

Product Selection Guide

Accessories Fast Ethernet SFP modules



Specifications

Characteristics	Model name				
	SFP100-MM/-I	SFP100-SS30/-I	SFP100-SS60/-I	SFP100-SS100/-I	* SFP100-SS120/-I
Fiber mode	multi-mode	single-mode	single-mode	single-mode	single-mode
Typical Distance	2 km	30 km	60 km	100 km	120 km
Operating Temperature	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)
Wavelength	1310 nm	1310 nm	1310 nm	1550 nm	1550 nm
Optical Output Power 9/125 μm fiber (Max. TX)	-	-8 dBm	0 dBm	0 dBm	5 dBm
Optical Output Power 9/125 μm fiber (Min. TX)	-	-15 dBm	-5 dBm	-5 dBm	0 dBm
Optical Output Power 62.5/125 μm fiber (Max. TX)	-14 dBm	-	-	-	-
Optical Output Power 62.5/125 μm fiber (Min. TX)	-20 dBm	-	-	-	-
Optical Output Power 50/125 μm fiber (Max. TX)	-14 dBm	-	-	-	-
Optical Output Power 50/125 μm fiber (Min. TX)	-23.5 dBm	-	-	-	-
Optical Input Power-minimum (Sensitivity)	-31 dBm	-34 dBm	-35 dBm	-35 dBm	-35 dBm
Optical Input Power-maximum (Saturation)	-8 dBm	0 dBm	0 dBm	0 dBm	0 dBm
Link Budget	7.5 dB	19 dB	30 dB	30 dB	35 dB

* If two SFP transceivers are connected to each other in a short distance and the received optical power is greater than the listed specification of the received SFP transceiver, please add an optical attenuator (Please refer to FAT-LC series accessories) to avoid any possible damages.

Ordering Information

Model Name	Description	Operating Temperature
SFP100-MM	100Mbps SFP optical transceiver, multi-mode / 2km, 1310nm	0 ~ 70°C
SFP100-MM-I	100Mbps SFP optical transceiver, multi-mode / 2km, 1310nm, industrial grade	-40 ~ 85°C
SFP100-SS30	100Mbps SFP optical transceiver, single-mode / 30km, 1310nm	0 ~ 70°C
SFP100-SS30-I	100Mbps SFP optical transceiver, single-mode / 30km, 1310nm, industrial grade	-40 ~ 85°C
SFP100-SS60	100Mbps SFP optical transceiver, single-mode / 60km, 1310nm	0 ~ 70°C
SFP100-SS60-I	100Mbps SFP optical transceiver, single-mode / 60km, 1310nm, industrial grade	-40 ~ 85°C
SFP100-SS100	100Mbps SFP optical transceiver, single-mode / 100km, 1550nm	0 ~ 70°C
SFP100-SS100-I	100Mbps SFP optical transceiver, single-mode / 100km, 1550nm, industrial grade	-40 ~ 85°C
SFP100-SS120	100Mbps SFP optical transceiver, single-mode / 120km, 1550nm	0 ~ 70°C
SFP100-SS120-I	100Mbps SFP optical transceiver, single-mode / 120km, 1550nm, industrial grade	-40 ~ 85°C

Product Selection Guide

Accessories

Fast Ethernet BIDI-SFP modules



Specifications

Characteristics	Model Name					
	SFP100B3-SS20/-I	SFP100B5-SS20/-I	SFP100B3-SS40/-I	SFP100B5-SS40/-I	SFP100B3-SS60/-I	SFP100B5-SS60/-I
Fiber mode	single-mode	single-mode	single-mode	single-mode	single-mode	single-mode
Typical Distance	20 km	20 km	40 km	40 km	60 km	60 km
Operating Temperature	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)
Wavelength	TX : 1310 nm RX : 1550 nm	TX : 1550 nm RX : 1310 nm	TX : 1310 nm RX : 1550 nm	TX : 1550 nm RX : 1310 nm	TX : 1310 nm RX : 1550 nm	TX : 1550 nm RX : 1310 nm
Optical Output Power 9/125 μm fiber (Max. TX)	-8 dBm	-8 dBm	0 dBm	0 dBm	0 dBm	0 dBm
Optical Output Power 9/125 μm fiber (Min. TX)	-14 dBm	-14 dBm	-8 dBm	-8 dBm	-5 dBm	-5 dBm
Optical Input Power-minimum (Sensitivity)	-32 dBm	-32 dBm	-34 dBm	-34 dBm	-34 dBm	-34 dBm
Optical Input Power-maximum (Saturation)	0 dBm	0 dBm	0 dBm	0 dBm	0 dBm	0 dBm
Link Budget	18 dB		26 dB		29 dB	

