



# OPTICAL TRANSCEIVER TEST REPORT

Tested by: Doubt.Zheng | Date: 2022.06.03

## 1. Test Purpose

Test objects: QSFP-100G-A5, 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-A5	ACS22060700 690	5m 100G QSFP28 Active Optical Cable

### 3.2. Test equipment

Equipment Brand	Equipment Model	Software version (running)
Cisco	Cisco Nexus N9K-C9318OYC-EX	NXOS: version 9.2(3)

## 4. Test data

### 4.1. Connectivity testing

<p>Test Method</p>	<ol style="list-style-type: none"> <li>1. check whether the device status is normal.;</li> <li>2. Check whether the port device port LED is green; (individual brand port LED is yellow or white)</li> <li>3. check whether the device port is normally linked up;</li> <li>4. Check whether the device port rate is up to standard.</li> </ol>
<p>Test Data</p>	<pre> switch# show inventory 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  switch# show interface status  ----- - Port          Name                Status  Vlan    Duplex  Speed  Type ----- mgmt0         --                  notconnec routed  auto    auto   -- -----  - Port          Name                Status  Vlan    Duplex  Speed  Type ----- Eth1/1        --                  xcvrAbsen routed  auto    auto   -- Eth1/2        --                  xcvrAbsen routed  auto    auto   -- </pre>

Eth1/3	--	xcvrAbsen routed	auto	auto	--
Eth1/4	--	xcvrAbsen routed	auto	auto	--
Eth1/5	--	xcvrAbsen routed	auto	auto	--
Eth1/6	--	xcvrAbsen routed	auto	auto	--
Eth1/7	--	xcvrAbsen routed	auto	auto	--
Eth1/8	--	xcvrAbsen routed	auto	auto	--
Eth1/9	--	xcvrAbsen routed	auto	auto	--
Eth1/10	--	xcvrAbsen routed	auto	auto	--
Eth1/11	--	xcvrAbsen routed	auto	auto	--
Eth1/12	--	xcvrAbsen routed	auto	auto	--
Eth1/13	--	xcvrAbsen routed	auto	auto	--
Eth1/14	--	xcvrAbsen routed	auto	auto	--
Eth1/15	--	xcvrAbsen routed	auto	auto	--
Eth1/16	--	xcvrAbsen routed	auto	auto	--
Eth1/17	--	xcvrAbsen routed	auto	auto	--
Eth1/18	--	xcvrAbsen routed	auto	auto	--
Eth1/19	--	xcvrAbsen routed	auto	auto	--
Eth1/20	--	xcvrAbsen routed	auto	auto	--
Eth1/21	--	xcvrAbsen routed	auto	auto	--
Eth1/22	--	xcvrAbsen routed	auto	auto	--
Eth1/23	--	xcvrAbsen routed	auto	auto	--
Eth1/24	--	xcvrAbsen routed	auto	auto	--
Eth1/25	--	xcvrAbsen routed	auto	auto	--
Eth1/26	--	xcvrAbsen routed	auto	auto	--
Eth1/27	--	xcvrAbsen routed	auto	auto	--
Eth1/28	--	xcvrAbsen routed	auto	auto	--
Eth1/29	--	xcvrAbsen routed	auto	auto	--
Eth1/30	--	xcvrAbsen routed	auto	auto	--
Eth1/31	--	xcvrAbsen routed	auto	auto	--
Eth1/32	--	xcvrAbsen routed	auto	auto	--
Eth1/33	--	xcvrAbsen routed	auto	auto	--
Eth1/34	--	xcvrAbsen routed	auto	auto	--
Eth1/35	--	xcvrAbsen routed	auto	auto	--
Eth1/36	--	xcvrAbsen routed	auto	auto	--
Eth1/37	--	xcvrAbsen routed	auto	auto	--
Eth1/38	--	xcvrAbsen routed	auto	auto	--
Eth1/39	--	xcvrAbsen routed	auto	auto	--
Eth1/40	--	xcvrAbsen routed	auto	auto	--
Eth1/41	--	xcvrAbsen routed	auto	auto	--
Eth1/42	--	xcvrAbsen routed	auto	auto	--
Eth1/43	--	xcvrAbsen routed	auto	auto	--
Eth1/44	--	xcvrAbsen routed	auto	auto	--
Eth1/45	--	xcvrAbsen routed	auto	auto	--
Eth1/46	--	xcvrAbsen routed	auto	auto	--
Eth1/47	--	xcvrAbsen routed	auto	auto	--

	Eth1/48	--	xcvrAbsen routed	auto	auto	--
	Eth1/49	--	xcvrAbsen routed	auto	auto	--
	Eth1/50	--	connected routed	full	100G	QSFP-100G-A
	OC5M					
	Eth1/51	--	connected routed	full	100G	QSFP-100G-A
	OC5M					
	Eth1/52	--	xcvrAbsen routed	auto	auto	--
	Eth1/53	--	xcvrAbsen routed	auto	auto	--
	Eth1/54	--	xcvrAbsen routed	auto	auto	--
Test Situation	QSFP-100G-A5					
	Port Number		Eth1/50		Eth1/51	
	Port Status		connected		connected	
	Port Link Rate		100G		100G	
Test Conclusion	After testing, the above transceivers are normally connected on Cisco Nexus N9K-C93180YC-EX, the device port LEDs at both ends are always on green Light,the link is linkup.					
Remarks						

