

BX40U SFP+

1x10GBASE-BX40U bidirectional SFP+

Benefits

- **Standard compliant SFP+ packaging**
Electrically and mechanical compliant to SFP+ standard; compliant with IEEE802.3cp. Single LC/UPC optical connector
- **Symmetrical latency**
Single-fiber working ensures same latency in both transmit and receive directions
- **Extended reach**
Up to 40km in single-mode fiber (SMF)
- **Bidirectional technology**
The BX40U SFP+ uses two sets of wavelengths in the 1300nm range (TX 1270nm / RX 1330nm)
- **Low footprint and power consumption**
Hot-swappable SFP+ pluggable module dissipating 1.5W maximum
- **Industrial operating temperature range**
I-temp design enabling outdoor deployments

Overview

The BX40U SFP+ pluggable device addresses the demand for cost-efficient 10Gbit/s Ethernet (10GbE) connectivity in areas where fiber availability is at a premium. With a standard-compliant SFP+ form factor and bidirectional technology, the BX40U SFP+ is ideal for single-fiber feeders in access networks, as well as for applications where the latency must be the same in both the transmit and receive directions.

The BX40U SFP+ used in tandem with our MicroMux™ Edge BiDi pluggable transceiver module offers customers a flexible and cost-effective solution to provide 10GbE bidirectional connectivity over a single fiber. It uses 1270nm optical signal in the transmit direction and a 1330nm optical signal in the receiving direction. The two signals are coupled into the same fiber inside the SFP+ module. To reach the 40km transmission distance an APD is used in the receiver side. Bidirectional transmission over a single fiber minimizes fiber consumption and ensures the same latency in both the transmit and receive direction. With an industrial operating temperature range (i-temp) and a low power consumption, the BX40U SFP+ is perfect for single-fiber feeders in access/edge networks connecting wired/wireless access infrastructures to the central offices or point of presence. The BX40U SFP+ is also an excellent solution for 5G wireless fronthaul/midhaul use cases where symmetric latency is very important.



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High-level technical specifications

Parameters	Minimum	Maximum
Transmitter operating wavelengths	1260nm	1280nm
Optical output power	-3dBm	3dBm
Extinction ratio	5.5dB	
Transmitter dispersion penalty		2.7dB
Side-mode suppression ratio	30dB	
Relative intensity noise		-128dB/Hz
Transmitter output eye mask	IEEE802.3-2008 Clause 52.9.7	
Maximum receive power (damage)	-3dBm	
Receiver operating wavelengths	1320nm	1340nm
Receiver sensitivity (average)		-21.2dBm
Received overload		-7dBm
Receiver reflectance		-20dB
Power consumption		1.5W
Operating case temperature	-40°C	85°C
Management	2-wire interface for Digital Diagnostic Monitoring (DDM) compliance	
Environmental sustainability	RoHS and REACH compliant	

Applications in your network

Single-fiber working wireless X-haul and wholesale/enterprise Carrier Ethernet use cases that require minimal fiber consumption and symmetric latency