Ordering Information

Model Name	Description	Operating Temperature
SFP100B3-SS20	100Mbps SFP optical transceiver, single-mode BIDI / 20km, TX1310nm, RX1550nm	0 ~ 70°C
SFP100B3-SS20-I	100Mbps SFP optical transceiver, single-mode BIDI / 20km, TX1310nm, RX1550nm, industrial grade	-40 ~ 85°C
SFP100B5-SS20	100Mbps SFP optical transceiver, single-mode BIDI / 20km, TX1550nm, RX1310nm	0 ~ 70°C
SFP100B5-SS20-I	100Mbps SFP optical transceiver, single-mode BIDI / 20km, TX1550nm, RX1310nm, industrial grade	-40 ~ 85°C
SFP100B3-SS40	100Mbps SFP optical transceiver, single-mode BIDI / 40km, TX1310nm, RX1550nm	0 ~ 70°C
SFP100B3-SS40-I	100Mbps SFP optical transceiver, single-mode BIDI / 40km, TX1310nm, RX1550nm, industrial grade	-40 ~ 85°C
SFP100B5-SS40	100Mbps SFP optical transceiver, single-mode BIDI / 40km, TX1550nm, RX1310nm	0 ~ 70°C
SFP100B5-SS40-I	100Mbps SFP optical transceiver, single-mode BIDI / 40km, TX1550nm, RX1310nm, industrial grade	-40 ~ 85°C
SFP100B3-SS60	100Mbps SFP optical transceiver, single-mode BIDI / 60km, TX1310nm, RX1550nm	0 ~ 70°C
SFP100B3-SS60-I	100Mbps SFP optical transceiver, single-mode BIDI / 60km, TX1310nm, RX1550nm, industrial grade	-40 ~ 85°C
SFP100B5-SS60	100Mbps SFP optical transceiver, single-mode BIDI / 60km, TX1550nm, RX1310nm	0 ~ 70°C
SFP100B5-SS60-I	100Mbps SFP optical transceiver, single-mode BIDI / 60km, TX1550nm, RX1310nm, industrial grade	-40 ~ 85°C

Product Selection Guide

Accessories

Gigabit Ethernet SFP modules



Specifications

Characteristics	Model Name									
	SFP1G-SX/-I	SFP1G-MLX/-I	SFP1G-LX10/-I	*SFP1G-LX20/-I	*SFP1G-LHX30/-I	*SFP1G-LHX40/-I	*SFP1G-XD50/-I	*SFP1G-ZX70/-I	*SFP1G-ZX80/-I	*SFP1G-EZX120/-I
Fiber mode	multi-mode	multi-mode	single-mode	single-mode	single-mode	single-mode	single-mode	single-mode	single-mode	single-mode
Typical Distance	550 m	62.5/125 : 2km 50/125 : 1km	10 km	20 km	30 km	40 km	50 km	70 km	80 km	120 km
Operating Temperature	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)
Wavelength	850 nm	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	1550 nm	1550 nm	1550 nm	1550 nm
Optical Output Power 9/125 μm fiber (Max. TX)	-	-	-3 dBm	-2 dBm	1 dBm	1 dBm	1 dBm	5 dBm	5 dBm	5 dBm
Optical Output Power 9/125 μm fiber (Min. TX)	-	-	-9.5 dBm	-8 dBm	-4 dBm	-4 dBm	-4 dBm	0 dBm	0 dBm	0 dBm
Optical Output Power 62.5/125 μm fiber (Max. TX)	-4 dBm	-1 dBm	-	-	-	-	-	-	-	-
Optical Output Power 62.5/125 μm fiber (Min. TX)	-9.5 dBm	-9 dBm	-	-	-	-	-	-	-	-
Optical Output Power 50/125 μm fiber (Max. TX)	-4 dBm	-1 dBm	-	-	-	-	-	-	-	-
Optical Output Power 50/125 μm fiber (Min. TX)	-9.5 dBm	-9 dBm	-	-	-	-	-	-	-	-
Optical Input Power-minimum (Sensitivity)	-18 dBm	-19 dBm	-20 dBm	-23 dBm	-24 dBm	-24 dBm	-24 dBm	-24 dBm	-24 dBm	-32 dBm
Optical Input Power-maximum(Saturation)	0 dBm	-1 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-8 dBm
Link Budget	8.5 dB	10 dB	10.5 dB	15 dB	20 dB	20 dB	20 dB	24 dB	24 dB	32 dB

* If two SFP transceivers are connected to each other in a short distance and the received optical power is greater than the listed specification of the received SFP transceiver, please add an optical attenuator (Please refer to FAT-LC series accessories) to avoid any possible damages.

