1G SFP BiDi Family

Single-fiber Gigabit Ethernet | 10 to 120 km | LC and SC

1. Product overview

The GLOBALfiber SFP BiDi family provides bidirectional Gigabit Ethernet connections over single-mode fiber. This family sheet covers 22 products from the category, retaining their published product numbers and descriptions. Complementary TX/RX wavelengths are offered at 1310/1490 nm, 1310/1550 nm and 1490/1550 nm, depending on the selected product.

2. Key features

- SFP form factor with single-mode BiDi optical interfaces
- Published reaches: 10, 20, 40, 80 and 120 km
- Stated optical budgets: 11, 14, 18, 26 and 31 dB
- LC and SC connector options, depending on model
- Four products explicitly described as I-Temp variants
- Product-specific coding options listed in ordering information

3. Applications

Gigabit Ethernet fiber links between compatible network devices. For S1G-BX20LC-35 and S1G-BX20SC-35, the technical information additionally lists Fibre Channel, switch-to-switch, switched-backplane and router/server interfaces, other optical transmission systems and SONET OC-24-LR-1 compatibility.

4. Technical data

Parameter	Specification
Form factor / service	SFP / 1 Gigabit Ethernet
Optical medium	Single-mode fiber
Wavelength selection	Complementary transmit and receive wavelengths; see page 2
Connector	LC or SC, model-dependent; see connector discrepancy on page 4
DDM	Listed for 18 products; not stated for the four I-Temp entries
Additional data for S1G-BX20LC-35 and S1G-BX20SC-35 only	1.25 / 1.063 Gbit/s; 1310 nm FP laser; PIN photodetector; +3.3 V supply

5. Recommended operating conditions

Operating temperature: 0 to +70 °C for standard models; -40 to +85 °C for I-Temp models. Temperature limits are shown for each product on page 2. S1G-BX20LC-35 and S1G-BX20SC-35 specify a single +3.3 V supply. Power consumption and storage limits are not stated.

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Optical selection and operating temperature

6. Optical characteristics

Product number	TX nm	RX nm	km	Budget dB	Port	Operating temp. °C
S1G-BX10-34	1310	1490	10	11	LC	0 to +70
S1G-BX10-35	1310	1550	10	11	LC	0 to +70
S1G-BX10-43	1490	1310	10	11	LC	0 to +70
S1G-BX10D-53	1550	1310	10	11	LC	0 to +70
S1G-BX120-45	1490	1550	120	31	LC	0 to +70
S1G-BX120-54	1550	1490	120	31	LC	0 to +70
S1G-BX20LC-35	1310	1550	20	14	LC	0 to +70
S1G-BX20SC-35	1310	1550	20	14	SC	0 to +70
S1G-BX20LC-53	1550	1310	20	14	LC	0 to +70
S1G-BX20SC-53	1550	1310	20	14	SC	0 to +70
S1GE-BX40D-34	1310	1490	40	18	LC	0 to +70
S1GE-BX40D-35	1310	1550	40	18	LC	0 to +70
S1G-BX40-43	1490	1310	40	18	LC	0 to +70
S1G-BX40-53	1550	1310	40	18	LC	0 to +70
S1G-BX80-35	1310	1550	80	26	LC	0 to +70
S1G-BX80-45	1490	1550	80	26	LC	0 to +70
S1G-BX80-53	1550	1310	80	26	LC	0 to +70
S1G-BX80-54	1550	1490	80	26	LC	0 to +70
S1G-20SC-35I	1310	1550	20	14	SC	-40 to +85
S1G-20SC-53I	1550	1310	20	14	SC	-40 to +85
S1G-BX40-53I	1550	1310	40	18	LC	-40 to +85
S1G-BX40-35I	1310	1550	40	18	LC	-40 to +85

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Diagnostics, compliance and ordering information

7. Digital diagnostics and management

DDM is explicitly included in the 18 non-I-Temp product descriptions. The technical information for S1G-BX20LC-35 and S1G-BX20SC-35 specifies SFF-8472 and internal or external calibration. Diagnostic availability and calibration for the four I-Temp products are not stated; no family-wide diagnostic accuracy or alarm thresholds are supplied.

8. Safety and regulatory

SFP MSA, SFF-8472 and RoHS compatibility are stated for S1G-BX20LC-35 and S1G-BX20SC-35. No family-wide laser-safety classification or regulatory declaration is provided. These model-specific statements are not extended to other products.

9. Ordering information

Product numbers and descriptions below are retained from the website. Coding options are product-specific and do not guarantee support on every host model or software version.

