



# OPTICAL TRANSCEIVER TEST REPORT

Tested by: Jessica.Yang | Date: 2022.06.03

## 1. Test Purpose

Test objects: QDD-400G-SR8, 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	QDD-400G-SR8	ACS22060700260	Cisco Compatible 400GBASE-SR8 QSFP-DD 400G 850nm 100m DOM MPO/MTP MMF Transceiver Module
NADDOD	QDD-400G-SR8	ACS22060700261	Cisco Compatible 400GBASE-SR8 QSFP-DD 400G 850nm 100m DOM MPO/MTP MMF Transceiver Module

### 3.2. Test equipment

Equipment Brand	Equipment Model	Software version (running)
Cisco	Cisco N3K-C3432D-S	NXOS: version 9.3(7)

## 4. Test data

### 4.1. Connectivity testing

Test Method	<ol style="list-style-type: none"> <li>check whether the device status is normal.;</li> <li>Check whether the port device port LED is green; (individual brand port LED is yellow or white)</li> <li>check whether the device port is normally linked up;</li> </ol>
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4. Check whether the device port rate is up to standard.

Test Data

\*\*\*\*\*Equipment model\*\*\*\*\*

switch# show inv

NAME: "Chassis", DESCR: "Nexus3000 C3432D-S Chassis"

PID: N3K-C3432D-S , VID: V01 , SN: FOC23356A40

NAME: "Slot 1", DESCR: "32x400G + 2x10G SFP+ Ethernet Module"

PID: N3K-C3432D-S , VID: V01 , SN: FOC23356A40

NAME: "Power Supply 1", DESCR: "Nexus3000 C3432D-S Chassis Power Supply"

PID: NXA-PHV-1100W-PI , VID: V01 , SN: ART2228FCXS

NAME: "Power Supply 2", DESCR: "Nexus3000 C3432D-S Chassis Power Supply"

PID: NXA-PHV-1100W-PI , VID: V01 , SN: ART2228FCZM

NAME: "Fan 1", DESCR: "Nexus3000 C3432D-S Chassis Fan Module"

PID: NXA-FAN-35CFM-PI , VID: V01 , SN: N/A

NAME: "Fan 2", DESCR: "Nexus3000 C3432D-S Chassis Fan Module"

PID: NXA-FAN-35CFM-PI , VID: V01 , SN: N/A

NAME: "Fan 3", DESCR: "Nexus3000 C3432D-S Chassis Fan Module"

PID: NXA-FAN-35CFM-PI , VID: V01 , SN: N/A

NAME: "Fan 4", DESCR: "Nexus3000 C3432D-S Chassis Fan Module"

PID: NXA-FAN-35CFM-PI , VID: V01 , SN: N/A

NAME: "Fan 5", DESCR: "Nexus3000 C3432D-S Chassis Fan Module"

PID: NXA-FAN-35CFM-PI , VID: V01 , SN: N/A

NAME: "Fan 6", DESCR: "Nexus3000 C3432D-S Chassis Fan Module"