Ordering Information

Model Name	Description	Operating Temperature
SFP1G-SX	1Gbps SFP optical transceiver, multi-mode / 550m, 850nm	0 ~ 70°C
SFP1G-SX-I	1Gbps SFP optical transceiver, multi-mode / 550m, 850nm, industrial grade	-40 ~ 85°C
SFP1G-MLX	1Gbps SFP optical transceiver, multi-mode / 2km, 1310nm	0 ~ 70°C
SFP1G-MLX-I	1Gbps SFP optical transceiver, multi-mode / 2km, 1310nm, industrial grade	-40 ~ 85°C
SFP1G-LX10	1Gbps SFP optical transceiver, single-mode / 10km, 1310nm	0 ~ 70°C
SFP1G-LX10-I	1Gbps SFP optical transceiver, single-mode / 10km, 1310nm, industrial grade	-40 ~ 85°C
SFP1G-LX20	1Gbps SFP optical transceiver, single-mode / 20km, 1310nm	0 ~ 70°C
SFP1G-LX20-I	1Gbps SFP optical transceiver, single-mode / 20km, 1310nm, industrial grade	-40 ~ 85°C
SFP1G-LHX30	1Gbps SFP optical transceiver, single-mode / 30km, 1310nm	0 ~ 70°C
SFP1G-LHX30-I	1Gbps SFP optical transceiver, single-mode / 30km, 1310nm, industrial grade	-40 ~ 85°C
SFP1G-LHX40	1Gbps SFP optical transceiver, single-mode / 40km, 1310nm	0 ~ 70°C
SFP1G-LHX40-I	1Gbps SFP optical transceiver, single-mode / 40km, 1310nm, industrial grade	-40 ~ 85°C
SFP1G-XD50	1Gbps SFP optical transceiver, single-mode / 50km, 1550nm	0 ~ 70°C
SFP1G-XD50-I	1Gbps SFP optical transceiver, single-mode / 50km, 1550nm, industrial grade	-40 ~ 85°C
SFP1G-ZX70	1Gbps SFP optical transceiver, single-mode / 70km, 1550nm	0 ~ 70°C
SFP1G-ZX70-I	1Gbps SFP optical transceiver, single-mode / 70km, 1550nm, industrial grade	-40 ~ 85°C
SFP1G-ZX80	1Gbps SFP optical transceiver, single-mode / 80km, 1550nm	0 ~ 70°C
SFP1G-ZX80-I	1Gbps SFP optical transceiver, single-mode / 80km, 1550nm, industrial grade	-40 ~ 85°C
SFP1G-EZX120	1Gbps SFP optical transceiver, single-mode / 120km, 1550nm	0 ~ 70°C
SFP1G-EZX120-I	1Gbps SFP optical transceiver, single-mode / 120km, 1550nm, industrial grade	-40 ~ 85°C