Product number	Published product description / coding
S1G-BX10-34	SFP BIDI 1GE DDM SM 10km | TX/RX=1310/1490nm 11dB LC Coding: Alcatel, Cisco, Ericsson, Extreme, Fortinet, Generic, HP, Huawei, Juniper
S1G-BX10-35	SFP BIDI 1GE DDM SM 10km | TX/RX=1310/1550nm 11dB LC Coding: Alcatel, Cisco, Extreme, Generic, HP, Huawei, Juniper, Juniper EX
S1G-BX10-43	SFP BIDI 1GE DDM SM 10km | TX/RX=1490/1310nm 11dB LC Coding: Alcatel, Cisco, Ericsson, Extreme, Fortinet, Generic, HP, Huawei, Juniper
S1G-BX10D-53	SFP BIDI 1GE DDM SM 10km | TX/RX=1550/1310nm 11dB LC Coding: Alcatel, Cisco, Extreme, Generic, HP, Huawei, Juniper, Juniper EX
S1G-BX120-45	SFP BIDI 1GE DDM SM 120km | Tx/Rx=1490/1550nm 31dB LC Coding: Cisco, Extreme, Generic, HP, Huawei, Juniper, Juniper EX
S1G-BX120-54	SFP BIDI 1GE DDM SM 120km | Tx/Rx=1550/1490nm 31dB LC Coding: Cisco, Extreme, Generic, HP, Huawei, Juniper
S1G-BX20LC-35	SFP BIDI 1GE DDM SM 20km | TX/RX=1310/1550nm 14dB LC Coding: Generic, Juniper
S1G-BX20SC-35	SFP BIDI 1GE DDM SM 20km | TX/RX=1310/1550nm 14dB SC Coding: Cisco, Extreme, Generic, HP, Huawei, Juniper
S1G-BX20LC-53	SFP BIDI 1GE DDM SM 20km | TX/RX=1550/1310nm 14dB LC Coding: Generic, Juniper
S1G-BX20SC-53	SFP BIDI 1GE DDM SM 20km | TX/RX=1550/1310nm 14dB SC Coding: Cisco, Extreme, Generic, HP, Huawei, Juniper
S1GE-BX40D-34	SFP BIDI 1GE DDM SM 40km | TX/RX=1310/1490nm 18dB LC Coding: Alcatel, Cisco, Ericsson, Extreme, Generic, HP, Huawei, Juniper, Juniper EX

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Ordering information (continued) and source notes

9. Ordering information (continued)

Product number	Published product description / coding
S1GE-BX40D-35	SFP BIDI 1GE DDM SM 40km | TX/RX=1310/1550nm 18dB LC Coding: Alcatel, Arista, Cisco, Ericsson, Extreme, Generic, HP, Huawei, Juniper, Juniper EX
S1G-BX40-43	SFP BIDI 1GE DDM SM 40km | TX/RX=1490/1310nm 18dB LC Coding: Alcatel, Cisco, Ericsson, Extreme, Generic, HP, Huawei, Juniper, Juniper EX
S1G-BX40-53	SFP BIDI 1GE DDM SM 40km | TX/RX=1550/1310nm 18dB LC Coding: Alcatel, Arista, Cisco, Ericsson, Extreme, Generic, HP, Huawei, Juniper, Juniper EX
S1G-BX80-35	SFP BIDI 1GE DDM SM 80km | Tx/Rx=1310/1550nm 26dB LC Coding: Arista, Cisco, Extreme, Generic, HP, Juniper
S1G-BX80-45	SFP BIDI 1GE DDM SM 80km | Tx/Rx=1490/1550nm 26dB LC Coding: Cisco, Ericsson, Extreme, Generic, Huawei, Juniper
S1G-BX80-53	SFP BIDI 1GE DDM SM 80km | Tx/Rx=1550/1310nm 26dB LC Coding: Arista, Cisco, Extreme, Generic, HP, Juniper
S1G-BX80-54	SFP BIDI 1GE DDM SM 80km | Tx/Rx=1550/1490nm 26dB LC Coding: Cisco, Extreme, Generic, Huawei, Juniper
S1G-20SC-35I	SFP BIDI 1GE SM 20km I-Temp | TX1310/RX1550nm 14dB SC Coding: Cisco, Generic, Juniper
S1G-20SC-53I	SFP BIDI 1GE SM 20km I-Temp | TX1550/RX1310nm 14dB SC Coding: Cisco, Generic, Juniper
S1G-BX40-53I	SFP BiDi 1GE SM 40km I-Temp | TX/RX=1550/1310nm 18dB LC Coding: Cisco, Generic
S1G-BX40-35I	SFP BIDI 1GE SM 40km I-temp | TX/RX=1310/1550nm 18dB LC Coding: Cisco, Generic