SFPP-10GE-SR Juniper Compatible 10Gbase SFP+ Transceiver

Features

- Supports 10GBASE Ethernet
- Transmission distance up to 300 meters (OM3 MM fiber)
- Hot-Swappable if your device supports
- Lifetime Warranty
- Plugs into SFP+ port
- Industry-standard LC duplex connector
- Compliant to SFP+ Electrical & Mechanical MSA
- Sub watt power consumption: 0.65W (typ.)
- 0°C to +70°C case operating temperature range
- Laser Class 1 IEC / CDRH compliant
- RoHS 6/6 compliant
- Compliant with product safety standards

Product Overview

The Hummingbird Networks 100% Juniper Compatible SFPP-10GE-SR optical transceiver module is for transmission at 850nm over multimode fiber. It supports Ethernet standards which make it ideally suited for 10G data communications. It offers customers a wide variety of 10 Gigabit Ethernet connectivity options for data center, enterprise wiring closet, and service provider transport applications.

Its sub watt power consumption and its excellent EMI performance allow system design with high port density. The small form factor integrates an 850nm vertical cavity surface emitting laser (VCSEL) in an LC package and a PIN receiver. Module is lead free, RoHS compliant and is designed and tested in accordance with industry safety standards.

The Transceivers convert information from electrical to optical format, and back again, at standard data rates. The transmit path consists of an AC coupled 100 ohm differentially terminated driver coupled to a highly reliable 850nm VCSEL. The receiver path consists of a ROSA (receiver optical sub-assembly) for optical electrical conversion, followed by a limiting amplifier to boost the electrical signal. A Loss of Signal (LOS) status is provided to facilitate easy link detection.

Ordering Information

Part No.	Data Rate	Laser	Fiber Type	Distance	Optical Interface	DDMI
SFPP-10GE-SR-HN	10Gbps	850nm	MMF	300m	SR/SW	NO

Supported Standards

Application	Standard	Data Rate
IEEE 802.3ae-2002	10 GBASE-SR	10.3125 GBd

Optical Characteristics

Parameter	Conditions	Min Modal Bandwidth (MHz*km)	Symbol	Min	Typical 1GBd	Typical 10GBd	Units
Operating Range	62.5 µm MMF 50 µm MMF 62.5 µm MMF 50 µm MMF 50 µm MMF	160 400 200 500 2000	IOP	2 2 0.5 0.5 0.5	220 500 275 550 X	26 66 33 82 300	m

Digital Optical Monitoring

Transceivers offer the ability to monitor important module parameters during operation. The temperature, supply voltage, laser bias current, optical transmitter power and receiver optical power parameters are continuously monitored for getting information about the module's current status. All data is calibrated internally; there is no need for external post processing.

Regulatory Compliance

The SFPP-10GE-SR modules are designed to meet international requirements and standards in terms of product safety. The modules optical output power meets Class 1 requirements for laser safety.

Requirements	Standard	Status
Module Safety	IEC 60950-1:2001 EN 60950-1:2001	TUV Report / Certificate available CB Report / Certificate available
RoHS Compliance	RoHS Directive 2002/95/EC Amendment 4054 (2005/747/EC)	RoHS 6/6 compliant Certificate of compliance available
Laser Eye Safety	CDRH 21 CFR 1040.10 and 1040.11 IEC 60825-1 Rev2 2007	Laser Class 1 according to FDA Laser Class 1 according to IEC Rev2

ESD & Electromagnetic Compatibility

Requirements	Standard	Status
Electro Static Discharge to the Electrical Pins (ESD)	EIA/JESD22-A114-B MIL-STD 883C Method 3015.7	Exceeds requirements Class 1B (>1000V)
Immunity to ESD (housing, receptacle)	IEN 61000-4-2 IEC61000-4-2	Exceeds requirements Discharges ranging from 2kV to 25kV without damages to the transceiver
Electromagnetic Emission (EMI)	FCC Part 15, Class B EN 55022 Class B CISPR 22	Exceeds requirements Class B with more than 6dB margin

Additional Information

For more information about our compatible SFP+/SR modules, contact:

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