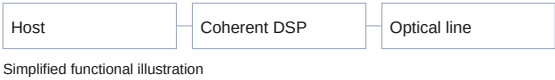


CFP2-800G-DCO

800G CFP2 DCO Coherent module Tunable / Support ultra long distance without DCM

1. Product overview

800G CFP2-DCO Coherent Optical Module The 800G CFP2-DCO is a high-performance Coherent optical module designed for OTN and Data Center Interconnect (DCI) applications. The module supports operation up to 850 Gbps and provides flexible Coherent line-side transmission using 800G PM-16QAM, 400G PM-QPSK and 400G 16QAM-PS modulation formats. The module integrates Coherent DSP functionality, management, alarm handling and performance monitoring in a hot-pluggable CFP2 form factor. It supports multiple OTN, Ethernet and FlexO host interfaces and is intended for high-capacity regional and long-haul optical transport applications.



2. Key features

Coherent 800G CFP2-DCO optical module • Maximum operating data rate: up to 850 Gbps • Supports: 800G PM-16QAM-PS, 400G PM-QPSK, 400G 16QAM-PS • Integrated SD-FEC

3. Applications

Data Center Interconnect – DCI • OTN transport networks • Regional coherent DWDM • Long-haul coherent DWDM • High-capacity point-to-point optical links • 400G / 800G optical transport systems.

4. Technical data

Coherent 800G CFP2-DCO optical module	Integrated local clock: approximately 156.25 MHz.
Maximum operating data rate: up to 850 Gbps	Supply voltage:; Minimum: 3.2 V; Typical: 3.3 V; Maximum: 3.4 V
Supports: 800G PM-16QAM-PS, 400G PM-QPSK, 400G 16QAM-PS	Power supply tolerance: approximately ±5%
Integrated SD-FEC	Typical power consumption: 400G PM-QPSK: 40 W, 400G 16QAM-PS: 38 W, 800G PM-16QAM-PS: 40 W
Supports OTU4	Maximum specified SD-FEC operating power: 40 W
Supports OTUCn	Low-power mode: maximum 2 W
Supports 100GE	Power supply noise: Up to 2% p-p from DC to 1 MHz, Up to 3% p-p from 1 to 10 MHz.
Supports FlexO	Form factor: CFP2-DCO
Supports OTL4.2 and OTL4.1 signaling	Maximum dimensions: Length: 107.5 mm, Width: 41.5 mm, Height: 12.4 mm
FlexO support through: FOIC1.1, FOIC1.2, FOIC4.8	Electrical connector: 104-pin CFP2-MSA
Hot-pluggable CFP2 form factor	Hot-pluggable design.
CFP2 MSA Hardware Specification 1.0 compliant with modifications	Form Factor: CFP2-DCO
Typical power consumption: up to 40 W.	Maximum Capacity: 800G / up to 850 Gbps operation
Host connector: 104-pin CFP2-MSA	FEC: SD-FEC
High-speed electrical interfaces compliant with: CEI-112G-VSR, CEI-56G-VSR	Grid: 100 GHz / 150 GHz depending on mode
Eight differential TX lane pairs	Fiber: Single-mode coherent DWDM
Eight differential RX lane pairs	Typical Power Consumption: 38–40 W
AC-coupled high-speed data interfaces	Primary Applications: OTN, DCI, regional and long-haul coherent transmission
Integrated local reference clock	
Host REFCLK is not required	

5. Recommended operating conditions

Operating case temperature: 0°C to +70°C	Short-term humidity condition: less than 96 hours
Storage temperature: -40°C to +85°C	ESD sensitivity: High-speed pins: 1000 V HBM, Other pins: 2000 V HBM.
Operating relative humidity: 5% to 85%, non-condensing	Operating Temperature: 0°C to +70°C
Short-term operating humidity: 5% to 95%, non-condensing	

