OPTICAL TRANSCEIVER TEST REPORT

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1. Test Purpose

Test objects: SFP-1G-U40-34,SFP-1G-D40-43,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-U40-34	ACS22060700370	1000BASE-BX-U BiDi SFP 1310nm-TX/1490nm-RX 40km DOM Simplex LC SMF Transceiver Module
NADDOD	SFP-1G-D40-43	ACS22060700360	1000BASE-BX-D BiDi SFP 1490nm-TX/1310nm-RX 40km DOM Simplex LC SMF Transceiver Module

3.2. Test equipment

Equipment Brand	Equipment Model	Software version (running)
Cisco	C9500-24Y4C	Version 16.12.04

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;

<table>
<tr><td></td><td colspan="3">4. Check whether the device port rate is up to standard.</td></tr>
<tr><td>Test Data</td><td colspan="3">C9500-24Y4C#show inventory
NAME: "Chassis", DESCR: "Cisco Catalyst 9500 Series Chassis"
PID: C9500-24Y4C , VID: V01 , SN: CAT2249L2AG

NAME: "Power Supply Module 0", DESCR: "Cisco Catalyst 9500 Series 650W AC Power Supply"
PID: C9K-PWR-650WAC-R , VID: V01 , SN: ART2251FM14

NAME: "Fan Tray 0", DESCR: "Cisco Catalyst 9500 Series Fan Tray"
PID: C9K-T1-FANTRAY , VID: , SN:

NAME: "Fan Tray 1", DESCR: "Cisco Catalyst 9500 Series Fan Tray"
PID: C9K-T1-FANTRAY , VID: , SN:

NAME: "Slot 1 Supervisor", DESCR: "Cisco Catalyst 9500 Series Router"
PID: C9500-24Y4C , VID: V01 , SN: CAT2249L2AG

NAME: "TwentyFiveGigE1/0/3", DESCR: "1000BASE BX10-D"
PID: GLC-BX-D , VID: V02 , SN: ACS22060700360

NAME: "TwentyFiveGigE1/0/4", DESCR: "1000BASE BX10-U"
PID: GLC-BX-U , VID: V02 , SN: ACS22060700370

C9500-24Y4C#show int status

Port Name Status Vlan Duplex Speed Type
Twe1/0/1 notconnect 1 full 25G unknown
Twe1/0/2 notconnect 1 auto auto unknown
Twe1/0/3 connected 1 full 1000 1000BaseBX-10D SFP
Twe1/0/4 connected 1 full 1000 1000BaseBX-10U SFP
Twe1/0/5 notconnect 1 auto auto unknown
Twe1/0/6 notconnect 1 auto auto unknown</td></tr>
<tr><td rowspan="4">Test Situation</td><td>Equipment model</td><td colspan="2">C9500-24Y4C</td></tr>
<tr><td>Port Number</td><td>Twe1/0/3</td><td>Twe1/0/4</td></tr>
<tr><td>Port Status</td><td>connected</td><td>connected</td></tr>
<tr><td>Port Link Rate</td><td>1000</td><td>1000</td></tr>
<tr><td>Test Conclusion</td><td colspan="3">After testing, the above transceivers are normally connected on C9500-24Y4C , the device port LEDs at both ends are always on white, the link is linkup.</td></tr>
</table>

