

## EX-SFP-10GE-ER Juniper Compatible 10Gbps XFP Transceiver

### Features

- Supports SFP+ 10GBASE-ER at 10.31Gbps
- Transmission distance up to 40KM on SMF
- Hot-Swappable if your device supports
- Lifetime Warranty
- Plugs into SFP+ port
- LC duplex connector
- Compliant to SFP+ Electrical & Mechanical MSA
- 0°C to +70°C case operating temperature range
- 1550nm DFB Transmitter
- RoHS 6/6 compliant
- Built-in digital diagnostic functions
- Compliant with product safety standards



### Product Overview

The Hummingbird Networks 100% Juniper Compatible EX-SFP-10GE-ER optical transceiver module is for transmission at 1550nm over single mode 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, switch-to-switch, and service provider transport applications. Its sub watt power consumption and its excellent EMI performance allow system design with high port density. 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.

### Ordering Information

| Part No.          | Data Rate                   | Laser         | Fiber Type | Distance | Optical Interface | DDMI |
|-------------------|-----------------------------|---------------|------------|----------|-------------------|------|
| EX-SFP-10GE-ER-HN | 10GBASE-ER/<br>10G Ethernet | 1550nm<br>DFB | SMF        | 40KM     | ER                | No   |

### Optical Characteristics

| Parameter              | Symbol | Min. | Typical       | Max  | Unit |
|------------------------|--------|------|---------------|------|------|
| 9µm Core Diameter SMF  |        |      | 40            |      | KM   |
| Data Rate              |        |      | 9.953/10.3125 |      | Gbps |
| Transmitter            |        |      |               |      |      |
| Centre Wavelength      |        | 1480 | 1550          | 1600 | nm   |
| Spectral Width (-20dB) |        |      |               | 1    | nm   |

| Receiver                  |      |      |  |      |     |
|---------------------------|------|------|--|------|-----|
| Centre Wavelength         |      | 1260 |  | 1600 | nm  |
| Sensitivity @ 10.3125Gbps | Pmin |      |  | -16  | dBm |
| Receiver Overload         | PMAX | 0    |  |      | dBm |
| LOS De-Assert             | LOSD |      |  | -20  | dBm |
| LOS Assert                | LOSA | -30  |  |      | dBm |

### 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 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.

| Feature  | Standard  | Performance  |
|--|---|--|
| Electrostatic Discharge (ESD) to the Electrical Pins | MIL-STD-883E Method 3015.7                                | Class 1(>500 V)  |
| Electromagnetic Interference (EMI)                   | FCC Part 15 Class B                                       | Compatible with standards  |
| Laser Eye Safety                                     | FDA 21CFR 1040.10 and 1040.11 EN60950, EN (IEC) 60825-1,2 | Compatible with Class I laser product. Compatible with T $\mu$ V standards |
| Component Recognition                                | UL and CUL  | UL file E317337  |
| Green Products                                       | RoHS  | RoHS6  |

### Additional Information

For more information about our compatible modules, contact:

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