SRX-QSFP-40G-SR4

Part number: 740-067444

Optics Overview

Juniper Networks offers a complete portfolio of modular and fixed-chassis routers and switches for both WAN and data center networks. These solutions span Juniper's MX-Series Universal Routing Platform and PTX-Series Packet Transport Routers to EX-Series Ethernet Switches and QFX-Series Data Center Switches among others. Depending on deployment scenarios, Juniper's platforms support different pluggable optic modules that can be selected based on speed, distance, form-factor, and wavelength among other relevant attributes.

Additional Resources

Hardware Compatibility Tool

HCT contains a regularly updated database of Juniper's transceivers, DACs, and AOCs along with information regarding compatibility with Juniper's platforms and interface modules.

https://apps.juniper.net/hct/home/

Product Description

40-Gigabit Ethernet multi-mode optic module

Overview

Part Number	740-067444
Old Part Number(s)	740-052665
Speed	40 Gigabit Ethernet
Breakout Capable	No
Transceiver Type	QSFP+
Product Type	Optical Transceiver
Connector	MPO-12
Monitoring Available	—
Digital Optical Monitoring	—

Note:

- Monitoring Available - Can measure received optical power and display in CLI.
- Digital Optical Monitoring - Full support for SFF-8636.
- Common Optic - The common optics product line provides competitively priced single-SKU optics offerings for use across Juniper routing, switching, and security platforms.

Specifications

Standard: 40GBASE-SR4

Transmitter wavelengths (range)	850 nm	
Cable type	MMF	
Fiber grade	OM3	OM4
Distance	100 m	150 m
Maximum Power consumption (W)	3.5 W	
Operating Temperature (range)	0° C to 70° C	
Storage temperature	−40° C to 85° C	

Supported Platforms

Platform	Introduced Release	Additional Information
Security		
SRX4600	Junos OS 17.4R2	
SRX5400	Junos OS 19.3R1 Junos OS 12.1X46-D10	Introduced release on SRX5K-MPC3-40G10G: 15.1X49-D10. Introduced release on SRX-MIC-2X40G-QSFP: 12.1X46-D10.
SRX5600	Junos OS 19.3R1 Junos OS 12.1X46-D10	Introduced release on SRX5K-MPC3-40G10G: 15.1X49-D10. Introduced release on SRX-MIC-2X40G-QSFP: 12.1X46-D10.
SRX5800	Junos OS 19.3R1 Junos OS 12.1X46-D10	Introduced release on SRX5K-MPC3-40G10G: 15.1X49-D10. Introduced release on SRX-MIC-2X40G-QSFP: 12.1X46-D10.
Switching		
QFX5230-64CD		

Supported Interface Modules

Modular Interface Cards (MICs)

Name	Description	Platforms and Introduced Releases	
40 Gigabit Ethernet			
SRX-MIC-2X40G-QSFP	MIC with two QSFP+ Ethernet ports	SRX5400 Junos OS 12.1X46-D10 SRX5800 Junos OS 12.1X46-D10	SRX5600 Junos OS 12.1X46-D10
4 x 10 Gigabit Ethernet			
SRX-MIC-2X40G-QSFP	MIC with two QSFP+ Ethernet ports	SRX5400 Junos OS 12.1X46-D10 SRX5800 Junos OS 12.1X46-D10	SRX5600 Junos OS 12.1X46-D10

Modular Port Concentrators (MPCs)

Name	Description	Platforms and Introduced Releases	
40 Gigabit Ethernet			
SRX5K-MPC3-40G10G	Fixed-configuration MPC with six 40-Gigabit Ethernet ports and twenty-four 10-Gigabit Ethernet ports	SRX5400 Junos OS 15.1X49-D10 SRX5800 Junos OS 15.1X49-D10	SRX5600 Junos OS 15.1X49-D10
4 x 10 Gigabit Ethernet			
SRX5K-MPC3-40G10G	Fixed-configuration MPC with six 40-Gigabit Ethernet ports and twenty-four 10-Gigabit Ethernet ports	SRX5400 Junos OS 15.1X49-D10 SRX5800 Junos OS 15.1X49-D10	SRX5600 Junos OS 15.1X49-D10

Why buy optics from Juniper?
There is <u>value</u> in choosing Juniper over 3rd party optics

✓ Full testing, validation, and JTAC support for Juniper optics

- Power, Electrical, and Management interfaces tested at the system level.
- Extended temperature and functional testing in DVT chamber using fully loaded systems.
- Full software integration into JUNOS/EVO for seamless part recognition, functionality, and telemetry.
- Latest qualification status and optics specifications published on Hardware Compatibility Tool.

✓ Single-source provider for 1G to 400G on a variety of optical technologies

- Juniper's optics portfolio is maintained and constantly refreshed based on vendor availability.
- Automatic supply chain diversity and supply continuity - multiple optics suppliers fulfilled through Juniper.

✓ Rigorous evaluation of optical vendors

- Juniper ensures uniformity across all vendors by standardizing P-Specs for management, specs, and logs.
- Vendors are scored based on engineering and supply-chain analysis.
- Factory audits and critical component evaluation (Ex. Who is supplying the laser?).

Aren't 3rd party optics the same?
Optics may be a commodity, but some things are too good to be true

× Juniper does not Provide JTAC support for 3rd party optics

- JTAC will only assist with host-related issues unrelated to the use of 3rd party optics.

× Not all optics are the same - standards compliance does <u>not</u> guarantee quality or performance

- Third-party providers lack system-level knowledge and testing.
- No guarantee of vendor reliability or accountability.

× Newer technologies (ex. Coherent 400G ZR/ZR+) are complex and not simply plug-and-play

- Significant software integration necessary to enable full functionality, management, and telemetry.
- Use of unqualified 3rd party high-power optics can damage the host equipment.

× Third-party providers simply can't scale

- Incomplete solution offerings and fast turnaround times only for limited quantities.