OPTICAL TRANSCEIVER TEST REPORT

Tested by: Doubt.Zheng | Date: 2022.06.03

1. Test Purpose

Test objects: SFP-1G-DW80-1561.41, Through the corresponding tests, the test parameters conform to the relevant industry standards, and the test transceivers can be used normally in Extreme brand equipment, laying the foundation for the subsequent cooperation with customers.

2. Test items

Test items		Test details
Compatibility Testing	Connectivity testing	The transceiver can connect both ends of the device normally, and the device port status is up.
	Parameter testing	The transceiver PN, VN, SN, and DDM information read by the device is consistent with the module tag description.

3. Test environment

3.1. Test samples

Vendor Name	Part Number	Serial Number	Transceiver Description
NADDOD	SFP-1G-DW80-1561.41	ACS22060700520	1000BASE-DWDM SFP C17-C61 80km DOM LC SMF Transceiver Module
NADDOD	SFP-1G-DW80-1561.41	ACS22060700521	1000BASE-DWDM SFP C17-C61 80km DOM LC SMF Transceiver Module

3.2. Test equipment

Equipment Brand	Equipment Model	Software version (running)
Cisco	N9K-C93180YC-EX	NXOS: version 9.2(3)

4. Test data

4.1. Connectivity testing

Test Method	1. check whether the device status is normal.; 2. Check whether the port device port LED is green; (individual brand port LED is yellow or white) 3. check whether the device port is normally linked up;

	4. Check whether the device port rate is up to standard.
Test Data	switch# sh inv NAME: "Chassis", DESCR: "Nexus9000 93180YC-EX chassis" PID: N9K-C93180YC-EX , VID: V01 , SN: FDO21192HKE NAME: "Slot 1", DESCR: "48x10/25G + 6x40/100G Ethernet Module" PID: N9K-C93180YC-EX , VID: V01 , SN: FDO21192HKE NAME: "Power Supply 1", DESCR: "Nexus9000 93180YC-EX chassis Power Supply" PID: NXA-PAC-650W-PE , VID: V02 , SN: LIT21182CKL NAME: "Power Supply 2", DESCR: "Nexus9000 93180YC-EX chassis Power Supply" PID: NXA-PAC-650W-PE , VID: V02 , SN: LIT21182G55 NAME: "Fan 1", DESCR: "Nexus9000 93180YC-EX chassis Fan Module" PID: NXA-FAN-30CFM-F , VID: V01 , SN: N/A NAME: "Fan 2", DESCR: "Nexus9000 93180YC-EX chassis Fan Module" PID: NXA-FAN-30CFM-F , VID: V01 , SN: N/A NAME: "Fan 3", DESCR: "Nexus9000 93180YC-EX chassis Fan Module" PID: NXA-FAN-30CFM-F , VID: V01 , SN: N/A NAME: "Fan 4", DESCR: "Nexus9000 93180YC-EX chassis Fan Module" PID: NXA-FAN-30CFM-F , VID: V01 , SN: N/A N9K-C93180YC-EX# show interface statu -- Port Name Status Vlan Duplex Speed Type -- mgmt0 -- notconnec routed auto auto -- -- Port Name Status Vlan Duplex Speed Type -- Eth1/1 -- xcvrAbsen 999 auto auto -- Eth1/2 -- xcvrAbsen routed auto auto -- Eth1/3 -- connected routed full 1000 DWDM-61.41 Eth1/4 -- xcvrAbsen routed auto auto -- Eth1/5 -- connected routed full 1000 DWDM-61.41
Test	Equipment model	N9K-C93180YC-EX

Situation	Port Number	Eth1/3	Eth1/5
	Port Status	connected	connected
	Port Link Rate	1000	1000
Test Conclusion	After testing, the above transceivers are normally connected on N9K-C93180YC-EX, the device port LEDs at both ends are always on white, the link is linkup.		
Remarks			

