Fiber Transceiver Accessories

The Zyxel transceiver family follows industry standards to assure compatibility with switches from other manufacturers without barrier set by proprietary technologies. The comprehensive product range including 1/10/25/100GbE transceivers, also Direct Attached Cable 1M/3M allows users to plug the proper model onto the network to extend the physical coverage easily.

Hot-Pluggable with maximum flexibility

Low power dissipation, high network stability

Industry standard compliance

802.3z SFP Multi-Source Agreement (MSA) compliance

Compact size, high port density

Benefits

Hot-swappable design facilitates network maintenance

Independent transceiver design provides the highest network maintenance flexibility. Transceivers can be freely added when required, and infrastructure upgrades or transceiver repairs can be done easily by just replacing the transceiver instead of the whole device.

Bi-directional transceivers maximizes usage of existing fiber plant

Traditional fiber optic networking requires two strands of fiber to accomplish communications, in which one strand is reserved for sending signals, while the other is for receiving. On the other hand, bi-directional, dual-wavelength transceivers can establish communications over just one strand of fiber by using two separate optical wavelengths: one receives and the other transmits signals. Transmission capacity can be expanded immediately without additional cost laying new fiber.

Supporting Digital Diagnostics Monitoring Interface (DDMI) SFP enhances management capability

The enhanced digital interface enables a real time link to be established between the switch and the SFP transceiver. This enables the switch to access operating parameters within the fiber link. This includes digital features such as soft control and monitoring of SFP I/O signals.

In addition, the DDMI functionality enables the capability to implement digital alarms and warnings.

This feature ensures that the business can be proactive in preventative maintenance of the network and ensure business continuity.

DDMI Monitors:
- Temperature
- Transmitted power
- Supply voltage
- Received power
- Transmitted bias current

All features listed above include alarm and warning thresholds.

Specifications and Features

100/25GbE Transceiver Modules	100 Gigabit QSFP28		25 Gigabit SFP28	
	QSFP100G-LR4	**QSFP100G-SR4**	**SFP25G-LR**	**SFP25G-SR**
Product photo				
Connector	Duplex LC	MPO12	Duplex LC	Duplex LC
Wavelength (nm)	1310	850	1310	850
Max transmission distance (km/yd)	10/10936	OM4: 0.1/109.36 OM3: 0.07/76.55	10/10936	OM4: 0.1/109.36 OM3: 0.07/76.55
Optical fiber type	Single mode	Multi mode	Single mode	Multi mode
With DDMI features	Yes	Yes	Yes	Yes
Optical Characteristics				
Transmit power range (dBm)	-4.3 to 4.5	-8.4 to 2.4	-7 to 2	-8.4 to 2.4
Receive power range (dBm)	-10.6 to 4.5	-10.3 to 2.4	-14 to 2	-10.3 to 2.4
Operational Ranges				
Supply voltage	3.135 - 3.465 V	3.135 - 3.465 V	3.135 - 3.465 V	3.135 - 3.465 V
Max current (mA)	1360	600	520	300
Power				
Max. power consumption (watts)	4.5	2.0	1.75	1.0
Physical Specifications				
Dimensions (WxDxH)(mm/in.)	118.4x19x9.8/ 4.66x0.75x0.39	125.7x19x15.11/ 4.95x0.75x0.59	57.4x14.55x11.9/2.26x0.57x0.47	
Weight (g/lb.)	45/0.1	39/0.09	22/0.05	18/0.04
Pack quantity	Single Pack	Single Pack	Single Pack	Single Pack
Environmental Specifications				
Temperature Operating	0°C to 70°C/32°F to 158°F			
Storage	-40°C to 85°C/-40°F to 185°F			
MTBF (hr @ 25°C)	4,863,340	4,434,039	4,936,565	3,502,283

