



OPTICAL TRANSCEIVER TEST REPORT

Tested by: Jessica.Yang | Date: 2022.06.03

1. Test Purpose

Test objects: QSFP-100G-SR4, 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	QSFP-100G-SR4	ACS22060700210	100GBASE-SR4 QSFP28 100G 850nm 100m DOM MPO/MTP MMF Transceiver Module
NADDOD	QSFP-100G-SR4	ACS22060700211	100GBASE-SR4 QSFP28 100G 850nm 100m DOM MPO/MTP MMF Transceiver Module

3.2. Test equipment

3.3.

Equipment Brand	Equipment Model	Software version (running)
Cisco	Cisco Nexus N9K-C93180YC-EX	NX-OS:10.2.1(F)

4. Test data

4.1. Connectivity testing

<p>Test Method</p>	<ol style="list-style-type: none"> check whether the device status is normal.; Check whether the port device port LED is green; (individual brand port LED is yellow or white) check whether the device port is normally linked up; Check whether the device port rate is up to standard. 												
<p>Test Data</p>	<pre> *****Equipment model***** switch# show inventory NAME: "Chassis", DESCR: "Nexus9000 C93180YC-EX chassis" PID: N9K-C93180YC-EX , VID: V01 , SN: FDO21021SZV NAME: "Slot 1", DESCR: "48x10/25G + 6x40/100G Ethernet Module" PID: N9K-C93180YC-EX , VID: V01 , SN: FDO21021SZV NAME: "Power Supply 2", DESCR: "Nexus9000 C93180YC-EX chassis Power Supply" PID: NXA-PAC-650W-PE , VID: V01 , SN: LIT20140G26 NAME: "Fan 1", DESCR: "Nexus9000 C93180YC-EX chassis Fan Module" PID: NXA-FAN-30CFM-F , VID: V01 , SN: N/A NAME: "Fan 2", DESCR: "Nexus9000 C93180YC-EX chassis Fan Module" PID: NXA-FAN-30CFM-F , VID: V01 , SN: N/A NAME: "Fan 3", DESCR: "Nexus9000 C93180YC-EX chassis Fan Module" PID: NXA-FAN-30CFM-F , VID: V01 , SN: N/A NAME: "Fan 4", DESCR: "Nexus9000 C93180YC-EX chassis Fan Module" PID: NXA-FAN-30CFM-F , VID: V01 , SN: N/A *****Port Status***** switch# show interface status include connected mgmt0 -- connected routed full 1000 -- Eth1/49 -- connected routed full 100G QSFP-100G-SR4 Eth1/50 -- connected routed full 100G QSFP-100G-SR4 </pre>												
<p>Test Situation</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="3">QSFP-100G-SR4</td> </tr> <tr> <td>Port Number</td> <td>Eth1/49</td> <td>Eth1/50</td> </tr> <tr> <td>Port Status</td> <td>connected</td> <td>connected</td> </tr> <tr> <td>Port Link Rate</td> <td>100G</td> <td>100G</td> </tr> </table>	QSFP-100G-SR4			Port Number	Eth1/49	Eth1/50	Port Status	connected	connected	Port Link Rate	100G	100G
QSFP-100G-SR4													
Port Number	Eth1/49	Eth1/50											
Port Status	connected	connected											
Port Link Rate	100G	100G											
<p>Test Conclusion</p>	<p>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.</p>												
<p>Remarks</p>													

4.2. Parameter Testing

<p>Test Method</p>	<ol style="list-style-type: none"> check whether the basic information such as module manufacturer name, model name and serial number is correct. check whether the module transmission distance, wavelength, type and other key parameters are correct. check whether the module DDM parameters have exceeded the threshold value.
<p>Test Data</p>	<pre>*****transceiver information and DDM information***** switch# show interface eth1/49-50 transceiver details Ethernet1/49 transceiver is present type is QSFP-100G-SR4 name is NADDOD part number is QSFP-100G-SR4 revision is A1 serial number is ACS22060700210 nominal bitrate is 25500 MBit/sec Link length supported for 50/125um OM3 fiber is 70 m cisco id is 17 cisco extended id number is 204 Lane Number:1 Network Lane SFP Detail Diagnostics Information (internal calibration) ----- Current Alarms Warnings Measurement High Low High Low ----- Temperature 38.00 C 85.00 C -10.00 C 70.00 C 0.00 C Voltage 3.23 V 3.60 V 2.90 V 3.50 V 3.10 V Current 6.01 mA 15.00 mA 0.00 mA 12.00 mA 2.00 mA Tx Power -0.25 dBm 3.99 dBm -10.60 dBm 2.39 dBm -7.61 dBm Rx Power 0.31 dBm 3.99 dBm -18.23 dBm 2.39 dBm -15.08 dBm Transmit Fault Count = 0 ----- Note: ++ high-alarm; + high-warning; -- low-alarm; - low-warning Lane Number:2 Network Lane SFP Detail Diagnostics Information (internal calibration) ----- Current Alarms Warnings Measurement High Low High Low ----- Temperature 38.00 C 85.00 C -10.00 C 70.00 C 0.00 C Voltage 3.23 V 3.60 V 2.90 V 3.50 V 3.10 V</pre>

