



Cisco QSFP-DD 400G ZR/ZR+ Low Power Consumption Coherent Optics Module

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Cisco® QSFP-DD 400G ZR/ZR+ low-power coherent optical modules provide power savings in high-port-density switch/router platforms for 400 Gigabit Ethernet (400GE) traffic over amplified dense wave-division multiplexing (DWDM) links up to 120 km for 400ZR and over 1000 km for 400ZR+.

Product overview

Cisco QSFP-DD 400ZR/ZR+ low-power-consumption coherent optics modules provide power savings in high-port-density switch/router platforms for 400GE traffic over amplified DWDM links up to 120 km for 400ZR and over 1000 km for 400ZR+.

Leveraging CMOS and coherent technology innovations, Cisco 400GE-capable coherent optics can transmit a single wavelength of 400GE traffic directly from a router or switch port up to 120 km for 400ZR in a data center interconnect (DCI) application, or beyond 1000 km over an existing DWDM network with 400ZR+.

The 400ZR module leverages the Optical Internetworking Forum (OIF) Implementation Agreement requirements and is ideally positioned for single-span DCI applications. The 400ZR+ module leverages OpenZR+ Multi-Source Agreement (MSA) interoperable modes for high-performance interoperability and extends to distances beyond 400ZR's capabilities. The 400ZR+ module is ideal for metro/regional data centers, service provider interconnects with Reconfigurable Optical Add-Drop Multiplexer (ROADM) infrastructure, and AI scale-across applications in hyperscale networks.

The Cisco 400G QSFP-DD low-power-consumption coherent optics modules are mechanically compliant with the QSFP-DD MSA. The media interface is a duplex LC connector. Both C-band and L-band are supported.



Features and benefits

Table 1. Cisco QSFP-DD 400ZR/ZR+ features and benefits

Feature	Benefit
QSFP-DD form factor	Compatible with Cisco and third-party 400GE-capable routers, switches, and transponders with QSFP-DD and OSFP ports
Low power consumption	Reduced operating costs from lower power and cooling required
Extended reach	Unamplified links: Up to 35 km with 400ZR and 45 km with 400ZR+ Amplified links: Up to 120 km with 400ZR, and over 1000 km with 400ZR+
Interoperability	400ZR: OIF 400ZR 400ZR+: OpenZR+ MSA

Prominent feature

Cisco 400ZR/ZR+ low-power-consumption coherent optics modules deliver high performance and low power in a QSFP-DD form factor. They are an optimal choice to extend Cisco Routed Optical Networking use cases to high-capacity DCI applications, metro/regional DWDM applications for service provider networks, and AI scale-across applications in hyperscale networks.

Platform support

Cisco QSFP-DD 400G low-power-consumption 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. Product specifications

Feature	Specifications
Distance	400ZR: Up to 120 km amplified DWDM 400ZR+: Over 1000 km amplified DWDM Actual reach depends on fiber/connector loss and/or amplified line-system design
Transmit power	> -10 dBm
Client formats	400ZR: 400GE 400ZR+: 100GE/200GE/400GE
Data rate, modulation	400ZR: OIF 400ZR 16-QAM 400ZR+: OpenZR+ 400GE 16-QAM 300GE 8-QAM 200GE 16-QAM/8-QAM/QPSK 100GE QPSK
Wavelength	C-band tunable, 1528.58 nm to 1567.34 nm
Connector	LC
Case temperature	-5° to 75°C (23° to 167°F)
Fiber	Single-mode fiber (SMF)
Power consumption	QSFP-DD type 2B compliant

Ordering information

Table 3. Ordering information

Part number	Product description
DP04QSDD-E26-A1	400GBPS COHERENT QSFP-DD, 400ZR OIF, Low Power
DP04QSDD-E36-A1	400GBPS COHERENT QSFP-DD, 400ZR+, OpenZR+, Low Power



Warranty information

Product warranty terms and other information applicable to Cisco products are available at 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
	Information on product takeback and resuse program	Cisco Takeback and Reuse Program
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
Material	Product packaging weight and materials	Contact: environment@cisco.com

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.



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Cisco Capital® makes it easier to get the right technology to achieve your objectives, enable business transformation, and help you 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.](#)

For more information

For more information about the Cisco QSFP-DD 400G ZR/ZR+ coherent optical modules, please visit the Cisco Product Information Matrix at <https://copi.cisco.com/>.