10GbE Transceiver Modules	10 Gigabit SFP+				
	SFP10G-T*	SFP10G-SR**	SFP10G-SR-E**	SFP10G-LR**	SFP10G-LR-E**
Connector	RJ-45	Duplex LC	Duplex LC	Duplex LC	Duplex LC
Wavelength (nm)	-	850	850	1310	1310
Max transmission distance (km/yd)	0.03/32.8	0.3/328	0.3/328	10/10936	10/10936
Optical fiber type	-	Multi mode	Multi mode	Single mode	Single mode
With DDMI features	-	Yes	Yes	Yes	Yes
Optical Characteristics					
Transmit power range (dBm)	-	-1 to -5	-1 to -8.2	+0.5 to -8.2	+0.5 to -8
Receive power range (dBm)	-	+0.5 to -11.1	0 to -11.1	+0.5 to -12.6	+1 to -14.4
Operational Ranges					
Supply voltage	3.1 - 3.45 V	3.14 - 3.46 V	3.14 - 3.46 V	3.14 - 3.46 V	3.14 - 3.46 V
Max current (mA)	750	250	300	285	300
Physical Specifications					
Dimensions (WxDxH)(mm/in.)	13.6x68.8x13.7/ 0.54x2.75x0.54	14.8x56.5x11.85/0.58x2.22x0.47			
Weight (g/lb.)	24/0.05	20/0.04	20/0.04	20/0.04	20/0.04
Pack quantity	Single pack	Single pack	10-pack	Single pack	10-pack
Environmental Specifications					
Temperature	Operating	0°C to 70°C/32°F to 158°F			
	Storage	-40°C to 85°C/-40°F to 185°F			
MTBF (hr @ 25°C)	4,170,664	5,160,000	798,275	3,390,000	2,183,835

GbE Transceiver Modules	Gigabit SFP				
	SFP-1000T	SFP-SX-D**	SFP-SX-E**	SFP-LX-10-D**	SFP-LX-10-E**
Connector	RJ-45	Duplex LC	Duplex LC	Duplex LC	Duplex LC
Wavelength (nm)	-	850	850	1310	1310
Max transmission distance (km/yd)	0.1/109	0.55/601	0.55/601	10/10936	10/10936
Optical fiber type	-	Multi mode	Multi mode	Single mode	Single mode
With DDMI features	-	Yes	Yes	Yes	Yes
Optical Characteristics					
Transmit power range (dBm)	-	-4 to -9.5	-3 to -9.5	-3 to -9.5	-3 to -9
Receive power range (dBm)	-	-3 to -17	-3 to -17	-3 to -20	-3 to -20
Operational Ranges					
Supply voltage	3.1 - 3.45 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V
Max current (mA)	300	250	300	300	300
Physical Specifications					
Dimensions (WxDxH)(mm/in.)	13.40x56.00x12.40/0.53x2.20x0.49				
Weight (g/lb.)	24/0.05	24/0.05	20/0.04	16/0.04	20/0.04
Pack quantity	Single pack	Single pack	10-pack	Single pack	10-pack
Environmental Specifications					
Temperature	Operating	0°C to 70°C/32°F to 158°F			
	Storage	-40°C to 85°C/-40°F to 185°F			
MTBF (hr @ 25°C)	277,657	83,030	40,850,123	83,030	47,966,232

* Works with Cat6a/7 Cable up to 30 m. Switch fan speed will speed up to dissipate the addition heat generated by 10G BASE-T transceiver. The maximum number of 10G copper transceivers a switch can support depends on its thermal design.