PID: NXA-FAN-35CFM-PI , VID: V01 , SN: N/A

\*\*\*\*\*Port Status\*\*\*\*\*

switch# show interface status

Port	Name	Status	Vlan	Duplex	Speed	Type
mgmt0	--	notconnec	routed	auto	auto	--

Port	Name	Status	Vlan	Duplex	Speed	Type
Eth1/5	--	xcvrAbsen	routed	auto	auto	--

	Eth1/6	--	connected routed	full	400G	QSFP-DD-400
	G-SR8					
	Eth1/7	--	xcvrAbsen routed	auto	auto	--
	Eth1/8	--	connected routed	full	400G	QSFP-DD-400
	G-SR8					
Test Situation	Equipment model	Cisco N3K-C3432D-S				
	Port Number		Eth1/6		Eth1/8	
	Port Status		connected		connected	
	Port Link Rate		400G		400G	
Test Conclusion	After testing, the above transceivers are normally connected on Cisco N3K-C3432D-S, the device port LEDs at both ends are always on white, 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>*****transceiver information and DDM information***** switch# show interface ethernet 1/6 transceiver details Ethernet1/6   transceiver is present   type is QSFP-DD-400G-SR8   name is NADDOD   part number is QDD-400G-SR8   revision is A0   serial number is ACS22060700260   nominal bitrate is 425000 MBit/sec per channel   cisco id is 0x18   firmware version is 0.2   Link length OM5 is 100 m   Link length OM4 is 100 m   Link length OM3 is 70 m   Nominal transmitter wavelength is 850.00 nm   Wavelength tolerance is 10.000 nm</pre>

host lane count is 8  
 media lane count is 8  
 max module temperature is 70 deg C  
 min module temperature is 0 deg C  
 min operational voltage is 3.14 mV  
 vendor OUI is 649d98  
 date code is 220324  
 power class is 5 (10.0 W maximum)  
 max power is 10.00 W  
 near-end lanes used none  
 far-end lane code for 8 lanes Undefined  
 media interface is 850 nm VCSEL  
 Advertising code is Optical Interfaces: MMF  
 Host electrical interface code is 400GAUI-8 C2M (Annex 120E)  
 media interface advertising code is 400G-SR8

Lane Number:1 Network Lane

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	41.56 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.23 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	5.25 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	0.35 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.46 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count = 0					

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

Lane Number:2 Network Lane

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	41.56 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.23 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	5.12 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	0.26 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.85 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count = 0					

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

Lane Number:3 Network Lane

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	41.56 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.23 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	5.10 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	0.16 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.43 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count = 0					

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

Lane Number:4 Network Lane

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	41.56 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.23 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	5.24 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	0.02 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.61 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count = 0					

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

Lane Number:5 Network Lane

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	41.56 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.23 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	4.85 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	-0.45 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.15 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count = 0					

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

Lane Number:6 Network Lane

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low

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Temperature  41.56 C      75.00 C      -5.00 C      70.00 C      0.00 C
Voltage      3.23V           3.59 V       3.00 V       3.50 V       3.09 V
Current      5.03 mA         15.00 mA     2.00 mA     12.00 mA     4.00 mA
Tx Power     -0.71 dBm       5.99 dBm    -5.00 dBm   4.99 dBm    -4.00 dBm
Rx Power     0.12 dBm       5.99 dBm    -15.08 dBm  4.99 dBm    -13.01 dBm
Transmit Fault Count = 0

```

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

Lane Number:7 Network Lane

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                Current          Alarms          Warnings
                Measurement      High           Low           High           Low
-----
Temperature  41.56 C      75.00 C      -5.00 C      70.00 C      0.00 C
Voltage      3.23 V       3.59 V       3.00 V       3.50 V       3.09 V
Current      4.95 mA     15.00 mA     2.00 mA     12.00 mA     4.00 mA
Tx Power     -0.67 dBm    5.99 dBm    -5.00 dBm   4.99 dBm    -4.00 dBm
Rx Power     0.03 dBm    5.99 dBm    -15.08 dBm  4.99 dBm    -13.01 dBm
Transmit Fault Count = 0

```

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

Lane Number:8 Network Lane

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-----
                Current          Alarms          Warnings
                Measurement      High           Low           High           Low
-----
Temperature  41.56 C      75.00 C      -5.00 C      70.00 C      0.00 C
Voltage      3.23 V       3.59 V       3.00 V       3.50 V       3.09 V
Current      4.91 mA     15.00 mA     2.00 mA     12.00 mA     4.00 mA
Tx Power     -0.89 dBm    5.99 dBm    -5.00 dBm   4.99 dBm    -4.00 dBm
Rx Power     -0.23 dBm    5.99 dBm    -15.08 dBm  4.99 dBm    -13.01 dBm
Transmit Fault Count = 0

```

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

switch# show interface ethernet 1/8 transceiver details

Ethernet1/8

```

transceiver is present
type is QSFP-DD-400G-SR8
name is NADDOD
part number is QDD-400G-SR8

