold  :  0.1510 mW / -8.21 dBm
    Module temperature high alarm threshold  :  75 degrees C / 167 degrees F
    Module temperature low alarm threshold   :  -5 degrees C / 23 degrees F
    Module temperature high warning threshold :  70 degrees C / 158 degrees F
    Module temperature low warning threshold  :  0 degrees C / 32 degrees F
    Module voltage high alarm threshold      :  3.630 V
    Module voltage low alarm threshold       :  2.970 V
    Module voltage high warning threshold    :  3.460 V
    Module voltage low warning threshold     :  3.130 V
    Laser rx power high alarm threshold      :  1.7783 mW / 2.50 dBm
    Laser rx power low alarm threshold       :  0.0229 mW / -16.40 dBm
    Laser rx power high warning threshold    :  1.1220 mW / 0.50 dBm
    Laser rx power low warning threshold     :  0.0363 mW / -14.40 dBm
```

Test Information	Physical interface: xe-0/0/17 Laser bias current : 33.930 mA Laser output power : 0.5660 mW / -2.47 dBm Module temperature : 33 degrees C / 91 degrees F Module voltage : 3.2540 V Laser receiver power : 0.2416 mW / -6.17 dBm Laser bias current high alarm : Off Laser bias current low alarm : Off Laser bias current high warning : Off Laser bias current low warning : Off Laser output power high alarm : Off Laser output power low alarm : Off Laser output power high warning : Off Laser output power low warning : Off Module temperature high alarm : Off Module temperature low alarm : Off Module temperature high warning : Off Module temperature low warning : Off Module voltage high alarm : Off Module voltage low alarm : Off Module voltage high warning : Off Module voltage low warning : Off Laser rx power high alarm : Off Laser rx power low alarm : Off Laser rx power high warning : Off Laser rx power low warning : Off Laser bias current high alarm threshold : 80.000 mA Laser bias current low alarm threshold : 10.000 mA Laser bias current high warning threshold : 75.000 mA Laser bias current low warning threshold : 15.000 mA Laser output power high alarm threshold : 1.7780 mW / 2.50 dBm Laser output power low alarm threshold : 0.0950 mW / -10.22 dBm Laser output power high warning threshold : 1.1220 mW / 0.50 dBm Laser output power low warning threshold : 0.1510 mW / -8.21 dBm Module temperature high alarm threshold : 75 degrees C / 167 degrees F Module temperature low alarm threshold : -5 degrees C / 23 degrees F Module temperature high warning threshold : 70 degrees C / 158 degrees F Module temperature low warning threshold : 0 degrees C / 32 degrees F Module voltage high alarm threshold : 3.630 V Module voltage low alarm threshold : 2.970 V Module voltage high warning threshold : 3.460 V Module voltage low warning threshold : 3.130 V Laser rx power high alarm threshold : 1.7783 mW / 2.50 dBm Laser rx power low alarm threshold : 0.0229 mW / -16.40 dBm Laser rx power high warning threshold : 1.1220 mW / 0.50 dBm Laser rx power low warning threshold : 0.0363 mW / -14.40 dBm root>
Test Conclusion	After completing the above test content, all the test information should be copied and pasted into a TXT document.
Remarks	