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Current      6.00 mA      15.00 mA      0.00 mA      12.00 mA      2.00 mA
Tx Power     -0.25 dBm      3.99 dBm     -10.60 dBm    2.39 dBm     -7.61 dBm
Rx Power      0.31 dBm      3.99 dBm     -18.23 dBm    2.39 dBm     -15.08 dBm

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Transmit Fault Count = 0

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

Lane Number:3 Network Lane

SFP Detail Diagnostics Information (internal calibration)

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                Current          Alarms          Warnings
                Measurement      High           Low           High           Low
-----
Temperature  38.00 C      85.00 C      -10.00 C      70.00 C      0.00 C
Voltage      3.23 V      3.60 V      2.90 V      3.50 V      3.10 V
Current      5.98 mA      15.00 mA      0.00 mA      12.00 mA      2.00 mA
Tx Power     -0.26 dBm      3.99 dBm     -10.60 dBm    2.39 dBm     -7.61 dBm
Rx Power      0.31 dBm      3.99 dBm     -18.23 dBm    2.39 dBm     -15.08 dBm

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Transmit Fault Count = 0

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

Lane Number:4 Network Lane

SFP Detail Diagnostics Information (internal calibration)

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-----
                Current          Alarms          Warnings
                Measurement      High           Low           High           Low
-----
Temperature  38.00 C      85.00 C      -10.00 C      70.00 C      0.00 C
Voltage      3.23 V      3.60 V      2.90 V      3.50 V      3.10 V
Current      6.02 mA      15.00 mA      0.00 mA      12.00 mA      2.00 mA
Tx Power     -0.25 dBm      3.99 dBm     -10.60 dBm    2.39 dBm     -7.61 dBm
Rx Power     -0.50 dBm      3.99 dBm     -18.23 dBm    2.39 dBm     -15.08 dBm

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Transmit Fault Count = 0

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

Ethernet1/50

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transceiver is present
type is QSFP-100G-SR4
name is NADDOD
part number is QSFP-100G-SR4
revision is A1
serial number is ACS22060700211
nominal bitrate is 25500 MBit/sec

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Link length supported for 50/125um OM3 fiber is 70 m
 cisco id is 17
 cisco extended id number is 204

Lane Number:1 Network Lane

SFP Detail Diagnostics Information (internal calibration)

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	36.26 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.60 V	2.90 V	3.50 V	3.10 V
Current	6.98 mA	15.00 mA	1.00 mA	12.00 mA	2.00 mA
Tx Power	1.21 dBm	3.99 dBm	-10.60 dBm	2.39 dBm	-7.61 dBm
Rx Power	1.09 dBm	3.99 dBm	-18.23 dBm	2.39 dBm	-15.08 dBm
Transmit Fault Count = 0					

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

Lane Number:2 Network Lane

SFP Detail Diagnostics Information (internal calibration)

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	36.26 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.60 V	2.90 V	3.50 V	3.10 V
Current	6.98 mA	15.00 mA	1.00 mA	12.00 mA	2.00 mA
Tx Power	1.13 dBm	3.99 dBm	-10.60 dBm	2.39 dBm	-7.61 dBm
Rx Power	1.14 dBm	3.99 dBm	-18.23 dBm	2.39 dBm	-15.08 dBm
Transmit Fault Count = 0					

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

Lane Number:3 Network Lane

SFP Detail Diagnostics Information (internal calibration)

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	36.26 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.60 V	2.90 V	3.50 V	3.10 V
Current	7.02 mA	15.00 mA	1.00 mA	12.00 mA	2.00 mA
Tx Power	1.08 dBm	3.99 dBm	-10.60 dBm	2.39 dBm	-7.61 dBm
Rx Power	0.67 dBm	3.99 dBm	-18.23 dBm	2.39 dBm	-15.08 dBm

Transmit Fault Count = 0					

Note: ++ high-alarm; + high-warning; -- low-alarm; - low-warning					
Lane Number:4 Network Lane					
SFP Detail Diagnostics Information (internal calibration)					

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low

Temperature	36.26 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.60 V	2.90 V	3.50 V	3.10 V
Current	7.00 mA	15.00 mA	1.00 mA	12.00 mA	2.00 mA
Tx Power	1.19 dBm	3.99 dBm	-10.60 dBm	2.39 dBm	-7.61 dBm
Rx Power	1.28 dBm	3.99 dBm	-18.23 dBm	2.39 dBm	-15.08 dBm
Transmit Fault Count = 0					

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

Test situation	QSFP-100G-SR4	
	Vendor	NADDOD
	Part Number	QSFP-100G-SR4
	Serial Number	ACS22060700210
	Wavelength	850nm
	Link Length	OM3:70m
	Transceiver Type	QSFP-100G-SR4
	DDM Alarm	NO
	DDM-Temp	38.°C
	DDM-Voltage	2.32V
	DDM-Tx Bias Current	6.01mA ,6.00mA ,5.98mA ,6.02mA
	DDM-Tx Power	-0.25dBm ,-0.25dBm ,-0.26dBm ,-0.25dBm
	DDM-Rx Power	0.31dBm ,0.31dBm ,0.31dBm ,-0.50dBm

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.

Further Information :

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