

**DATASHEET 5.0**

# DS-8G-ZR-CXX

**SFP+, 8/4/2 Gbps FC/FICON, CWDM, DDM, 23dB, 70km, 1470nm-1610nm (8ch)**

## OVERVIEW

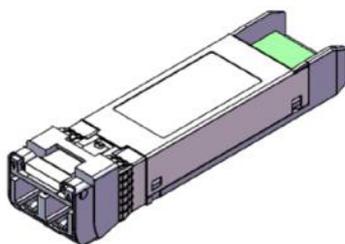
The DS-8G-ZR-Cxx is a versatile CWDM transceiver in SFP+ form-factor supporting a wide range of Fiber Channel (FC) services (2G to 8G). The transceiver has been layer-1 tested and approved by Cisco.

The transceiver is provided in 8 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 70km (without dispersion compensation) for 8G 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	70 km
Nominal wavelengths	1470 - 1610 nm (8ch)
Bit rate range	2.125 – 8.5 Gbps
Protocol support	FC: 8G FC 4G FC 2G FC
Power budget	11 – 23 dB <sup>1)2)</sup>
Dispersion tolerance	1400 ps/nm
Dispersion penalty	Max: 3 dB
Temperature range	0°C to +70°C
Power consumption	< 1.6 W
<b>Transmitter data:</b>	
Output power (avg):	Min: -0.5 dBm Max: +4.0 dBm
Tx wavelengths	1471 - 1611 nm in 20nm steps (G.694.2)
<b>Receiver data:</b>	
Minimum input power	-23.5 dBm <sup>1)2)</sup>
Max input power	-7.0 dBm
Wavelength range	1260 – 1620 nm
DDM	Yes
MSA compliance	SFF+ MSA
<b>Regulatory compliance</b>	
RoHS	RoHS 6
Safety	EN 60825-1 Class 1 laser product
Storage temp.	-40°C to 85°C

<sup>1)</sup> @ 8.5 Gbps (8G FC)

<sup>2)</sup> @ BER < 1E-12 using PRBS 231-1

## ORDERING INFORMATION

Part Number	Description
DS-8G-ZR-C47	SFP+, 8/4/2 Gbps FC/FICON, CWDM 1470nm, DDM, 23dB, 70km
DS-8G-ZR-C49	SFP+, 8/4/2 Gbps FC/FICON, CWDM 1490nm, DDM, 23dB, 70km
DS-8G-ZR-C51	SFP+, 8/4/2 Gbps FC/FICON, CWDM 1510nm, DDM, 23dB, 70km
DS-8G-ZR-C53	SFP+, 8/4/2 Gbps FC/FICON, CWDM 1530nm, DDM, 23dB, 70km
DS-8G-ZR-C55	SFP+, 8/4/2 Gbps FC/FICON, CWDM 1550nm, DDM, 23dB, 70km
DS-8G-ZR-C57	SFP+, 8/4/2 Gbps FC/FICON, CWDM 1570nm, DDM, 23dB, 70km
DS-8G-ZR-C59	SFP+, 8/4/2 Gbps FC/FICON, CWDM 1590nm, DDM, 23dB, 70km
DS-8G-ZR-C61	SFP+, 8/4/2 Gbps FC/FICON, CWDM 1610nm, DDM, 23dB, 70km

## DEFINITIONS

<b>Technology</b>	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.
<b>Transmission Media</b>	Type of fiber, e.g. Multimode (MM) or Singlemode (SM). Number of and connector type within brackets (e.g. 2x LC, 1x MPO).
<b>Typical reach</b>	Nominal distance performance based on dispersion and power budget properties, i.e. w/o dispersion compensation and optical amplification.
<b>Bit rate range:</b>	Supported bit rate range in Gigabit or Megabit per second (Gbps or Mbps).
<b>Protocols:</b>	Protocols within supported bit rate range.
<b>Nominal wavelength</b>	Typical wavelength from transmitter.
<b>Interface standards</b>	Referenced interface standards e.g. IEEE 802.3 standard for 10GbE services.
<b>Power budget</b>	Min and max power budget between Transmitter and Receiver. Excluding any dispersion penalty.
<b>Dispersion tolerance/penalty</b>	Maximum amount of tolerated dispersion and required reduction of power budget to maintain BER better than 1E-12. Defined at a specific bit rate.

## DEFINITIONS

<b>Temperature range</b>	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)
<b>Power consumption</b>	Worst case power consumption.
<b>Transmitter Output power</b>	Average output power. Provided in min and max values.
<b>Receiver minimum input power</b>	Minimum average input power at specified BER, normally $1E^{-12}$ .
<b>Receiver max input power</b>	Maximum average input power giving a BER, normally $1E^{-12}$ .
<b>DDM</b>	Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.

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