OPTCORE

Transceiver Test Report

PN: OSP1250-8505DCR (SFP-1G-SX)

Test by: Maddy | Date: 2025/12/16

I. Test Purpose

By building realistic switch use cases, we test whether the OSP1250-8505DCR (SFP-1G-SX) transceiver meets industry standards, performs at a high level, and is compatible with the target switch platform.

II. Test Results Summary

Test items	Test Result	Note
Compatibility Test	Pass	Check whether the transceiver is compatible with the target switch
Digital Diagnostic Monitoring	Pass	Check whether the DDM parameters have exceeded the threshold value
Transmission Distance Test	Pass	Check whether the transceiver meets the distance specification

III. Test Environment

3.1 Test Sample

Vendor Name	Part Number	Serial Number	Description
OPTCORE	OSP1250-8505DCR	24J4400982	1000BASE-SX SFP MMF 850nm 550m Transceiver
OPTCORE	OSP1250-8505DCR	24J4400983	1000BASE-SX SFP MMF 850nm 550m Transceiver

3.2 Test Equipment Used

Equipment Brand	Equipment Model	Software Version/Note
Juniper	EX3400 PoE+	JUNOS 18.2R3-S4.1
OPTCORE	LC-LC-OM2-D550M	550m duplex LC multimode patch cable

IV. Test Data

4.1 Compatibility Test

Test Data	 root@E18-Juniper> show interfaces statistics | match ge Physical interface: ge-0/2/0, Enabled, Physical link is Up Logical interface ge-0/2/0.0 (Index 603) (SNMP ifIndex 621) Flags: Up SNMP-Traps 0x24024000 Encapsulation: Ethernet-Bridge

	Physical interface: ge-0/2/1, Enabled, Physical link is Up Logical interface ge-0/2/1.0 (Index 602) (SNMP ifIndex 620) Flags: Up SNMP-Traps 0x24024000 Encapsulation: Ethernet-Bridge
Test Conclusion	The optical transceiver was successfully recognized by the Juniper EX3400 PoE+, with all identification information accurately displayed in the outputs.

4.2 Digital Diagnostic Monitoring

Test Data	{master:0} root@E18-Juniper> show interfaces diagnostics optics Physical interface: ge-0/2/0 Laser bias current : 4.544 mA Laser output power : 0.3550 mW / -4.50 dBm Module temperature : 17 degrees C / 63 degrees F Module voltage : 3.3850 V Laser receiver power : 0.3607 mW / -4.43 dBm Laser bias current high alarm : Off Laser bias current low alarm : Off Laser bias current high warning : Off Laser bias current low warning : Off Laser output power high alarm : Off Laser output power low alarm : Off Laser output power high warning : Off Laser output power low warning : Off Module temperature high alarm : Off Module temperature low alarm : Off Module temperature high warning : Off Module temperature low warning : Off Module voltage high alarm : Off Module voltage low alarm : Off Module voltage high warning : Off Module voltage low warning : Off Laser rx power high alarm : Off Laser rx power low alarm : Off Laser rx power high warning : Off Laser rx power low warning : Off Laser bias current high alarm threshold : 15.000 mA Laser bias current low alarm threshold : 1.000 mA Laser bias current high warning threshold : 12.000 mA Laser bias current low warning threshold : 2.000 mA Laser output power high alarm threshold : 1.0000 mW / 0.00 dBm Laser output power low alarm threshold : 0.0440 mW / -13.57 dBm Laser output power high warning threshold : 0.5010 mW / -3.00 dBm

Laser output power low warning threshold : 0.1120 mW / -9.51 dBm
Module temperature high alarm threshold : 90 degrees C / 194 degrees F
Module temperature low alarm threshold : -10 degrees C / 14 degrees F
Module temperature high warning threshold : 85 degrees C / 185 degrees F
Module temperature low warning threshold : -5 degrees C / 23 degrees F
Module voltage high alarm threshold : 3.700 V
Module voltage low alarm threshold : 2.900 V
Module voltage high warning threshold : 3.600 V
Module voltage low warning threshold : 3.000 V
Laser rx power high alarm threshold : 1.9953 mW / 3.00 dBm
Laser rx power low alarm threshold : 0.0079 mW / -21.02 dBm
Laser rx power high warning threshold : 1.0000 mW / 0.00 dBm
Laser rx power low warning threshold : 0.0200 mW / -16.99 dBm

Physical interface: ge-0/2/1
Laser bias current : 4.472 mA
Laser output power : 0.3670 mW / -4.35 dBm
Module temperature : 17 degrees C / 62 degrees F
Module voltage : 3.3930 V
Laser receiver power : 0.3576 mW / -4.47 dBm
Laser bias current high alarm : Off
Laser bias current low alarm : Off
Laser bias current high warning : Off
Laser bias current low warning : Off
Laser output power high alarm : Off
Laser output power low alarm : Off
Laser output power high warning : Off
Laser output power low warning : Off
Module temperature high alarm : Off
Module temperature low alarm : Off
Module temperature high warning : Off
Module temperature low warning : Off
Module voltage high alarm : Off
Module voltage low alarm : Off
Module voltage high warning : Off
Module voltage low warning : Off
Laser rx power high alarm : Off
Laser rx power low alarm : Off
Laser rx power high warning : Off
Laser rx power low warning : Off
Laser bias current high alarm threshold : 15.000 mA
Laser bias current low alarm threshold : 1.000 mA
Laser bias current high warning threshold : 12.000 mA
Laser bias current low warning threshold : 2.000 mA
Laser output power high alarm threshold : 1.0000 mW / 0.00 dBm
Laser output power low alarm threshold : 0.0440 mW / -13.57 dBm

	Laser output power high warning threshold : 0.5010 mW / -3.00 dBm Laser output power low warning threshold : 0.1120 mW / -9.51 dBm Module temperature high alarm threshold : 90 degrees C / 194 degrees F Module temperature low alarm threshold : -10 degrees C / 14 degrees F Module temperature high warning threshold : 85 degrees C / 185 degrees F Module temperature low warning threshold : -5 degrees C / 23 degrees F Module voltage high alarm threshold : 3.700 V Module voltage low alarm threshold : 2.900 V Module voltage high warning threshold : 3.600 V Module voltage low warning threshold : 3.000 V Laser rx power high alarm threshold : 1.9953 mW / 3.00 dBm Laser rx power low alarm threshold : 0.0079 mW / -21.02 dBm Laser rx power high warning threshold : 1.0000 mW / 0.00 dBm Laser rx power low warning threshold : 0.0200 mW / -16.99 dBm
Test Conclusion	After testing, the above transceiver on the Juniper EX3400 PoE+ DDM is normally identified, the parameters do not exceed thresholds, and the transceiver operates normally.

4.3 Transmission Distance Test

Test Conclusion	In this test, optical transceiver modules were connected using 550m OM2 fiber cables to verify link stability. The modules were inserted into the switches and established a point-to-point connection. The link was monitored for one hour to check for any bit errors, packet loss, link drops, or interruptions. All connections remained stable and error-free, indicating that the modules perform reliably over an 550m fiber link.

Appendix A. Document Revision

Version No	Date	Description
V1.0/EN	2025-12-16	Preliminary test report