SFP 10G Copper RJ45 80 Meter Transceiver

Description

The BlueOptics© BO08J78S7 SFP+ transceiver is a high performance, cost effective module supporting a data rate up to 10Gbps with 80 Meter link length on twisted pair Cat6A S/FTP cable.

BlueOptics© transceivers are 100% compliant with SFP Multi-Source Agreement (MSA).

The BO08J78S7 SFP+ Copper Transceiver is designed for application where optical connections not possible or Direct Attached Cable Connection are too short.

The BO08J78S7 10Gbase-T SFP+ Copper Transeiver give you significant more bandwith than classical SFP Copper Modules, which just operate at 1Gbps.

Another significant advantage compared to 10GBASE-T fixed port is the very low power consumption.

Features

- ✓ 10Gb/s electrical RJ45 interface compliant to 802.3an 10GBASE-T

- ✓ Complaint to Energy Efficient Ethernet 802.3az

- ✓ Hot-pluggable SFP+ footprint compliant to SFF-8431

- ✓ RJ-45 connector interface

- ✓ Link length up to 80 Meter with Cat6A or 7

- ✓ Auto-negotiates with other 10GBase- T PHYs

- ✓ Auto MDI-X

- ✓ Access to physical layer IC via 2 wire serial bus

- ✓ Metal enclosure, for lower EMI

- ✓ RoHS compliant and lead-free

- ✓ Low power dissipation: maximum 2.5W

- ✓ Single +3.3V power supply

- ✓ Case operating temperature

  - Commercial: 0°C to +70°C
  - Extended: -10°C to +80°C
  - Industrial: -40°C to +85°C

Applications

- ✓ 10GBase-T

- ✓ Ethernet

- ✓ Switch to Server Interface

- ✓ Router to Server Interface

- ✓ Other links

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Warnings

Handling Precautions: This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended.

Laser Safety: Even small radiation emitted by laser devices can be dangerous to human eyes and lead to permanent eye injuries. Be sure to avoid eye contact with direct or indirect radiation.

Warranty

Every BlueOptics© transceiver comes with a 5 year replacement warranty and lifetime support.
For a warranty inquiry, please contact your CBO sales representative.
This warranty covers the first user of the equipment only.

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by CBO before they become applicable to any particular order or contract. In accordance with the CBO policy of continuous improvement specifications may change without notice.

The publication of information in this data sheet does not imply freedom from patent or other protective rights of CBO or others.

Further details are available from any CBO sales representative.

Installation

Before installation attach an ESD-preventive wrist to ensure not to damage the transceiver or hardware.

BlueOptics© BO08J78S7 can be installed in any Small Form Factor Pluggable (SFP+) port. You can install the BO08J78S7 regardless if the system is powered on or off, because it is hot-swappable.

Insert the transceiver into the SFP+ port and remove the dust cap.

You can now connect your cable.

Order Information

Part No.	Temp.	DDM
BO08J78S7	0°C to +70°C	-
BO08J78S7IN	-40°C to +80°C	-

Regulatory Compliance

Feature	Standard	Co.
Electrostatic Discharge (ESD)	- IEC/EN 61000-4- 2	✔
Electromagnetic Interference (EMI)	- FCC Part 15 Class B EN 55022 - Class B (CISPR 22A)	✔
Component Recognition	- IEC/EN 60950, UL	✔
RoHS	- 2002/95/EC	✔
EMC	- EN61000-3	✔

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1. Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	Ts	-40		85	ºC
Storage Ambient Humidity	HA	5		95	%

2. Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	0		70		BO08J78S7
		-40		85		BO08J78S7IN
Ambient Humidity	HA	5		70	%	
Data Rate			10/10		Gbps	
Transmission Distance				30	M	
Coupled Copper Cable		Twisted Pair			Min. Cat6A	

3. EEPROM Information

The SFP MSA defines a 256-byte memory map in EEPROM describing the transceivers capabilities, standard interfaces, manufacturer, and other information, which is accessible over a 2 wire serial interface at the 8-bit address 1010000X (A0h).

Data Address	Field Size (Bytes)	Name of Field	Contents (Hex)	Description
0	1	Identifier	XX	Formfactor
1	1	Ext. Identifier	XX	
2	1	Connector	XX	
3-10	8	Transceiver	XX XX XX XX XX XX XX XX	Transmittter Code
11	1	Encoding	XX	
12	1	BR, Nominal	XX	Transceiver Speed
13	1	Reserved	00	
14	1	Length (9µm) km	XX	Max. link length in KM
15	1	Length (9µm) 100m	XX	Max. link length in M
16	1	Length (50µm) 10m	XX	Max. link length in M
17	1	Length(62.5µm)10m	XX	Max. link length in M
18	1	Length (Copper)	XX	Max. link length in M
29	1	Reserved	00	
30-35	16	Vendor name	XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX	Vendor name - OEM
36	1	Reserved	00	
37-39	3	Vendor OUI	XX XX XX	
40-55	16	Vendor PN	XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX	Product Number - depending on Part
56-59	4	Vendor rev	XX XX XX XX	Vendor revision
60-61	2	Wavelength	XX XX	Transceiver Wavelength
62	1	Reserved	00	
63	1	CC BASE	XX	Checksum of bytes 0-62
64-65	2	Options	XX XX	
66	1	BR, max	XX	
67	1	BR, min	XX	
68-83	16	Vendor SN	XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX	Part serial number
84-91	8	Vendor date code	XX XX XX XX XX XX 20 20	Year, Month, Day
92	1	Diagnostic type	XX	Diagnostics
93	1	Enhanced option	XX	Diagnostics
94	1	SFF-8472	XX	Diagnostics

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95	1	CC_EXT	XX	Checksum of bytes 64-94
96-255	160	Vendor Specific		

4. Mechanical Specifications (Unit: mm)

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