

Brocade[®] 10Gb/s SR SFP+

Optimized, Certified Optical Transceivers for Extending Service Provider and Data Center Networks

Highlights

- Provides high system reliability through rigorous qualification and certification processes.
- Leverages unique design parameters to provide the highest performance with industry-leading Brocade switches and directors.
- Helps eliminate issues related to SFP incompatibility, reducing downtime and support costs.
- Provides ongoing end-to-end compatibility, eliminating issues resulting from unexpected design changes.
- Optimizes connectivity with Brocade platforms to enable maximum cable distance.
- Connects servers, storage, and switches within 10Gb/s Ethernet fabrics.

Key Features

The Brocade 10Gb/s SR SFP+ modules are hot-swappable, low-voltage (3.3V) digital diagnostic optical transceivers that support high-speed serial links over multimode optical fiber at signaling rates up to 10.3125Gb/s. They comply with SFP+ mechanical (SFF-8432), optical, and electrical specifications for LC duplex transceivers.

Overview

Today's enterprise data centers are undergoing an infrastructure transformation, requiring higher speeds, greater scalability, and higher levels of performance and reliability to better meet the demands of business. As speed and performance needs increase, optical transceivers—once considered a generic component of Ethernet switching technologies—have become an integral part of overall system design. However, optical transceiver design margins and parameters vary widely and can be the difference between an optimized, highly reliable fabric and incompatibility issues that drive up support costs.

The Brocade[®] 10Gb/s Short Reach (SR) SFP+, part of the Brocade family of small form-factor pluggable (SFP) optical transceivers, is optimized to fully leverage Brocade 10Gb/s director and switch products. Together, these optical transceivers provide state-of-the-art performance, helping IT organizations achieve new levels of infrastructure consolidation while expanding the capabilities of their applications and services.

End-to-End Compatibility and Reliability

The Brocade 10Gb/s SR SFP+ modules support highly reliable operations in data center fabrics and are optimized for Brocade 10Gb/s switching platforms. They undergo rigorous qualification and certification testing, which results in an end-to-end solution that is easier to maintain—improving the availability of data center fabrics that support mission-critical applications.

Family of Optical Transceivers

Brocade offers a comprehensive family of reliable optical transceivers to provide highly compatible, high-performance connectivity to Brocade director and switch products.

For additional ordering information, contact a Brocade representative or visit <https://www.broadcom.com/how-to-buy/>.

Brocade Global Support

Global Support has the expertise to help organizations build resilient, efficient SAN infrastructures. Leveraging 20+ years of expertise in storage networking, Global Support delivers world-class technical support, implementation, and migration services to enable organizations to maximize their hardware and software investments, accelerate new technology deployments, and optimize the performance of their overall network.

<https://www.broadcom.com/support/fibre-channel-networking/>

Maximizing Investments

To help optimize technology investments, Brocade and its partners offer complete solutions that include professional services, technical support, and education.

For more information, contact a Brocade sales partner or visit www.broadcom.com.

Regulatory and Standards Compliance

North America: UL/CSA 60950, CDRH Class 1

European Union: EN 60950, EN 60825 Class 1

Brocade 10Gb/s SR SFP+ Specifications

System	
Performance	Ethernet: 10.3125Gb/s line speed, full duplex
Media	Hot-pluggable, industry-standard SFP+, LC connector; Short Reach (SR)
Operating Parameters	Transmit (Tx): <ul style="list-style-type: none"> Wavelength: 840 nm to 860 nm Average power: ≤ -1 dBm RIN: -128 dB-Hz max Extinction ratio: 3 dB Receive (Rx): <ul style="list-style-type: none"> Wavelength: 840 nm to 860 nm Average power: -1 dBm max Optical return loss: 12 dB min Unstressed sensitivity: 77 μW, -11.1 dBm SRS OMA: 180 μW, -7.5 dBm 3-dB cutoff maximum: 12.3 GHz
Operating Distances	OM2 50 μm (500 MHz\timeskm): <ul style="list-style-type: none"> 10.3125Gb/s Ethernet: Distance: 82 meters max OM3 50 μm (2000 MHz\timeskm): <ul style="list-style-type: none"> 10.3125Gb/s Ethernet: Distance: 300 meters max
Mechanical	
Size	Width: 14.80 mm (0.58 inches) Height: 12.21 mm (0.48 inches) Depth: 56.70 mm (2.23 inches)
Environment	
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Power	
Power Dissipation	1.0W

Key Features (con't)

The Brocade 10.3125Gb/s SR SFP+ is an 850-nm SFP that complies with 10G Ethernet specifications. Product highlights include:

- 850-nm multimode VCSEL transmitter
- IEEE 802.3ae compliance for 10.3125Gb/s operation
- Diagnostic features per SFF-8472, *Diagnostic Monitoring Interface for Optical Transceivers*, providing real-time monitoring of:
 - Transmitted optical power
 - Received optical power
 - Laser bias current
 - Temperature
 - Supply voltage
- Industry-standard LC duplex connector
- 300m link lengths at 10.3125Gb/s on OM3 fiber
- IEC 60825-1 Class 1/CDRH Class 1 laser, eye-safe
- RoHS compliance

Caution

- Do not look through the optical ports, as it is a potential eye hazard.
- The SFP is an ESD sensitivity Class 1 device. It should be handled accordingly.

Ordering Part Number

- XBR-000180 (1-pack)
- XBR-000181 (8-pack)