

DS-16G-ER-CXX

SFP+, 16/8/4 Gbps FC/FICON, CWDM, DDM, 13dB, 40km, 1470nm-1550nm (5ch)



OVERVIEW

The DS-16G-ER-Cxx is a versatile CWDM transceiver in SFP+ form-factor supporting a wide range of Fiber Channel (FC) services (4G to 16G). The transceiver has been layer-1 tested and approved by Cisco.

The transceiver is provided in 5 channel versions at the CWDM grid as specified in the ITU-T 694.2 standard.

The optical performance provides a bridgeable distance of up to 40km (without dispersion compensation) for 16G FC. This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification.

The transceiver module is compliant to RoHS-6/6.

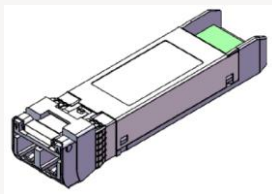
TECHNICAL DATA

Technology	CWDM SFP+
Transmission media	SM (2x LC)
Typical reach	40 km
Nominal wavelength	1470 - 1550 nm (8ch)
Bit rate range	4.25 – 14.025 Gbps
Protocols	FC: 16G FC 8G FC 4G FC
Power budget	2 – 13 dB ¹⁾²⁾
Dispersion tolerance	800 ps/nm
Dispersion penalty	Max: 2 dB
Temperature range	0°C to +70°C
Power consumption	< 1.9 W

Transmitter data	Output power (avg):	Min: -1.0 dBm Max: +3.0 dBm
	Tx wavelength:	1471 - 1551 nm in 20nm steps (G.694.2)
Receiver data	Minimum input power:	-14.0 dBm ¹⁾²⁾
	Max input power:	+1.0 dBm
	Wavelength range:	1260 – 1620 nm
DDM		Yes
MSA compliance		SFF+ MSA

¹⁾ @ 14.025 Gbps (16G FC)

²⁾ @ BER < 1E-12 using PRBS 2³¹-1



Regulatory compliance

RoHS	RoHS 6
Safety	EN 60825-1 Class 1 laser product

Storage temp.	-40°C to 85°C
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ORDERING INFORMATION

Part number	Description
DS-16G-ER-C47	SFP+, 16/8/4 Gbps FC/FICON, CWDM 1470nm, DDM, 13dB, 40km
DS-16G-ER-C49	SFP+, 16/8/4 Gbps FC/FICON, CWDM 1490nm, DDM, 13dB, 40km
DS-16G-ER-C51	SFP+, 16/8/4 Gbps FC/FICON, CWDM 1510nm, DDM, 13dB, 40km
DS-16G-ER-C53	SFP+, 16/8/4 Gbps FC/FICON, CWDM 1530nm, DDM, 13dB, 40km
DS-16G-ER-C55	SFP+, 16/8/4 Gbps FC/FICON, CWDM 1550nm, DDM, 13dB, 40km

DEFINITIONS

Technology:	Grey; Transceiver type for non-WDM applications. Electrical or optical. CWDM; Transceiver type for CWDM applications using G.694.2 channel grid. DWDM; Transceiver type for DWDM applications using G.694.1 channel grid. BiDi; Transceiver pair using two different wavelength channels operating on a single-fiber. DAC: Direct Attach Cable. Electrical or optical cable with attached connectors.
Transmission Media:	Type of fiber, e.g. Multimode (MM) or Singlemode (SM). Number of and connector type within brackets (e.g. 2x LC, 1x MPO).
Typical reach:	Nominal distance performance based on dispersion and power budget properties, i.e. w/o dispersion compensation and optical amplification.
Bit rate range:	Supported bit rate range in Gigabit or Megabit per second (Gbps or Mbps).
Protocols:	Protocols within supported bit rate range.
Nominal wavelength:	Typical wavelength from transmitter.
Interface standards:	Referenced interface standards e.g. IEEE 802.3 standard for 10GbE services.
Power budget:	Min and max power budget between Transmitter and Receiver. Excluding any dispersion penalty.
Dispersion tolerance/penalty:	Maximum amount of tolerated dispersion and required reduction of power budget to maintain BER better than $1E^{-12}$. Defined at a specific bit rate.
Temperature range:	Max operating case temperature range. Standard temperature range: Typically 0°C to +70°C (32°F to +158°F) Extended temperature range (E-temp): Typically -20°C to +75°C (-4°F to +167°F) Industrial temperature range (I-temp): -40°C to +85°C (-40°F to +185°F) Worst case power consumption.
Power consumption:	Worst case power consumption.
Transmitter Output power:	Average output power. Provided in min and max values.
Receiver minimum input power:	Minimum average input power at specified BER, normally $1E^{-12}$.
Receiver max input power:	Maximum average input power at specified BER, normally $1E^{-12}$.
DDM:	Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.