CFP2-800G-DCO

6. Optical characteristics

Line-Side Optical Performance The module supports three main coherent operating modes.	400G 16QAM-PS – Regional Wavelength stability: ± 1.5 GHz
400G PM-QPSK – Long-Haul Data rate: 400G	400G 16QAM-PS – Regional Tx output power range: -7 to -2 dBm
400G PM-QPSK – Long-Haul Modulation: PM-QPSK	400G 16QAM-PS – Regional Maximum chromatic dispersion tolerance: $\pm 25,000$ ps/nm
400G PM-QPSK – Long-Haul FEC: SD-FEC	400G 16QAM-PS – Regional Receiver input power range: 0 to -18 dBm
400G PM-QPSK – Long-Haul Application: Long-haul	400G 16QAM-PS – Regional Typical OSNR tolerance: 18.5 dB
400G PM-QPSK – Long-Haul Grid spacing: 150 GHz	400G 16QAM-PS – Regional Typical power consumption: 38 W
400G PM-QPSK – Long-Haul Frequency range: 190.75 to 196.60 THz	800G PM-16QAM-PS – Regional Data rate: 800G
400G PM-QPSK – Long-Haul Wavelength stability: ± 1.5 GHz	800G PM-16QAM-PS – Regional Modulation: PM-16QAM-PS
400G PM-QPSK – Long-Haul Tx output power range: -7 to -2 dBm	800G PM-16QAM-PS – Regional FEC: SD-FEC
400G PM-QPSK – Long-Haul Tx output power accuracy: ± 1.5 dB	800G PM-16QAM-PS – Regional Application: Regional
400G PM-QPSK – Long-Haul Optical output during tuning: < -35 dBm	800G PM-16QAM-PS – Regional Grid spacing: 150 GHz
400G PM-QPSK – Long-Haul Maximum chromatic dispersion tolerance: $\pm 40,000$ ps/nm	800G PM-16QAM-PS – Regional Frequency range: 190.75 to 196.60 THz
400G PM-QPSK – Long-Haul Receiver input power range: 0 to -18 dBm	800G PM-16QAM-PS – Regional Wavelength stability: ± 1.5 GHz
400G PM-QPSK – Long-Haul Typical OSNR tolerance: 17 dB	800G PM-16QAM-PS – Regional Tx output power range: -7 to -2 dBm
400G PM-QPSK – Long-Haul Typical power consumption: 40 W	800G PM-16QAM-PS – Regional Maximum chromatic dispersion tolerance: $\pm 15,000$ ps/nm
400G 16QAM-PS – Regional Data rate: 400G	800G PM-16QAM-PS – Regional Receiver input power range: 0 to -18 dBm
400G 16QAM-PS – Regional Modulation: 16QAM-PS	800G PM-16QAM-PS – Regional Typical OSNR tolerance: 25.5 dB
400G 16QAM-PS – Regional FEC: SD-FEC	800G PM-16QAM-PS – Regional Typical power consumption: 40 W.
400G 16QAM-PS – Regional Application: Regional	400G Modulation: PM-QPSK / 16QAM-PS
400G 16QAM-PS – Regional Grid spacing: 100 GHz	800G Modulation: PM-16QAM-PS
400G 16QAM-PS – Regional Frequency range: 190.725 to 196.625 THz	

7. Digital diagnostics and management

Near-end data loopback	Programmable alarm signals
Remote-end data loopback	Global alarm
CFP MSA Management Interface Specification 2.2 compliant with modifications	Internal software management
MDIO management interface	Modulator control
IEEE 802.3 Clause 45 MDIO implementation	Alarm and performance event reporting.
MDIO data rate: up to 4 Mb/s	These functions can be used for commissioning, troubleshooting and system diagnostics.
MDC clock rate: up to 4 MHz	Two-channel SGMII monitoring interface
Module reset	Supports SGMII / 2500BASE-X modes
Transmitter disable	Supports USGMII
Receiver loss-of-signal alarm	AC-coupled interface
Module-present detection	Used for DSP overhead access
Low-power mode	Serial rates described in the module include 3.125 Gbps SGMII / 2500BASE-X and up to 5 Gbps USGMII-related operation.
Programmable control signals	

8. Safety and regulatory

Class 1 laser product • IEC / EN 60825 compliant • FDA CDRH laser safety compliant • GR-78 ESD requirements • GR-1089-CORE Class B electromagnetic radiation requirements • RoHS compliant according to the referenced directive • ESD HBM: 1 kV on high-speed pins, 2 kV on other pins.

9. Ordering information

CFP2-800G-DCO | 800G CFP2 DCO Coherent module Tunable / Support ultra long distance without DCM

10. General notes

The overview specifies PM-16QAM while the operating-mode data specify PM-16QAM-PS. Supply is stated as 3.2–3.4 V and approximately $\pm 5\%$; both source statements are retained. • Technical values and product image: GLOBALfiber product page, Technical Info. Unspecified parameters have not been inferred. Accessed 06.09.2026.

Source: GLOBALfiber product page – Technical Info