

# DS-8G-ZR

SFP+, 8/4/2 Gbps FC/FICON, 1550nm, SM, DDM, 23dB, 70km



## OVERVIEW

The DS-8G-ZR is a versatile 1550nm 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.

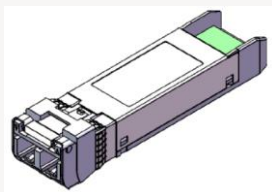
## TECHNICAL DATA

<b>Technology</b>	Grey SFP+
<b>Transmission media</b>	SM (2x LC)
<b>Typical reach</b>	70 km
<b>Nominal wavelength</b>	1550 nm
<b>Bit rate range</b>	2.125 – 8.5 Gbps
<b>Protocols</b>	FC:
	8G FC
	4G FC
	2G FC
<b>Power budget</b>	11 – 23 dB <sup>1) 2)</sup>
<b>Dispersion tolerance</b>	1400 ps/nm
<b>Dispersion penalty</b>	Max: 3 dB
<b>Temperature range</b>	0°C to +70°C
<b>Power consumption</b>	< 1.6 W

<b>Transmitter data</b>	Output power (avg):	Min: -0.5 dBm Max: +4.0 dBm
<b>Receiver data</b>	Tx wavelength:	1544 - 1557 nm
	Minimum input power:	-23.5 dBm <sup>1) 2)</sup>
	Max input power:	-7.0 dBm
	Wavelength range:	1260 – 1620 nm
<b>DDM</b>		Yes
<b>MSA compliance</b>		SFF+ MSA

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

<sup>2)</sup> @ BER < 1E-12 using PRBS 2<sup>31</sup>-1



### Regulatory compliance

<b>RoHS</b>	RoHS 6
<b>Safety</b>	EN 60825-1 Class 1 laser product

<b>Storage temp.</b>	-40°C to 85°C
----------------------	---------------

## ORDERING INFORMATION

Part number	Description
DS-8G-ZR	SFP+, 8/4/2 Gbps FC/FICON, 1550nm, SM, DDM, 23dB, 70km

## 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)
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.