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	C9500-24Y4C#show interfaces twe1/0/3 transceiver detail ITU Channel not available (1310.0 nm), Transceiver is internally calibrated. mA: milliamperes, dBm: decibels (milliwatts), NA or N/A: not applicable. ++ : high alarm, + : high warning, - : low warning, -- : low alarm. A2D readouts (if they differ), are reported in parentheses. The threshold values are calibrated. Port Temperature (Celsius) High Alarm Threshold (Celsius) High Warn Threshold (Celsius) Low Warn Threshold (Celsius) Low Alarm Threshold (Celsius) --- --- --- --- --- --- Twe1/0/3 31.1 75.0 70.0 0.0 -5.0 Port Voltage (Volts) High Alarm Threshold (Volts) High Warn Threshold (Volts) Low Warn Threshold (Volts) Low Alarm Threshold (Volts) --- --- --- --- --- --- Twe1/0/3 3.23 3.79 3.46 3.13 2.80 Port Lane Current (milliamperes) High Alarm Threshold (mA) High Warn Threshold (mA) Low Warn Threshold (mA) Low Alarm Threshold (mA) --- --- --- --- --- --- --- Twe1/0/3 N/A 13.7 40.0 35.0 0.0 0.0 Port Lane Optical Transmit Power (dBm) High Alarm Threshold (dBm) High Warn Threshold (dBm) Low Warn Threshold (dBm) Low Alarm Threshold (dBm) --- --- --- --- --- --- --- Twe1/0/3 N/A -4.6 -1.5 -2.0 -10.0 -10.5 Port Lane Optical Receive Power (dBm) High Alarm Threshold (dBm) High Warn Threshold (dBm) Low Warn Threshold (dBm) Low Alarm Threshold (dBm)

	--------- ---- --------- --------- --------- --------- --------- Twe1/0/3 N/A -6.0 -1.5 -2.0 -26.0 -26.6 C9500-24Y4C#show interfaces twe1/0/4 transceiver detail ITU Channel not available (1490.0 nm), Transceiver is internally calibrated. mA: milliamperes, dBm: decibels (milliwatts), NA or N/A: not applicable. ++ : high alarm, + : high warning, - : low warning, -- : low alarm. A2D readouts (if they differ), are reported in parentheses. The threshold values are calibrated. High Alarm High Warn Low Warn Low Alarm Temperature Threshold Threshold Threshold Threshold Port (Celsius) (Celsius) (Celsius) (Celsius) (Celsius) --------- --------- --------- --------- --------- --------- Twe1/0/4 31.6 95.0 85.0 -40.0 -50.0 High Alarm High Warn Low Warn Low Alarm Voltage Threshold Threshold Threshold Threshold Port (Volts) (Volts) (Volts) (Volts) (Volts) --------- --------- --------- --------- --------- --------- Twe1/0/4 3.23 3.79 3.46 3.13 2.80 High Alarm High Warn Low Warn Low Alarm Current Threshold Threshold Threshold Threshold Port Lane (milliamperes) (mA) (mA) (mA) (mA) --------- ---- --------- --------- --------- --------- --------- Twe1/0/4 N/A 13.8 40.0 35.0 0.0 0.0 Optical High Alarm High Warn Low Warn Low Alarm Transmit Power Threshold Threshold Threshold Threshold Port Lane (dBm) (dBm) (dBm) (dBm) (dBm) --------- ---- --------- --------- --------- --------- --------- Twe1/0/4 N/A -5.7 -1.5 -2.0 -10.0 -10.5 Optical High Alarm High Warn Low Warn Low Alarm Receive Power Threshold Threshold Threshold Threshold Port Lane (dBm) (dBm) (dBm) (dBm) (dBm) --------- ---- --------- --------- --------- --------- --------- Twe1/0/4 N/A -5.9 -1.5 -2.0 -26.0 -26.6
Test situation	SFP-1G-U40-34/SFP-1G-D40-43
Vendor	NADDOD / NADDOD

	Part Number	SFP-1G-U40-34	SFP-1G-D40-43
	Serial Number	ACS22060700370	ACS22060700360
	Wavelength	1310nm	1490nm
	Link Length	40km	40km
	Transceiver Type	1000BaseBX-10U SFP	1000BaseBX-10D SFP
	DDM Alarm	NO	NO
	DDM-Temp	31.1℃	31.6℃
	DDM-Voltage	3.23V	3.23V
	DDM-Tx Bias Current	13.7mA	13.8mA
	DDM-Tx Power	-4.6dBm	-5.7dBm
	DDM-Rx Power	-6.0dBm	-5.9dBm
Test Conclusion	After testing, the above Transceiver on C9500-24Y4C 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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