Product Selection Guide

Accessories

Gigabit Ethernet BIDI-SFP modules



Specifications

Characteristics	Model Name									
	SFP1GB3-LX10/-I	SFP1GB5-LX10/-I	SFP1GB3-LX20/-I	SFP1GB5-LX20/-I	* SFP1GB3-LX40/-I	* SFP1GB5-LX40/-I	* SFP1GB3-LX60/-I	* SFP1GB5-LX60/-I	* SFP1GB51-LX80/-I	* SFP1GB59-LX80/-I
Fiber mode	single-mode	single-mode	single-mode	single-mode	single-mode	single-mode	single-mode	single-mode	single-mode	single-mode
Typical Distance	10 km	10 km	20 km	20 km	40 km	40 km	60 km	60 km	80 km	80 km
Operating Temperature	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)	0~70°C -40~85°C (-I model)
Wavelength	TX : 1310 nm RX : 1550 nm	TX : 1550 nm RX : 1310 nm	TX : 1310 nm RX : 1550 nm	TX : 1550 nm RX : 1310 nm	TX : 1310 nm RX : 1550 nm	TX : 1550 nm RX : 1310 nm	TX : 1310 nm RX : 1550 nm	TX : 1550 nm RX : 1310 nm	TX : 1510 nm RX : 1590 nm	TX : 1590 nm RX : 1510 nm
Optical Output Power 9/125 μm fiber (Max. TX)	-3 dBm	-3 dBm	-2 dBm	-2 dBm	2 dBm	2 dBm	5 dBm	4 dBm	3 dBm	3 dBm
Optical Output Power 9/125 μm fiber (Min. TX)	-9 dBm	-9 dBm	-8 dBm	-8 dBm	-3 dBm	-3 dBm	0 dBm	-2 dBm	-2 dBm	-2 dBm
Optical Input Power-minimum (Sensitivity)	-21 dBm	-21 dBm	-23 dBm	-23 dBm	-23 dBm	-23 dBm	-24 dBm	-25 dBm	-26 dBm	-26 dBm
Optical Input Power-maximum (Saturation)	-1 dBm	-1 dBm	-1 dBm	-1 dBm	-1 dBm	-1 dBm	-1 dBm	-1 dBm	-3 dBm	-3 dBm
Link Budget	12 dB		15 dB		20 dB		22 dB		24 dB	

* If two SFP transceivers are connected to each other in a short distance and the received optical power is greater than the listed specification of the received SFP transceiver, please add an optical attenuator (Please refer to FAT-LC series accessories) to avoid any possible damages.

Ordering Information

Model Name	Description	Operating Temperature
SFP1GB3-LX10	1Gbps SFP optical transceiver, single-mode BIDI / 10km, TX1310nm, RX1550nm	0 ~ 70°C
SFP1GB3-LX10-I	1Gbps SFP optical transceiver, single-mode BIDI / 10km, TX1310nm, RX1550nm, industrial grade	-40 ~ 85°C
SFP1GB5-LX10	1Gbps SFP optical transceiver, single-mode BIDI / 10km, TX1550nm, RX1310nm	0 ~ 70°C
SFP1GB5-LX10-I	1Gbps SFP optical transceiver, single-mode BIDI / 10km, TX1550nm, RX1310nm, industrial grade	-40 ~ 85°C
SFP1GB3-LX20	1Gbps SFP optical transceiver, single-mode BIDI / 20km, TX1310nm, RX1550nm	0 ~ 70°C
SFP1GB3-LX20-I	1Gbps SFP optical transceiver, single-mode BIDI / 20km, TX1310nm, RX1550nm, industrial grade	-40 ~ 85°C
SFP1GB5-LX20	1Gbps SFP optical transceiver, single-mode BIDI / 20km, TX1550nm, RX1310nm	0 ~ 70°C
SFP1GB5-LX20-I	1Gbps SFP optical transceiver, single-mode BIDI / 20km, TX1550nm, RX1310nm, industrial grade	-40 ~ 85°C
SFP1GB3-LX40	1Gbps SFP optical transceiver, single-mode BIDI / 40km, TX1310nm, RX1550nm	0 ~ 70°C
SFP1GB3-LX40-I	1Gbps SFP optical transceiver, single-mode BIDI / 40km, TX1310nm, RX1550nm, industrial grade	-40 ~ 85°C
SFP1GB5-LX40	1Gbps SFP optical transceiver, single-mode BIDI / 40km, TX1550nm, RX1310nm	0 ~ 70°C
SFP1GB5-LX40-I	1Gbps SFP optical transceiver, single-mode BIDI / 40km, TX1550nm, RX1310nm, industrial grade	-40 ~ 85°C
SFP1GB3-LX60	1Gbps SFP optical transceiver, single-mode BIDI / 60km, TX1310nm, RX1550nm	0 ~ 70°C
SFP1GB3-LX60-I	1Gbps SFP optical transceiver, single-mode BIDI / 60km, TX1310nm, RX1550nm, industrial grade	-40 ~ 85°C
SFP1GB5-LX60	1Gbps SFP optical transceiver, single-mode BIDI / 60km, TX1550nm, RX1310nm	0 ~ 70°C
SFP1GB5-LX60-I	1Gbps SFP optical transceiver, single-mode BIDI / 60km, TX1550nm, RX1310nm, industrial grade	-40 ~ 85°C
SFP1GB51-LX80	1Gbps SFP optical transceiver, single-mode BIDI / 80km, TX1510nm, RX1590nm	0 ~ 70°C
SFP1GB51-LX80-I	1Gbps SFP optical transceiver, single-mode BIDI / 80km, TX1510nm, RX1590nm, industrial grade	-40 ~ 85°C
SFP1GB59-LX80	1Gbps SFP optical transceiver, single-mode BIDI / 80km, TX1590nm, RX1510nm	0 ~ 70°C
SFP1GB59-LX80-I	1Gbps SFP optical transceiver, single-mode BIDI / 80km, TX1590nm, RX1510nm, industrial grade	-40 ~ 85°C

