

10-Gigabit Ethernet XENPAK Optical Interface Specifications

M Series and T Series routers support the following 10-Gigabit Ethernet PIC with XENPAK modules. To determine which XENPAK modules are supported, see the cables and connectors for each PIC.

- Table 1 shows the optical interface specifications for 10-Gigabit Ethernet 10GBase-SR PICs with a short wavelength XENPAK module.
- Table 2 shows the optical interface specifications for 10-Gigabit Ethernet 10GBase-LR PICs with a long wavelength XENPAK module.
- Table 3 shows the optical interface specifications for 10-Gigabit Ethernet 10GBase-ER PICs with an extra-long wavelength XENPAK module.
- Table 4 shows the optical interface specifications for 10-Gigabit Ethernet 10GBase-ZR PICs with an extra-long wavelength XENPAK module.

Table 1: 10-GBase-SR Short Wavelength Serial Xenpak Module LAN Rate Optical Interface Specifications

Parameter	10-GBase-SR
Transceiver model number	XENPAK-1XGE-SR
Optical interface	Multimode
Transceiver type	XENPAK Module
Standard	IEEE 802.3ae—2002
Maximum distance	50/125 MMF cable: 2000 MHz-km; 948 feet/300 m 50/125 MMF cable: 500 MHz-km; 269 feet/82 m 50/125 MMF cable: 400 MHz-km; 217 feet/66 m 62.5/125 MMF cable: 200 MHz-km; 108 feet/33 m 62.5/125 MMF cable: 160 MHz-km; 85 feet/26 m
Transmitter wavelength	840 through 860 nm
Average launch power	–4.5 through –1.0 dBm
Average receive power	–9.9 through –1.0 dBm
Receiver saturation	–1.0 dBm
Receiver sensitivity	–9.9 dBm

Table 2: 10-GBase-LR Long Wavelength Serial Xenpak Module LAN Rate Optical Interface Specifications

Parameter	10-GBase-LR
Transceiver model number	XENPAK-1XGE-LR
Optical interface	Single-mode
Transceiver type	XENPAK
Standard	IEEE 802.3ae—2002
Maximum distance	9/125 SMF cable: 6.2 miles/10 km
Transmitter wavelength	1260 through 1355 nm
Average launch power	-4.0 through 0.5 dBm
Average receive power	-14.4 through 0.5 dBm
Receiver saturation	0.5 dBm
Receiver sensitivity	-14.4 dBm

Table 3: 10-GBase-ER Extra-Long Wavelength Serial Xenpak Module LAN Rate Optical Interface Specifications

Parameter	10-GBase-ER
Transceiver model number	XENPAK-1XGE-ER
Optical interface	Single-mode
Transceiver type	XENPAK
Standard	IEEE 802.3ae—2002
Maximum distance	9/125 SMF cable: 24.8 miles/40 km; distances greater than 30 km are considered to be engineered links.
Transmitter wavelength	1530 through 1565 nm
Average launch power	-4.7 through 4.0 dBm
Average receive power	-15.8 through -1.0 dBm
Receiver saturation	-1.0 dBm
Receiver sensitivity	-15.8 dBm

Table 4: 10-GBase-ZR Extra-Long Wavelength Serial Xenpak Module LAN Rate Optical Interface Specifications

Parameter	10-GBase-ZR
Transceiver model number	XENPAK-1XGE-ZR
Optical interface	Single-mode
Transceiver type	XENPAK
Standard	Multivendor agreement
Maximum distance	9/125 SMF cable: 49.6 miles/80 km
Transmitter wavelength	1530 through 1565 nm
Average launch power	0 through 4.0 dBm
Average receive power	-24.0 through -7.0 dBm
Receiver saturation	-7.0 dBm
Receiver sensitivity	-24.0 dBm

Related Topics ■ T1600 PICs Supported

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