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revision is A0
serial number is ACS22060700261
nominal bitrate is 425000 MBit/sec per channel
cisco id is 0x18
firmware version is 0.2
Link length OM5 is 100 m
Link length OM4 is 100 m
Link length OM3 is 70 m
Nominal transmitter wavelength is 850.00 nm
Wavelength tolerance is 10.000 nm
host lane count is 8
media lane count is 8
max module temperature is 70 deg C
min module temperature is 0 deg C
min operational voltage is 3.14 mV
vendor OUI is 649d98
date code is 220324
power class is 5 (10.0 W maximum)
max power is 10.00 W
near-end lanes used none
far-end lane code for 8 lanes Undefined
media interface is 850 nm VCSEL
Advertising code is Optical Interfaces: MMF
Host electrical interface code is 400GAUI-8 C2M (Annex 120E)
media interface advertising code is 400G-SR8

```

Lane Number:1 Network Lane

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	41.64 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.33 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	5.10 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	0.39 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.49 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm

Transmit Fault Count = 0

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

Lane Number:2 Network Lane

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low



Temperature	41.64 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.33 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	5.23 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	0.24 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.83 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count = 0					

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

Lane Number:3 Network Lane

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	41.64 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.33 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	5.10 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	0.18 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.46 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count = 0					

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

Lane Number:4 Network Lane

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	41.64 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.33 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	5.23 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	0.00 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.65 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count = 0					

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

Lane Number:5 Network Lane

	Current Measurement	Alarms		Warnings	
		High	Low	High	Low
Temperature	41.64 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.33 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	4.97 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA

Tx Power      -0.41 dBm      5.99 dBm      -5.00 dBm      4.99 dBm      -4.00 dBm  
 Rx Power      0.13 dBm      5.99 dBm      -15.08 dBm      4.99 dBm      -13.01 dBm  
 Transmit Fault Count = 0

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

Lane Number:6 Network Lane

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	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	41.64 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.33 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	5.10 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	-0.69 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.08 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count	= 0				

-----

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

Lane Number:7 Network Lane

-----

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	41.64 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.33 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	4.84 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	-0.69 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	0.00 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count	= 0				

-----

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

Lane Number:8 Network Lane

-----

	Current	Alarms		Warnings	
	Measurement	High	Low	High	Low
Temperature	41.64 C	75.00 C	-5.00 C	70.00 C	0.00 C
Voltage	3.33 V	3.59 V	3.00 V	3.50 V	3.09 V
Current	4.84 mA	15.00 mA	2.00 mA	12.00 mA	4.00 mA
Tx Power	-0.84 dBm	5.99 dBm	-5.00 dBm	4.99 dBm	-4.00 dBm
Rx Power	-0.19 dBm	5.99 dBm	-15.08 dBm	4.99 dBm	-13.01 dBm
Transmit Fault Count	= 0				

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	----- Note: ++ high-alarm; + high-warning; -- low-alarm; - low-warning	
Test situation	QDD-400G-SR8	
	Vendor	NADDOD
	Part Number	QDD-400G-SR8
	Serial Number	ACS22060700260
	Wavelength	850nm
	Link Length	100m
	Transceiver Type	QDD-400G-SR8
	DDM Alarm	NO
	DDM-Temp	41.56°C
	DDM-Voltage	3.23V
	DDM-Tx Bias Current	5.25mA ,5.12mA ,5.10mA ,5.24mA 4.85mA, 5.03mA, 4.95mA, 4.91mA
	DDM-Tx Power	0.35dBm ,0.26dBm ,0.16dBm ,0.02dBm -0.45dBm, -0.71dBm, -0.67dBm, -0.89dBm
	DDM-Rx Power	0.46dBm ,0.85dBm ,0.43dBm, 0.61dBm 0.15dBm, 0.12dBm, 0.03dBm, -0.23dBm
Test Conclusion	After testing, the above Transceiver on Cisco N3K-C3432D-S 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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Web [www.naddod.com](http://www.naddod.com)

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

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