** Only connections with patch cords with PC or UPC connectors are supported.

GbE Transceiver Modules	Gigabit SFP					
	SFP-LHX1310-40-D*	SFP-ZX-80-D*	SFP-BX1310-10-D*/**	SFP-BX1310-E*/**	SFP-BX1490-10-D*/**	SFP-BX1550-E*/**
Connector	Duplex LC	Duplex LC	Single LC	Single LC	Single LC	Single LC
Wavelength (nm)	1310	1550	1310 (TX) 1490 (RX)	1310 (TX) 1550 (RX)	1490 (TX) 1310 (RX)	1550 (TX) 1310 (RX)
Max transmission distance (km/yd)	40/43744	80/87488	10/10936	20/21872	10/10936	20/21872
Optical fiber type	Single mode	Single mode	Single mode	Single mode	Single mode	Single mode
With DDMI features	Yes	Yes	Yes	Yes	Yes	Yes
Optical Characteristics						
Transmit power range (dBm)	+3 to -2	+5 to 0	-3 to -9	0 to -9	-3 to -9	0 to -9
Receive power range (dBm)	-2 to -23	-1 to -24	-2 to -20	-3 to -23	-2 to -20	-3 to -24
Operational Ranges						
Supply voltage	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V
Max current (mA)	300	300	-	300	300	300
Physical Specifications						
Dimensions (WxDxH) (mm/in.)	13.40x56.00x12.40/0.53x2.20x0.49					
Weight (g/lb.)	17/0.04	18/0.04	17/0.04	20/0.04	17/0.04	20/0.04
Pack quantity	Single pack	Single pack	Single pack	10-pack	Single pack	10-pack
Environmental Specifications						
Temperature — Operating	0°C to 70°C/32°F to 158°F					
Temperature — Storage	-40°C to 85°C/-40°F to 185°F					
MTBF (hr @ 25°C)	83,030	83,030	137,682	47,966,231	137,682	47,966,231

* Only connections with patch cords with PC or UPC connectors are supported.
** SFP-BX1310-10-D & SFP-BX1490-10-D, SFP-BX1310-E & SFP-BX1550-E must be used in pairs.

Direct Attached Cable 100G Series	DAC100G	
	DAC100G-1M	DAC100G-3M
Product photo		
Connector	QSFP28 to QSFP28	QSFP28 to QSFP28
Max transmission distance (m/ft)	1/3.28	3/9.84
Operational Ranges		
Supply voltage	3.135 - 3.465 V	3.135 - 3.465 V
Max current (mA)	150	150
Physical Specifications		
Dimensions (WxDxH) (mm/in.)	76x18.35x13.3/ 2.99x0.72x0.52	76x18.35x13.3/ 2.99x0.72x0.52
Weight (g/lb.)	129/0.28	247/0.54

Direct Attached Cable 25G Series	DAC25G	
	DAC25G-1M	**DAC25G-3M**
Product photo		
Connector	SFP28 to SFP28	SFP28 to SFP28
Max transmission distance (m/ft)	1/3.28	3/9.84
Operational Ranges		
Supply voltage	3.135 - 3.465 V	3.135 - 3.465 V
Max current (mA)	150	150
Physical Specifications		
Dimensions (WxDxH)(mm/in.)	57.5x13.55x8.55/2.26x0.53x0.34	57.5x13.55x8.55/2.26x0.53x0.34
Weight (g/lb.)	73/0.16	129/0.28

Direct Attached Cable 10G Series	DAC10G	
	DAC10G-1M	**DAC10G-3M**
Connector	SFP+ to SFP+	SFP+ to SFP+
Max transmission distance (m/ft)	1/3.28	3/9.84
Operational Ranges		
Supply voltage	3.14 - 3.46 V	3.14 - 3.46 V
Max current (mA)	150	150
Physical Specifications		
Dimensions (WxDxH)(mm/in.)	14x58x11/0.55x2.30x0.43	14x58x11/0.55x2.30x0.43
Weight (g/lb.)	70/0.15	120/0.26

