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Cisco 400G QSFP-DD ER1 Optical Module

Contents

The Cisco 400G QSFP-DD ER1 optical module enables 400GbE router to router traffic over dark fiber up to a 45 km distance.

Product overview

Cisco has expanded the range of 400G digital coherent QSFP-DD transceivers with the Cisco® 400G QSFP-DD ER1 optical module. Leveraging coherent technology innovations, the QSFP-DD ER1 optical module can transmit a single wavelength of 400G traffic directly from a router port up to a 45 km distance. The 400G QSFP-DD ER1 optical module's small size and low power consumption make it an optimal choice for unamplified point-to-point dark fiber applications including data center interconnect, campus interconnect, wireless backhaul, and metro access/aggregation.

The Cisco 400G QSFP-DD ER1 optical module is mechanically compliant to the QSFP-DD Multi-Source Agreement (MSA). The QSFP-DD module contains a PCB with a 76 contact card-edge electrical interface to external host-side logic. The media interface is a duplex LC connector operating in C-band over single-mode fiber (SMF) carrying 400G 16 QAM coherent signal.

Features and benefits

Feature	Benefit
QSFP-DD form factor	Compatible with Cisco 400GbE capable routers with QSFP-DD ports
Low power consumption	Reduced operating cost from lower power and cooling
Extended reach	Up to 45 km distance without amplification
Interoperability	OIF 400ZR and OpenZR+ protocol support

Product specifications

Table 1.   Cisco 400G QSFP-DD ER1 Product Specifications

Distance	45 km
Modulation	16 QAM
Data rate (max)	400 Gb/s
Client format	400GbE GAUI-8, 4x100GbE GAUI-2
Low-end case temperature (°C)	-5
High-end case temperature (°C)	75
Link budget	>12.5dB
Interoperability	OIF 400ZR, OpenZR+ protocol support

Voltage supply	3.3
Connector	LC
Cable type	SMF
Wavelength	C-band fixed
Power consumption	QSFP-DD Class 8 compliant

Warranty information

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

Ordering information

Table 2. Cisco 400G QSFP-DD ER1 Ordering Information

Part #	Product Description
DP04QSDD-ER1	400G QSFP-DD transceiver module, coherent DCO, ER 45km

Cisco environmental sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's Corporate Social Responsibility (CSR) Report.

Reference links to information about key environmental sustainability topics (mentioned in the "Environment Sustainability" section of the CSR Report) are provided in the following table:

Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

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Printed in USA

C78-4024651-00　12/23