#### 4.2. Parameter Testing

Test Method	<ol style="list-style-type: none"> <li>check whether the basic information such as module manufacturer name, model name and serial number is correct.</li> <li>check whether the module transmission distance, wavelength, type and other key parameters are correct.</li> <li>check whether the module DDM parameters have exceeded the threshold value.</li> </ol>
Test Data	<pre>switch# show interface eth 1/50 transceiver details Ethernet1/50   transceiver is present   type is QSFP-100G-AOC5M   name is NADDOD   part number is QSFP-100G-A5   revision is 00   serial number is ACS22060700690   nominal bitrate is 25500 MBit/sec per channel   cisco id is 17   cisco extended id number is 204</pre>

Lane Number:1 Network Lane

SFP Detail Diagnostics Information (internal calibration)

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	24.00 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.59 V	2.90 V	3.50 V	3.09 V
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
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 Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	24.00 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.59 V	2.90 V	3.50 V	3.09 V
Current	5.99 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:3 Network Lane

SFP Detail Diagnostics Information (internal calibration)

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	24.00 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.59 V	2.90 V	3.50 V	3.09 V
Current	5.98 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:4 Network Lane

SFP Detail Diagnostics Information (internal calibration)

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	24.00 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.59 V	2.90 V	3.50 V	3.09 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
Transmit Fault Count = 0					

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

switch# show interface eth 1/51 transceiver details

Ethernet1/51

transceiver is present  
 type is QSFP-100G-AOC5M  
 name is NADDOD  
 part number is QSFP-100G-A5  
 revision is 00  
 serial number is ACS22060700690  
 nominal bitrate is 25500 MBit/sec per channel  
 cisco id is 17  
 cisco extended id number is 204

Lane Number:1 Network Lane

SFP Detail Diagnostics Information (internal calibration)

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	29.00 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.59 V	2.90 V	3.50 V	3.09 V
Current	6.01 mA	15.00 mA	0.00 mA	12.00 mA	2.00 mA
Tx Power	-0.24 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	29.00 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.59 V	2.90 V	3.50 V	3.09 V
Current	6.00 mA	15.00 mA	0.00 mA	12.00 mA	2.00 mA
Tx Power	-0.24 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:3 Network Lane

SFP Detail Diagnostics Information (internal calibration)

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	29.00 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.59 V	2.90 V	3.50 V	3.09 V
Current	5.99 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:4 Network Lane

SFP Detail Diagnostics Information (internal calibration)

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	29.00 C	85.00 C	-10.00 C	70.00 C	0.00 C
Voltage	3.24 V	3.59 V	2.90 V	3.50 V	3.09 V
Current	5.97 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
Transmit Fault Count = 0					

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

Test

QSFP-100G-A5



situation	Vendor	NADDOD	NADDOD
	Part Number	QSFP-100G-A5	QSFP-100G-A5
	Serial Number	ACS22060700690	ACS22060700690
	Wavelength	/	/
	Link Length	/	/
	Transceiver Type	QSFP-100G-AOC5M	QSFP-100G-AOC5M
	DDM Alarm	NO	NO
	DDM-Temp	24.00°C, 24.00°C, 24.00°C, 24.00°C	29.00°C, 29.00°C, 29.00°C, 29.00°C
	DDM-Voltage	3.24V, 3.24V, 3.24V, 3.24V	3.24V, 3.24V, 3.24V, 3.24V
	DDM-Tx Bias Current	6.00mA, 5.99mA, 5.98mA, 5.98mA	6.01mA, 6.00mA, 5.99mA, 5.97mA
	DDM-Tx Power	-0.25dBm, -0.25dBm, -0.25dBm, -0.26dBm	-0.24dBm, -0.24dBm, -0.25dBm, -0.26dBm
	DDM-Rx Power	0.31dBm, 0.31dBm, 0.31dBm, 0.31dBm	0.31dBm, 0.31dBm, 0.31dBm, 0.31dBm
Test Conclusion	After testing, the above Fiber Optic Cable on Cisco Nexus N9K-C9318OYC-EX vendor name, part number, serial number DDM and other information is normally identified, the Fiber Optic Cable operates normally.		
Remarks	Cisco Nexus switch can't read fiber optic wavelengths.		

## 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	<ol style="list-style-type: none"> <li>1. The actual DDM information is within the DDM threshold and there are no alarms.</li> <li>2. The DDM threshold range is in accordance with the module specification.</li> </ol>
	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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Web [www.naddod.com](http://www.naddod.com)

Email For order requirements: [sales@naddod.com](mailto:sales@naddod.com)

For cooperation: [agency@naddod.com](mailto:agency@naddod.com)

For customer service: [support@naddod.com](mailto:support@naddod.com)

For other informations: [info@naddod.com](mailto:info@naddod.com)

For technical support: [tech@naddod.com](mailto:tech@naddod.com)

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