



## Reliable Transceiver Modules for Different Connectivity Demands

- Hot-Pluggable with maximum flexibility
- Low power dissipation
- Industry standard compliance
- SFP Multi-Source Agreement (MSA) compliance
- Compact size, high port density

The ZyXEL Transceiver Series is a complete range of industry standard, hot-pluggable transceiver modules consists of Fast, Gigabit and 10 Gigabit variations.

### Benefits

#### Standard-based design assures compatibility

The ZyXEL transceiver family follows industry standards to assure compatibility with switches from other manufacturers without barrier set by proprietary technologies.

#### Comprehensive portfolio for different connectivity demands

With ZyXEL's comprehensive Fast, Gigabit and 10 Gigabit transceiver product range, also Direct Attached Cable 1 M/3 M, users can just plug the proper model onto the network to extend the physical coverage.

#### 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
- Supply voltage
- Transmitted bias current
- Transmitted power
- Received power

All features listed above include alarm and warning thresholds.



**Fiber Transceiver Accessories**

## Specifications and Features

	10GbE Transceiver Modules			
	10 Gigabit XFP		10 Gigabit SFP+	
	XFP-SR	FTLX1412D3BCL (XFP-LR)	SFP10G-SR	SFP10G-LR
<b>Connector</b>	LC	LC	Duplex LC	Duplex LC
<b>Wavelength</b>	850 nm	1310 nm	850 nm	1310 nm
<b>Max Transmission Distance</b>	0.3 km/328 yd	10 km/10936 yd	0.3 km/328 yd	10 km/10936 yd
<b>Optical Fiber Type</b>	Multi Mode	Single Mode	Multi Mode	Single Mode
<b>Receiver Characteristics</b>				
<b>Optical receiver sensibility</b>	-11.1 dBm	-12.6 dBm	-11.1 dBm	-12.6 dBm
<b>Maximum input power</b>	+0.5 dBm	+0.5 dBm	0.5 dBm	0.5 dBm
<b>Operational Ranges</b>				
<b>Supply voltage</b>	3.1 - 3.45 V	3.1 - 3.5 V	3.14 - 3.46 V	3.14 - 3.46 V
<b>Max current</b>	400 mA	600 mA	250 mA	285 mA
<b>Physical Specifications</b>				
<b>Dimensions (WxDxH)(mm/in.)</b>	22.15 x 77.95 x 13.30/0.87 x 3.07 x 0.52		14.8 x 56.5 x 11.85/0.58 x 2.22 x 0.47	
<b>Weight (g/lb.)</b>	40/0.09	42/0.09	20/0.04	20/0.04
<b>With DDMI Features</b>	Yes	Yes	Yes	Yes

	GbE Transceiver Modules						
	Gigabit SFP						
	SFP-1000T	SFP-SX-D	SFP-LX-10-D	SFP-BX 1310-10-D*1	SFP-BX 1490-10-D*1	SFP-LHX 1310-40-D	SFP-ZX-80-D
<b>Connector</b>	RJ-45	LC	LC	LC	LC	LC	LC
<b>Wavelength</b>	-	850 nm	1310 nm	1310 nm (TX) 1490 nm (RX)	1490 nm (TX) 1310 nm (RX)	1310 nm	1550 nm
<b>Max Transmission Distance</b>	0.1 km/109 yd	0.55 km/ 601 yd	10 km/10936 yd	10 km/10936 yd	10 km/10936 yd	40 km/43744 yd	80 km/87488 yd
<b>Optical Fiber Type</b>	Multi Mode	Multi Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode
<b>Receiver Characteristics</b>							
<b>Optical receiver sensibility</b>	-	-17 dBm	-20 dBm	-20 dBm	-20 dBm	-23 dBm	-24 dBm
<b>Maximum input power</b>	-	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm
<b>Operational Ranges</b>							
<b>Supply voltage</b>	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	3.1 - 3.5 V	3.1 - 3.5 V
<b>Max current</b>	300 mA	250 mA	300 mA	-	300 mA	300 mA	300 mA
<b>Physical Specifications</b>							
<b>Dimensions (WxDxH) (mm/in.)</b>	13.40 x 56.00 x 12.40/0.53 x 2.20 x 0.49						
<b>Weight (g/lb.)</b>	24/0.05	24/0.05	16/0.04	17/0.04	17/0.04	17/0.04	18/0.04
<b>With DDMI Features</b>	-	Yes	Yes	Yes	Yes	Yes	Yes

\*1: SFP-BX1310-10-D and SFP-BX1490-10-D are must used in pairs.

	Direct Attached Cable 10G Series	
	DAC10G	
	DAC10G-1M	DAC10G-3M
<b>Connector</b>	SFP+ to SFP+	SFP+ to SFP+
<b>Max Transmission Distance</b>	1 m/3.28 ft	3 m/9.84 ft
<b>Operational Ranges</b>		
<b>Supply voltage</b>	3.13 - 3.47 V	3.13 - 3.47 V
<b>Max current</b>	480 mA	480 mA
<b>Physical Specifications</b>		
<b>Dimensions (WxDxH)(mm/in.)</b>	14 x 58 x 11/0.55 x 2.30 x 0.43	
<b>Weight (g/lb.)</b>	85/0.19	164/0.36

### Environmental Specifications

- Operating temperature: 0°C to 70°C (32°F to 158°F)
- Storage temperature: -40°C to 85°C (-40°F to 185°F)

### Safety Certification

- Class 1 Laser
- 21 CFR 1040.10 and 1040.11 compliant
- CSA (10 Gigabit XFP, Gigabit SFP and Fast Ethernet SFP Series)
- TUV
- CE (10 Gigabit SFP+ Series, DAC10G Series)
- FDA (10 Gigabit SFP+ Series)

## Switch Compatibility List

		4500 Series	3900 Series	GS3700 Series	XGS3700 Series	3500 Series	2200 Series	2210 Series
DAC10G	DAC10G-1M	-	Yes	-	Yes	-	-	-
	DAC10G-3M	-	Yes	-	Yes	-	-	-
10 Gigabit XFP	XFP-SR	Yes	-	-	-	-	-	-
	FTLX1412D3BCL (XFP-LR)	Yes	-	-	-	-	-	-
10 Gigabit SFP+	SFP10G-SR	-	Yes	-	Yes	-	-	-
	SFP10G-LR	-	Yes	-	Yes	-	-	-
Gigabit SFP*	SFP-1000T	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-SX-D	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-D	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-10-D	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-BX1490-10-D	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

		1920 Series	GS1910 Series	XGS1910 Series	GS1900 Series	ES1100-24G	GS1100-24
DAC10G	DAC10G-1M	-	-	Yes	-	-	-
	DAC10G-3M	-	-	Yes	-	-	-
10 Gigabit XFP	XFP-SR	-	-	-	-	-	-
	FTLX1412D3BCL (XFP-LR)	-	-	-	-	-	-
10 Gigabit SFP+	SFP10G-SR	-	-	Yes	-	-	-
	SFP10G-LR	-	-	Yes	-	-	-
Gigabit SFP*	SFP-1000T	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-SX-D	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-D	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-10-D	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1490-10-D	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

\* The switch models featuring dual-rate (100Mbps/1Gbps) SFP transceiver support include the GS1900 Series, XGS/GS1910 Series, GS1920 Series, GS2210 Series, ES3500-8PD and ES3500-24HP.



For more product information, visit us on the web at [www.ZyXEL.com](http://www.ZyXEL.com)



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