Product Selection Guide

Accessories

Gigabit Ethernet SFP-RJ45 modules



Specifications

Characteristics	Model Name	
	SFP1GRJ	SFP1GRJ-I
Operating Temperature	-40~70°C	-40~85°C
RJ45 Operation mode	1000Base-T	1000Base-T
SFP Interface	SERDES, 1000Base-X	SERDES, 1000Base-X

Please notice 10/100Base-T(X) mode is not supported

Ordering Information

Model Name	Description	Operating Temperature
SFP1GRJ	1Gbps SFP 1000 Base-T transceiver	-40 ~ 70°C
SFP1GRJ-I	1Gbps SFP 1000 Base-T transceiver, industrial grade	-40 ~ 85°C

10G Ethernet SFP+ modules with Diagnostic Monitoring



Specifications

Characteristics	Model Name			
	SFP10G-MM	SFP10G-MM-I	SFP10G-LR10	SFP10G-LR10-I
Fiber mode	multi-mode	multi-mode	single-mode	single-mode
Typical Distance	62.5/125um : 33m 50/125um(OM2) : 82m 50/125um(OM3) : 300m	62.5/125um : 33m 50/125um(OM2) : 82m 50/125um(OM3) : 300m	10 km	10 km
Operating Temperature	0~70°C	-40~85°C	0~70°C	-40~85°C
Wavelength	850 nm	850 nm	1310 nm	1310 nm
Optical Output Power 9/125 μm fiber (Max. TX)	-	-	0.5 dBm	0.5 dBm
Optical Output Power 9/125 μm fiber (Min. TX)	-	-	-8 dBm	-8 dBm
Optical Output Power 62.5/125 μm fiber (Max. TX)	-1 dBm	-1 dBm	-	-
Optical Output Power 62.5/125 μm fiber (Min. TX)	-6.5 dBm	-6.5 dBm	-	-
Optical Output Power 50/125 μm fiber (Max. TX)	-1 dBm	-1 dBm	-	-
Optical Output Power 50/125 μm fiber (Min. TX)	-6.5 dBm	-6.5 dBm	-	-
Optical Input Power-minimum (Sensitivity)	-9.9 dBm	-9.9 dBm	-14.4 dBm	-14.4 dBm
Optical Input Power-maximum (Saturation)	-1 dBm	-1 dBm	0.5 dBm	0.5 dBm
Link Budget	3.4 dB	3.4 dB	6.4 dB	6.4 dB

Ordering Information

Model Name	Description	Operating Temperature
SFP10G-MM	10Gbps SFP+ optical transceiver, multi-mode / 300m, 850nm	0 ~ 70°C
SFP10G-MM-I	10Gbps SFP+ optical transceiver, multi-mode / 300m, 850nm, industrial grade	-40 ~ 85°C
SFP10G-LR10	10Gbps SFP+ optical transceiver, single-mode / 10km, 1310nm	0 ~ 70°C
SFP10G-LR10-I	10Gbps SFP+ optical transceiver, single-mode / 10km, 1310nm, industrial grade	-40 ~ 85°C

Product Selection Guide

10G Ethernet SFP+ Copper Cable



Specifications

Characteristics	Model Name			
	SFPC10G-50	SFPC10G-100	SFPC10G-300	SFPC10G-500
Max.Speed	10 Gbps	10 Gbps	10 Gbps	10 Gbps
Wire Gauge	30 AWG	30 AWG	30 AWG	24 AWG
Low Smoke Zero Halogen	•	•	•	•
Cable length	0.5 m	1 m	3 m	5 m
Operating temperature	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C

Ordering Information

Model Name	Description	Cable length
SFPC10G-50	10Gbps SFP+ copper cable 30AWG, 0.5 m	0.5 m
SFPC10G-100	10Gbps SFP+ copper cable 30AWG, 1 m	1 m
SFPC10G-300	10Gbps SFP+ copper cable 30AWG, 3 m	3 m
SFPC10G-500	10Gbps SFP+ copper cable 24AWG, 5 m	5 m