Safety Certifications

- Class 1 Laser
- 21 CFR 1040.10 and 1040.11 compliant

- CB
- TUV*

- CE*
- FDA*

* Applies to certain models

Switch Compatibility List

Model		CX4800-56F	XGS4600 Series	XS3800-28	XGS2220 Series	GS2220 Series
DAC100G	DAC100G-1M	Yes	-	-	-	-
	DAC100G-3M	Yes	-	-	-	-
DAC25G	DAC25G-1M	Yes	-	-	-	-
	DAC25G-3M	Yes	-	-	-	-
DAC10G	DAC10G-1M	Yes	Yes	Yes	Yes	-
	DAC10G-3M	Yes	Yes	Yes	Yes	-
100 Gigabit QSFP28	QSFP100G-SR4	Yes	-	-	-	-
	QSFP100G-LR4	Yes	-	-	-	-
25 Gigabit SFP28	SFP25G-SR	Yes	-	-	-	-
	SFP25G-LR	Yes	-	-	-	-
10 Gigabit SFP+	SFP10G-T	Yes (10*)	Yes	Yes	Yes (2*)	-
	SFP10G-SR	Yes	Yes	Yes	Yes	-
	SFP10G-SR-E	Yes	Yes	Yes	Yes	-
	SFP10G-LR	Yes	Yes	Yes	Yes	-
	SFP10G-LR-E	Yes	Yes	Yes	Yes	-
Gigabit SFP	SFP-1000T	Yes	Yes	Yes	Yes	Yes
	SFP-SX-D	Yes	Yes	Yes	Yes	Yes
	SFP-SX-E	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-D	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-E	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-10-D	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-E	Yes	Yes	Yes	Yes	Yes
	SFP-BX1490-10-D	Yes	Yes	Yes	Yes	Yes
	SFP-BX1550-E	Yes	Yes	Yes	Yes	Yes
	SFP-LHX1310-40-D	Yes	Yes	Yes	Yes	Yes
	SFP-ZX-80-D	Yes	Yes	Yes	Yes	Yes

* It is recommended to use no more than the maximum number of 10GbE copper modules simultaneously to avoid overheating and ensure reliable operation.

Model		XS1930 Series	XMG1930 Series	XGS1935 Series	GS1920v2 Series	XMG1915 Series	GS1900 Series
DAC10G	DAC10G-1M	Yes	Yes	Yes	-	Yes	-
	DAC10G-3M	Yes	Yes	Yes	-	Yes	-
10 Gigabit SFP+	SFP10G-T	Yes	Yes	Yes (4*)	-	Yes (2*)	-
	SFP10G-SR	Yes	Yes	Yes	-	Yes	-
	SFP10G-SR-E	Yes	Yes	Yes	-	Yes	-
	SFP10G-LR	Yes	Yes	Yes	-	Yes	-
	SFP10G-LR-E	Yes	Yes	Yes	-	Yes	-
Gigabit SFP	SFP-1000T	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-SX-D	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-SX-E	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-D	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-E	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-10-D	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-E	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1490-10-D	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1550-E	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LHX1310-40-D	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-ZX-80-D	Yes	Yes	Yes	Yes	Yes	Yes

* It is recommended to use no more than the maximum number of 10GbE copper modules simultaneously to avoid overheating and ensure reliable operation.

Model		GS1350 Series	GS1300 Series	XGS1250-12	XGS1210-12	XGS1010-12	GS1100-24	XMG-100 Series
DAC10G	DAC10G-1M	-	-	Yes	Yes	Yes	-	Yes
	DAC10G-3M	-	-	Yes	Yes	Yes	-	Yes
10 Gigabit SFP+	SFP10G-T	-	-	-	-	-	-	-
	SFP10G-SR	-	-	Yes	Yes	Yes	-	Yes
	SFP10G-SR-E	-	-	Yes	Yes	Yes	-	Yes
	SFP10G-LR	-	-	Yes	Yes	Yes	-	Yes
	SFP10G-LR-E	-	-	Yes	Yes	Yes	-	Yes
Gigabit SFP	SFP-1000T	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-SX-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-SX-E	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-E	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-10-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-E	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1490-10-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1550-E	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LHX1310-40-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-ZX-80-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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