

Cisco QSFP-DD and OSFP 800G ZR/ZR+ Coherent Optics Modules





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Cisco QSFP-DD and OSFP 800G ZR/ZR+ digital coherent optics modules enable 800G traffic over amplified Dense Wavelength-Division Multiplexing (DWDM) links up to 120 km for 800ZR and over 1000 km for 800G ZR+.

Product overview

Cisco® QSFP-DD and OSFP 800G ZR/ZR+ coherent optics modules enable 800G traffic over amplified DWDM links up to 120 km for 800ZR and over 1000 km for 800G ZR+.

Leveraging the latest CMOS and coherent technology innovations, Cisco 800G-capable coherent optics can transmit a single wavelength of 800G traffic directly from a router or switch port up to 120 km for 800ZR in a Data Center Interconnect (DCI) application, or beyond 1000 km over existing DWDM networks with 800G ZR+.

The 800G QSFP-DD and OSFP coherent optics expand Cisco Routed Optical Networking applications to include 800G links.

The 800ZR modules leverage the Optical Internetworking Forum (OIF) Implementation Agreement requirements and are ideally positioned for single-span DCI applications. The 800G ZR+ modules leverage the industry-standard OpenROADM interoperable Probabilistic Constellation Shaping (PCS) mode for high-performance interoperability and reaches extending beyond 800ZR. The 800G ZR+ modules are ideal for metro or regional data center and service provider interconnects.

The Cisco 800G QSFP-DD coherent optics modules are mechanically compliant with the QSFP-DD Multi-Source Agreement (MSA), and the Cisco 800G OSFP optical modules are mechanically compliant with the OSFP MSA. The media interface is a duplex LC connector. Both C-band and L-band are supported.





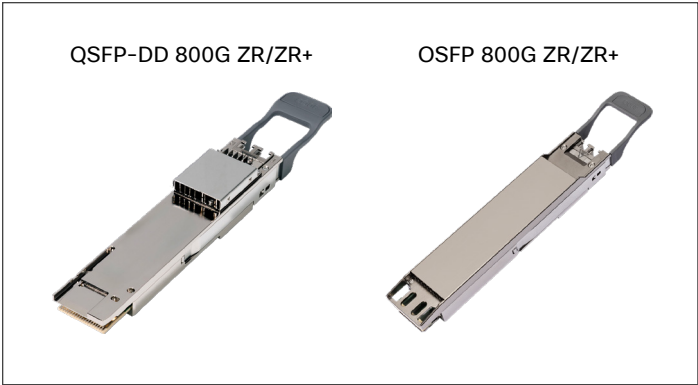
Features and benefits

Table 1. Features and benefits

Feature	Benefits
QSFP-DD or OSFP form factor	Compatible with Cisco and third-party 800G-capable routers, switches, and transponders with QSFP-DD and OSFP ports
Low power consumption	Reduced operating costs due to less need for power and cooling
Extended reach	Unamplified links: Up to 75 km with 800ZR and 80 km with 800G ZR+ Amplified links: Up to 120 km with 800ZR, and over 1000 km with 800G ZR+
Interoperability	800ZR: OIF 800ZR, OpenZR+ interoperable 400G QPSK 800G ZR+ OpenROADM interoperable PCS
High transmit power and Optical Signal-to-Noise Ratio (OSNR)	Compatible with any DWDM photonic network
C-band and L-band support	Allows network operators to double the existing long-haul network capacity

Prominent feature

Cisco 800G ZR/ZR+ coherent optics modules deliver high performance and low power in QSFP-DD and OSFP form factors. They are an optimal choice to extend Cisco Routed Optical Networking use cases to high-capacity single-span DCI applications, for metro/regional DWDM applications in service provider networks, and for AI scale across applications in hyperscale networks.



Platform support

Cisco QSFP-DD and OSFP 800G coherent optical modules are supported on Cisco switches and routers. For more details, refer to the [Cisco Transceiver Modules Compatibility Matrix](#).



Product specifications

Table 2. Cisco QSFP-DD and OSFP 800G ZR/ZR+ product specifications

Specification	Value
Distance	800ZR: Up to 120 km amplified DWDM 800G ZR+: Over 1000 km amplified DWDM Actual reach depends on fiber/connector loss and/or amplified line-system design
Transmit power	>+1 dBm, C-band
Client formats	100GE/200GE/400GE/800GE FOIC mode in 800G ZR+ only on transponders
Data rate, modulation	800ZR 800G: OIF 800ZR 16QAM 400G: OpenZR+ 800G ZR+ 800G: OpenROADM interoperable PCS, OIF 800G 16QAM, Proprietary enhanced mode 600G: OpenROADM interoperable PCS, Proprietary enhanced mode 400G: OpenROADM 400G QPSK, OpenZR+, Proprietary enhanced mode
Wavelength	Tunable, 1528.58 nm to 1567.34 nm for C-band, 1570.21nm to 1610.49nm for L-band
Connector	LC
Case temperature	-5° to 75°C (41° to 167°F)
Fiber	SMF
Power consumption	QSFP-DD type 2B compliant, OSFP power class 8

Ordering information

Table 3. Cisco QSFP-DD and OSFP 800G ZR/ZR+ ordering information

Part #	Product description
DP08QSDD-ZRB-A2	800G ZR+ OpenROADM QSFP-DD DCO - C-Band
DP08QSDD-LRB-A2	800G ZR+ OpenROADM QSFP-DD DCO - L-Band
DP08QSDD-ZRA-A2	800G ZR OIF QSFP-DD DCO - C-Band
DP08SFP8-ZRB-A2	800G ZR+ OpenROADM OSFP DCO - C-Band
DP08SFP8-LRB-A2	800G ZR+ OpenROADM OSFP DCO - L-Band
DP08SFP8-ZRA-A2	800G ZR OIF OSFP DCO - C-Band

Warranty information

Product warranty terms and other information applicable to Cisco products are available at <http://www.cisco.com/go/warranty>.

Product sustainability

Information about Cisco's Environmental, Social, and Governance (ESG) initiatives and performance is provided in Cisco's CSR and sustainability [reporting](#).

Table 4. Cisco environmental sustainability information

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance

Cisco and partner services

Services from Cisco and our certified partners can help you transform the WDM system setup experience and accelerate business innovation and growth. We have the depth and breadth of expertise to create a clear, replicable, optimized coherent transport footprint across technologies. Planning and design services align technology with business goals and can increase the accuracy, speed, and efficiency of your deployment. Technical services can help you improve operational efficiency, save money, and mitigate risk. Optimization services are designed to continuously improve performance and help your team succeed with new technologies. For more information, please visit www.cisco.com/go/services.

Cisco capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital® makes it easier to get the right technology to achieve your objectives, enable business transformation and stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. [Learn more](#).

Learn more

For more information about the Cisco QSFP-DD and OSFP 800G ZR/ZR+ coherent optical modules please visit the Cisco Optics Product Information Matrix at <https://copi.cisco.com/>.