

Cisco QSFP28 100G ZR Digital Coherent Optics Module

Contents

Product overview	3
Features and benefits	3
Platform Support/Compatibility	4
Product specifications	4
Ordering information	4
Warranty information	5
Cisco environmental sustainability	5
Cisco Capital	5
For more information	5

Cisco® QSFP28 100G ZR extends 100GbE coherent links from QSFP28 ports reaching up to 80km over dark fiber and up to 300km over amplified Dense Wave Division Multiplexing (DWDM) links.

Product overview

The Cisco QSFP28 100G ZR module expands the portfolio of digital coherent optics (DCO) modules to connect QSFP28 ports. Leveraging ITU-T standard compliant staircase FEC and different Quadrature Phase Shift Keying (QPSK) modulation, it can transmit a single wavelength of 100G traffic directly from a router port reaching up to 80km over dark fiber and up to 300km over amplified DWDM links. This DCO module is tunable across C-band.

The module is compatible with widely deployed ports of QSFP28 100G and 100GBASE ER CAUI-4 client interfaces. Its maximum operating power range is 5.5W for C-temperature and 6W for industrial temperature. The QSFP28 100G ZR can cost effectively extend 100G links to 80km on any fiber type, and is a cost-effective migration option of multiple 10G wavelengths to 100G. The module also supports Precision Timing Protocol (PTP) Class C Timing, making it an ideal choice for low latency and precise frequency requirements across metro access, data center interconnect, wireless x-haul, and campus interconnect applications.

The Cisco QSFP28 100G ZR leverages the latest Common Management Interface Specification (CMIS) 5.2 management interface specification and is compliant to coherent CMIS. The module supports ITU-T G.709.2 standard-compliant staircase FEC and allows optical line interface interoperability with multiple existing Cisco and third-party products.

Features and benefits

Table 1. Cisco QSFP28 100G ZR features and benefits

Feature	Benefit
QSFP28 form factor	Compatible with Cisco host platforms supporting QSFP28 ports
Low power consumption	Reduced operating costs from lower power and cooling required
Extended reach	Up to 80km over dark fiber and up to 300km over amplified DWDM links
PTP Class C Timing	Support for low latency precise frequency and phase/time synchronization
CMIS 5.2	Support for Common Management Interface Specification 5.2 for standardized and simplified management
Interoperability	Supports ITU-T G.709.2-standard compliant Staircase FEC
Industrial temperature	PID variant allows industrial temperature range of -40C° to 85C° for outdoor use.

Platform Support/Compatibility

For detailed platform compatibility please see the TMG Matrix: <https://tmgmatrix.cisco.com>.

Product specifications

Table 2. Cisco QSFP28 100G ZR Product Specifications

Distance	Up to 80km dark fiber, up to 300km amplified DWDM
Wavelength range	191.275 THz to 196.125 THz
Data rate	100 Gbps
Client interface	100G BASE-R CAUI-4
Case Temperature - Commercial	0c to 70c
Case Temperature - Industrial	-40° C to 85° C
Tx output power	-8 dBm
Rx sensitivity	-30dBm
Line protocol	OTU4-SC, ITU-T, G.709.2
Connector	LC
Cable type	SMF
Wavelength	C-band tunable
Power Consumption Commercial (Max)	5.5W
Power Consumption Industrial (Max)	6W

Ordering information

Table 3. Ordering information

Part #	Product Description
DP01QS28-E20	Cisco QSFP28 100G ZR DCO commercial temp
DP01QS28-E25	Cisco QSFP28 100G ZR DCO industrial temp

Warranty information

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

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:

Table 4. Cisco environmental sustainability

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

Cisco makes the packaging data available for informational purposes only. It may not reflect the most current legal developments, and Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.

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 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 QSFP28 100G ZR please visit the Cisco Product Information Matrix: <https://copi.cisco.com/>.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at <https://www.cisco.com/go/offices>.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: <https://www.cisco.com/go/trademarks>. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)