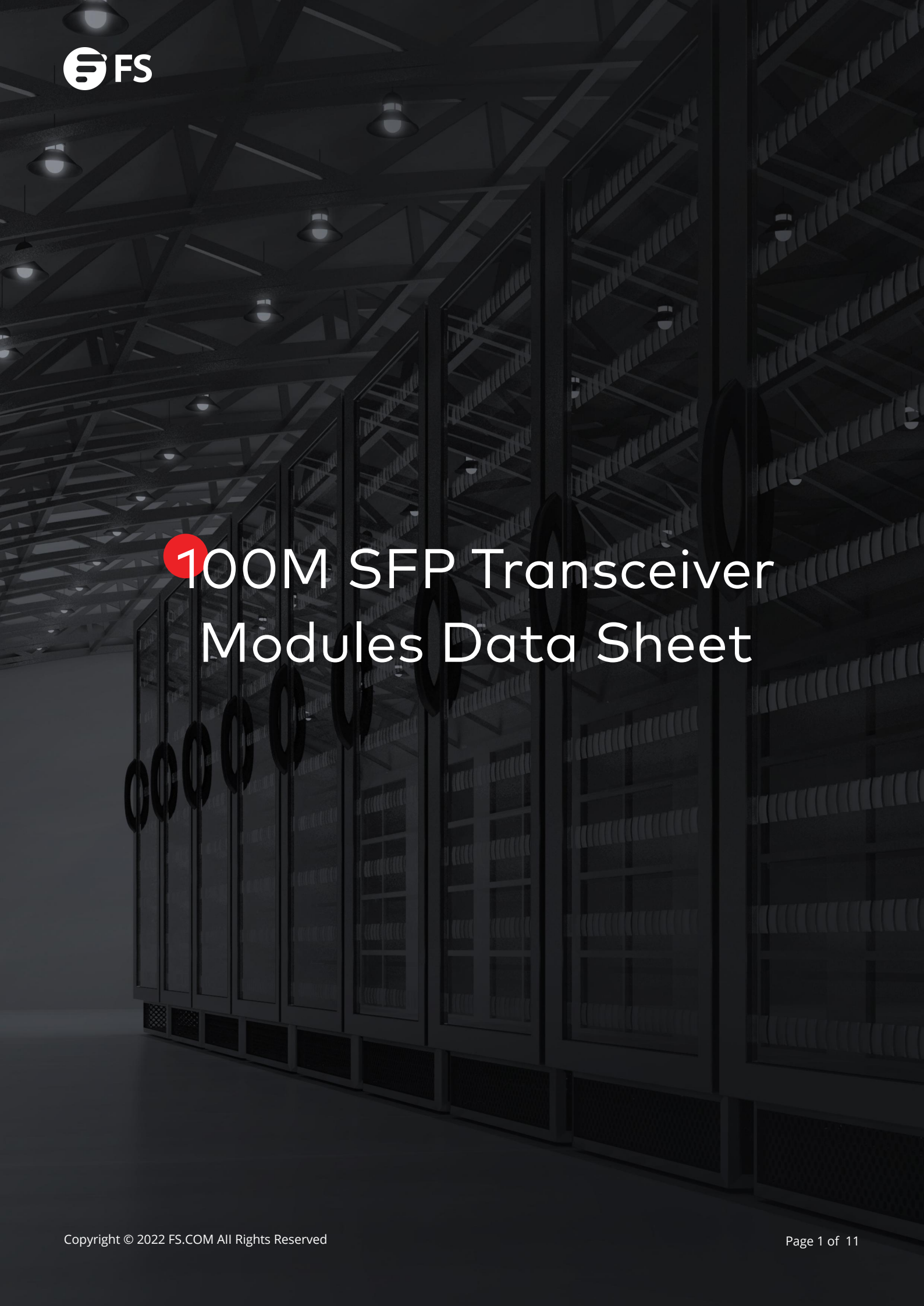


The background of the entire page is a dark, high-contrast photograph of a server room. Rows of server racks with glass doors are visible, filled with equipment. The ceiling has a complex network of pipes and several industrial-style pendant lights hanging down. The overall tone is dark and technical.