4.2. Parameter Testing

Test Method	1. check whether the basic information such as module manufacturer name, model name and serial number is correct. 2. check whether the module transmission distance, wavelength, type and other key parameters are correct. 3. check whether the module DDM parameters have exceeded the threshold value.
Test Data	N9K-C93180YC-EX# show interface eth1/3 transceiver de Ethernet1/3 transceiver is present type is DWDM-61.41 name is NADDOD part number is SFP-1G-DW80-1561.41 revision is A serial number is ACS22060700510 nominal bitrate is 1300 MBit/sec Link length supported for 9/125um fiber is 80 km cisco id is 3 cisco extended id number is 4 SFP Detail Diagnostics Information (internal calibration) --- Current Alarms Warnings Measurement High Low High Low --- Temperature 33.25 C 95.00 C -50.00 C 85.00 C -40.00 C Voltage 3.18 V 3.79 V 2.80 V 3.46 V 3.13 V Current 13.38 mA 40.00 mA 0.00 mA 35.00 mA 0.00 mA Tx Power -5.67 dBm -1.50 dBm -10.50 dBm -1.99 dBm -10.00 dBm Rx Power -7.42 dBm -1.50 dBm -26.98 dBm -1.99 dBm -26.98 dBm Transmit Fault Count = 0 --- Note: ++ high-alarm; + high-warning; -- low-alarm; - low-warning

N9K-C93180YC-EX# show interface eth1/5 transceiver de

Ethernet1/5

transceiver is present

type is DWDM-61.41

name is NADDOD

part number is SFP-1G-DW80-1561.41

revision is A

serial number is ACS22060700510

nominal bitrate is 1300 MBit/sec

Link length supported for 9/125um fiber is 80 km

cisco id is 3

cisco extended id number is 4

SFP Detail Diagnostics Information (internal calibration)

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	33.31 C	95.00 C	-50.00 C	85.00 C	-40.00 C
Voltage	3.20 V	3.79 V	2.80 V	3.46 V	3.13 V
Current	13.52 mA	40.00 mA	0.00 mA	35.00 mA	0.00 mA
Tx Power	-5.71 dBm	-1.50 dBm	-10.50 dBm	-1.99 dBm	-10.00 dBm
Rx Power	-7.32 dBm	-1.50 dBm	-26.98 dBm	-1.99 dBm	-26.98 dBm

Transmit Fault Count = 0

Note: ++ high-alarm; + high-warning; -- low-alarm; - low-warning

Test situation

SFP-1G-DW80-1561.41		
Vendor	NADDOD	NADDOD
Part Number	SFP-1G-DW80-1561.41	SFP-1G-DW80-1561.41
Serial Number	ACS22060700510	ACS22060700511
Wavelength	1561.41nm	1561.41nm
Link Length	80km	80km
Transceiver Type	DWDM-61.41	DWDM-61.41
DDM Alarm	NO	NO

	DDM-Temp	33.25℃	33.31℃
	DDM-Voltage	3.18V	3.20V
	DDM-Tx Bias Current	13.38mA	13.52mA
	DDM-Tx Power	-5.67dBm	-5.71dBm
	DDM-Rx Power	-7.42dBm	-7.32dBm
Test Conclusion	After testing, the above Transceiver on N9K-C93180YC-EX vendor name, part number, serial number, DDM and other information is normally identified, the five DDM parameters do not exceed the level I and II thresholds, and the Transceiver operates normally.		
Remarks	\		

5.Appendix

5.1 Transceiver compatibility testing standards

On the basis of the threshold range, the allowed deviation value should be within the standard range specified by the industry protocol.

Content	Details	Standard
Basic Information	Part Number	The part number read by the device is the same as the Part Number on the label.(If there are special requirements, the actual information shall prevail)
	Serial Number	The serial number read by the device is the same as the serial number on the label.(If there is special requirement, the actual information shall prevail).
	Vendor	The vendor name information read is NADDOD.(If there are special requirements, the actual information shall prevail).
	Transceiver Type	Transceiver information read by the device is consistent with that specified on the actual optics protocol specification (SFF-8636/SFF-8024).
	Wavelength	Transceiver wavelength information read by the device is consistent with the module description.
	Link Length	Transceiver maximum transmission distance information read by the device is consistent with the module description.
DDM Information	Temp	1. The actual DDM information is within the DDM threshold and there are no alarms. 2. The DDM threshold range is in accordance with the module specification.
	Voltage	
	Tx Bias Current	
	Tx Power	
	Rx Power	

Port Information	Port Rate	The data rate information read on the switch port corresponds to the actual rate of the optics.
	Port Status	When the transceiver is connected, the port status information is UP.
	Switch Port LED Status	The port indicators on both ends of the transceiver will be green when the transceiver is connected.
	Port Count	No packet loss, no error code, no CRC, no other ERROR packets.
Device Log		The device does not have any transceiver warning message.

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