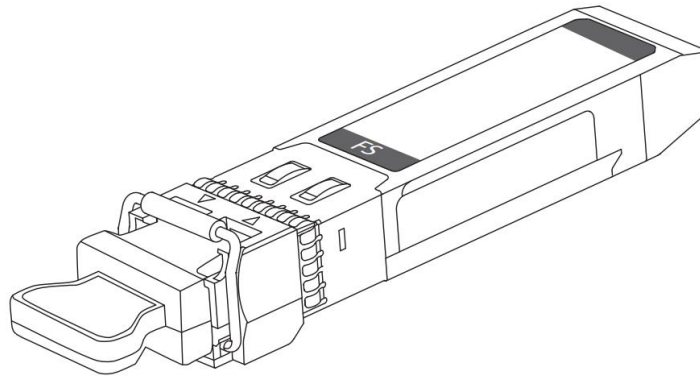
100M SFP Transceiver Modules Data Sheet

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Product overview

The FS® 100BASE Small Form-Factor Pluggable (SFP) device (Figure 1) is a hot-swappable input/output device that plugs into Fast Ethernet ports, dual-rate Fast/Gigabit Ethernet ports, or Gigabit Ethernet ports of a FS switch or router, linking the port with the fiber cabling network.



- SFP-100FX-31-I
- SFP-FB-GE-T
- SFP-100LX-31-I
- SFP-GE-100FX

Figure 1.

SFP-100M Optical modules

Features and benefits

- Hot-swappable when deployed, the switch or router does not have to reboot
- Interoperable with other IEEE-compliant 100BASE SFPs interfaces where applicable
- Certified and tested on Cisco, Arista, Juniper, Brocade 100BASE SFP ports for superior performance, quality, and reliability. For more details, refer to the [FS Assured Program for Transceivers](#)

Table 1 describes the SFP-100M portfolio.

Table 1. SFP-100M portfolio

Product	Description	Connector type
SFP-100FX-31-I	100BASE-FX SFP Transceiver, LC, 2km over MMF, I-Temp	LC
SFP-FB-GE-T	100BASE-T SFP Transceiver, RJ-45, 100m	RJ-45
SFP-100LX-31-I	100BASE-LX SFP Transceiver, LC, 10km over SMF, I-Temp	LC

Product	Description	Connector type
SFP-GE-100FX	100BASE-FX SFP Transceiver, LC, 2km over MMF	LC
SFP-FE-BX	100BASE-BX BiDi SFP Transceiver, LC, 10/20km over SMF	LC
SFP-100LX-31	100BASE-LX SFP Transceiver, LC, 10km over SMF	LC
SFP-100EX-31	100BASE-EX SFP Transceiver, LC, 40km over SMF	LC
SFP-100FX-31	100BASE-FX SFP Transceiver, LC, 2km over MMF	LC
SFP-100ZX-55	100BASE-ZX SFP Transceiver, LC, 80km over SMF	LC

SFP-100FX-31-I

The SFP-100FX-31-I transceiver supports up to 2km link lengths over multi-mode fiber (MMF) using a wavelength of 1310nm via an LC connector. Featuring low power consumption, this industrial optic transceiver provides 100BASE Ethernet connectivity options for Fast Ethernet, Telecom and Data Centers, suitable for both outdoor and indoor deployments.

SFP-FB-GE-T

The SFP-FB-GE-T transceiver supports up to 100m link lengths over a copper connection via a RJ-45 connector. Featuring low power consumption, the hot swappable 100BASE SFP transceiver is ideal for Internet Service Provider (ISP) Fast Ethernet communication links, Enterprise LAN & SAN Networks, Data Center LAN & SAN Networks and other optical links.

SFP-100LX-31-I

The SFP-100LX-31-I transceiver supports up to 10km link lengths over single-mode fiber (SMF) using a wavelength of 1310nm via an LC connector. Featuring low power consumption, this industrial optic transceiver provides 100BASE Ethernet connectivity options for Fast Ethernet and Data Centers, suitable for both outdoor and indoor deployments.

SFP-GE-100FX

The SFP-GE-100FX transceiver supports up to 2km link lengths over multi-mode fiber (MMF) using a wavelength of 1310nm via an LC connector. Featuring low power consumption, the hot swappable 100BASE SFP transceiver is ideal for Internet Service Provider (ISP) Fast Ethernet communication links, Enterprise LAN & SAN Networks, Data Center LAN & SAN Networks and other optical links.

SFP-FE-BX

The SFP-FE-BX transceiver provides up to 20km of 100Base-BX throughput over single-mode fiber (SMF) using 1550nm-TX/1310nm-RX wavelengths via LC simplex connectors. This bi-directional unit must be used with another transceiver or network equipment of complementary wavelengths. It provides 100BASE Ethernet connectivity options for Fast Ethernet and Data Centers.

SFP-100LX-31

The SFP-100LX-31 SFP transceiver supports up to 10km link lengths over single-mode fiber (SMF) using a wavelength of 1310nm via an LC connector. Featuring low power consumption, this industrial optic transceiver provides 100BASE Ethernet connectivity options for Fast Ethernet and Data Centers, suitable for both outdoor and indoor deployments.

SFP-100EX-31

The SFP-100EX-31 transceiver supports up to 40km link lengths over single-mode fiber (SMF) using a wavelength of 1310nm via an LC connector. Featuring low power consumption, the hot swappable 100BASE SFP transceiver is ideal for Internet Service Provider (ISP) Fast Ethernet communication links, Enterprise LAN & SAN Networks, Data Center LAN & SAN Networks and other optical links.

SFP-100FX-31

The SFP-100FX-31 transceiver supports up to 2km link lengths over multi-mode fiber (MMF) using a wavelength of 1310nm via an LC connector. Featuring low power consumption, this industrial optic transceiver provides 100BASE Ethernet connectivity options for Fast Ethernet, Telecom and Data Centers, suitable for both outdoor and indoor deployments.

SFP-100ZX-55

The SFP-100ZX-55 transceiver supports up to 80km link lengths over single-mode fiber (SMF) using a wavelength of 1550nm via an LC connector. Featuring low power consumption, the hot swappable 100BASE SFP transceiver is ideal for Internet Service Provider (ISP) Fast Ethernet communication links, Enterprise LAN & SAN Networks, Data Center LAN & SAN Networks and other optical links.

Product Specifications

Table 2 shows the key electrical characteristics for the 100M SFP modules.

Table 2. Electrical specifications

Product	Description	Nominal data rate	Link meter
SFP-100FX-31-I	100BASE-FX SFP Transceiver, LC, 2km over MMF, I-Temp	155Mbps	2km
SFP-FB-GE-T	100BASE-T SFP Transceiver, RJ-45, 100m	125Mbps	100m
SFP-100LX-31-I	100BASE-LX SFP Transceiver, LC, 10km over SMF, I-Temp	155Mbps	10km
SFP-GE-100FX	100BASE-FX SFP Transceiver, LC, 2km over MMF	155Mbps	2km
SFP-FE-BX	100BASE-BX BiDi SFP Transceiver, LC, 10/20km over SMF	155Mbps	20km
SFP-100LX-31	100BASE-LX SFP Transceiver, LC, 10km over SMF	155Mbps	10km
SFP-100EX-31	100BASE-EX SFP Transceiver, LC, 40km over SMF	155Mbps	40km
SFP-100FX-31	100BASE-FX SFP Transceiver, LC, 2km over MMF	155Mbps	2km
SFP-100ZX-55	100BASE-ZX SFP Transceiver, LC, 80km over SMF	155Mbps	80km
SFP-100eLX-31	100BASE-LX SFP Transceiver, LC, 15km over SMF	155Mbps	15km
SFP-100ELX-31	100BASE-LX SFP Transceiver, LC, 20km over SMF	155Mbps	20km

Table 3 shows the key optical characteristics for the 100M SFP modules.

Table 3. Optical specifications

Product	Description	Transmit Power (dBm) per lane		Receive Power (dBm) per lane		Transmit and Receive Wavelength (nm)
		Minimum	Maximum	Minimum	Maximum	
SFP-100FX-31-I	100BASE-FX SFP Transceiver, LC, 2km over MMF, I-Temp	-15	-8	-32	-3	1310
SFP-FB-GE-T	100BASE-T SFP Transceiver, RJ- 45, 100m	-	-	-	-	-
SFP-100LX-31-I	100BASE-LX SFP Transceiver, LC, 10km over SMF, I-Temp	-15	-8	-32.5	-3	1310
SFP-GE-100FX	100BASE-FX SFP Transceiver, LC, 2km over MMF	-15	-8	-32	-3	1310
SFP-FE-BX	100BASE-BX BiDi SFP Transceiver, LC, 10/20km over SMF	-15	-8	-34	-3	1310 (Tx) 1550 (Rx)
SFP-100LX-31	100BASE-LX SFP Transceiver, LC, 10km over SMF	-15	-8	-36	-3	1310
SFP-100EX-31	100BASE-EX SFP Transceiver, LC, 40km over SMF	-5	0	-36	-3	1310
SFP-100FX-31	100BASE-FX SFP Transceiver, LC, 2km over MMF	-15	-8	-32	-3	1310
SFP-100ZX-55	100BASE-ZX SFP Transceiver, LC, 80km over SMF	-5	0	-36	-3	1550

Table 4 shows the mechanical characteristics for the 100M SFP modules.

Table 4. Mechanical specifications

Product	Module dimension (H x W x D)	Module weight	Operation temperature	Storage temperature
SFP-100FX-31-I	8.5 x 13.4 x 56.6mm	19.77g	-40 to 85°C	-40 to 85°C
SFP-FB-GE-T	8.55 x 13.4 x 70.39mm	24.5g	0 to 70°C	-40 to 85°C
SFP-100LX-31-I	12.65 x 14 x 57.48mm	17.5g	-40 to 85°C	-40 to 85°C
SFP-GE-100FX	8.5 x 14.8 x 64.4mm	0.22g	0 to 70°C	0 to 70°C
SFP-FE-BX	8.5 x 13.4 x 56.6mm	21.45g	0 to 70°C	-40 to 85°C
SFP-100LX-31	12.65 x 14 x 57.48mm	17.5g	0 to 70°C	-40 to 85°C
SFP-100EX-31	8.5 x 13.4 x 56.6mm	19.77g	0 to 70°C	-40 to 85°C
SFP-100FX-31	8.5 x 13.4 x 56.6mm	19.77g	0 to 70°C	-40 to 85°C
SFP-100ZX-55	8.5 x 13.4 x 56.6mm	19.77g	0 to 70°C	-40 to 85°C

Warranty

- Standard warranty: 5 years
- For more information for FS Returns & Refunds policy, visit <https://www.fs.com/policies/warranty.html> or https://www.fs.com/policies/day_return_policy.html

Ordering information

Table 5 provides the ordering information for SFP 100M modules and related cables.

Table 5. Ordering information

Part number	Description
SFP optics modules	
SFP-100FX-31-I	100BASE-FX SFP Transceiver, LC, 2km over MMF, I-Temp
SFP-FB-GE-T	100BASE-T SFP Transceiver, RJ-45, 100m
SFP-100LX-31-I	100BASE-LX SFP Transceiver, LC, 10km over SMF, I-Temp
SFP-GE-100FX	100BASE-FX SFP Transceiver, LC, 2km over MMF
SFP-FE-BX	100BASE-BX BiDi SFP Transceiver, LC, 10/20km over SMF
SFP-100LX-31	100BASE-LX SFP Transceiver, LC, 10km over SMF
SFP-100EX-31	100BASE-EX SFP Transceiver, LC, 40km over SMF
SFP-100FX-31	100BASE-FX SFP Transceiver, LC, 2km over MMF
SFP-100ZX-55	100BASE-ZX SFP Transceiver, LC, 80km over SMF

Regulatory and standards compliance

Standards

- SFF-8472
- IEEE802.3U
- GR-468
- MSA Compliant
- RoHS 6
- GR-468-CORE: Generic Requirements for Optoelectronic Devices Used in Telecommunications Equipment

Safety

- Modules are compliant with Laser Class 1 as defined in IEC 60825-1, IEC 60825-2 and Comply with 21 CFR 1040.10 and 1040.11

Table 6. Laser class for the SFP-100M optical modules

Product	Laser class
SFP-100FX-31-I	1
SFP-FB-GE-T	-
SFP-100LX-31-I	1
SFP-GE-100FX	1
SFP-FE-BX	1
SFP-100LX-31	1
SFP-100EX-31	1
SFP-100FX-31	1
SFP-100ZX-55	1

Additional information

For more information about 100MBASE SFP optics and copper modules, contact your account manager or visit <https://www.fs.com/c/100base-sfp-1668>

Document history

New or revised topic	Described in	Date
100M SFP Transceiver Modules Data Sheet	Updated all	11/17/2022

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