

ROTEX Optical Module Catalog

For Data Communication

Summary

Optical modules are optoelectronic devices that perform photoelectric and electro-optical conversion. The transmitting end of the optical module converts electrical signals into optical signals, while the receiving end converts optical signals into electrical signals. Optical modules are classified according to their packaging forms, commonly including SFP, SFP+, SFF, Gigabit Ethernet Interface Converter (GBIC), etc.

BIDI optical module is an optical module that uses WDM (wavelength division multiplexing) bidirectional transmission technology to achieve bidirectional transmission within an optical channel on a single fiber. Unlike conventional optical modules (which have two fiber optic sockets), BIDI optical modules only have one socket, which transmits and receives signals on a single optical cable through an integrated bidirectional coupler received.

Optoelectronic modules are commonly referred to as electrical modules, also known as optical to electrical modules or RJ45 modules. Unlike optical modules, electrical modules do not perform photoelectric conversion. Through the conversion of the electrical module, two optical interfaces can be connected using a network cable. At present, we only provide GE electrical modules with RJ45 interfaces, using Category 5 Ethernet cables and supporting 1000BASE-T (IEEE 802.3ab) standard, maximum transmission distance is 100m.

Features

- Ordinary optical modules include optical receiving modules, optical transmitting modules, optical transceiver integrated modules, and optical forwarding modules according to their functions. The main function of the integrated optical transceiver module is to achieve optoelectronic/electro-optical conversion, including optical power control, modulation transmission, signal detection, IV conversion, and limiting amplification decision regeneration functions. In addition, it also has anti-counterfeiting information query, TX disable and other functions. Common ones include SFP, SFF, SFP+, GBIC, XFP, 1x9, etc.

In addition to its photoelectric conversion function, the optical forwarding module also integrates many signal processing functions, such as MUX/DEMUX, CDR, function control, energy harvesting and monitoring. Common optical forwarding modules include: 200/300 pin, XENPAK, and X2/XPAK.

Optical transceiver module, also known as optical module or fiber optic module, is an important component in fiber optic communication systems.

- The main difference between a BIDI optical module and a traditional dual fiber bidirectional optical module is that the BIDI

optical module is equipped with a wavelength division multiplexing (WDM) coupler, also known as a duplexer, which combines and separates data transmitted on one optical fiber according to different wavelengths. Therefore, BIDI optical modules are also considered WDM optical modules. In order to work efficiently. To achieve bidirectional data transmission, BIDI optical modules must be paired and used by tuning duplexers to match the desired wavelengths of the transmitter and receiver.

Product classification and model description

FE SFP

Product appearance	Product model	Product Description
	SF15S1310	Functional Module - Industrial Router Switching Integrated Machine - SF15S1310 Optical Module - eSFP-FE Single Mode Module (1310nm, 15km, LC)
	eSFP-FE-LX-SM1310	Functional Module - Switch Product - DP0M1eSFP - Optical Module - eSFP-100M/155M - Single Mode Module (1310nm, 15km, LC)
	S-SFP-FE-LH40-SM1310	Functional Module - Switch Product - LE0M0FS4DD Optical Module - eSFP-FE Single Mode Module (1310nm, 40km, LC)

FE BIDI

Product appearance	Product model	Product Description
	SFP-FE-LX-SM1550-BIDI	Functional Module - Switch Product - DP0M2SFP - Optical Module - eSFP-FE-BIDI Single Mode Module (TX1550/RX1310, 15km, LC)
	SFP-FE-LX-SM1310-BIDI	Functional Module - Switch Product - DP0M3SFP Optical Module - eSFP-FE-BIDI Single Mode Module (TX1310/RX1550, 15km, LC)

GE

Product appearance	Product model	Product Description
	SFP-GE-SX-C	Functional Modules - Switch Products - SFP-GE-SX-C-Optical Modules - eSFP-GE Multimode Modules (850nm, 0.55km, LC)
	SFP-GE-LX-SM1310	Functional Module - Switch Product - DP0M0SFP - Optical Module - eSFP-GE - Single Mode Module (1310nm, 10km, LC)
	eSFP-GE-SX-MM850	Functional Module - Switch Product - DP0M0ESFP - Optical Module - eSFP-GE - Multimode Module (850nm, 0.55km, LC)

S-SFP-GE-LH40-SM1310	Functional Module - Switch Product - LE0M0GS4DD Optical Module - eSFP-GE Single Mode Module (1310nm, 40km, LC)
S-SFP-GE-LH40-SM1550	Functional Module - Switch Product - LE0M0GS4FF - Optical Module - eSFP-GE - Single Mode Module (1550nm, 40km, LC)
S-SFP-GE-LH80-SM1550	Functional Module - Switch Product - LE0M0GS8FF Optical Module - eSFP-GE Single Mode Module (1550nm, 80km, LC)

GE BIDI

Product appearance	Product model	Product Description
	LE2MGSC40ED0	Functional Module - Switch Product - LE2MGSC40ED0- Optical Module - eSFP-GE-BIDI Single Mode Module (TX1490/RX1310, 40km, LC)
	LE2MGSC40DE0	Functional Module - Switch Product - LE2MGSC40DE0- Optical Module - eSFP-GE-BIDI Single Mode Module (TX1310/RX1490,40km, LC)
	SFP-GE-BX-U1-I	Functional Module - Switch Product - SFP-GE-BX-U1-I- Optical Module - SFP-GE-BIDI Single Module (TX1310/RX1490,10km, LC)
	SFP-GE-LX-SM1310-BIDI	Functional Module - Switch Product - DP0M6SFP Optical Module - eSFP-GE-BIDI Single Mode Module (TX1310/RX1490,10km, LC)
	SFP-GE-LX-SM1490-BIDI	Functional Module - Switch Product - DP0M7SFP Optical Module - eSFP-GE-BIDI Single Mode Module (TX1490/RX1310, 10km, LC)

GE electrical module

Product appearance	Product model	Product Description
	SFP-1000BaseT	Functional Module - Data Communication Product - CR0M3GP4U - Electrical Module - SFP-GE - Electrical Interface Module (100m, RJ45)

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Product appearance	Product model	Product Description
	OSX040N01	Functional module - Switch product - LE0M0XS4FF - Optical module - SFP+-10G - Single mode module (1550nm, 40km, LC)

SFP-10G-USR	Functional Modules - Enterprise Network Products - SFP-10G-USR-10GBase USR Optical Module - SFP+-10G Multimode Module (850nm, 0.1km, LC)
SFP-10G-BXU1	Functional Modules - Switch Products - SFP-10G-BXU1-10GBase BIDI Single Fiber Bidirectional Optical Module - SFP+-10G Single Mode Module (TX1270nm/RX1330nm, 10km, LC)
SFP-10G-BXD1	Functional Module - Switch Product - SFP-10G-BXD1-10GBase BIDI Single Fiber Bidirectional Optical Module - SFP+-10G Single Mode Module (TX1330nm/RX1270nm, 10km, LC)
SFP-10G-AOC10M	Functional Module - Enterprise Network Product - SFP-10G-AOC 10M-AOC Optical Module - SFP+-850nm-1G~10G-10m
SFP-10G-ZR	Functional Modules - Enterprise Network Products - SFP-10G-ZR-10GBase ZR Optical Module - SFP+-10G Single Mode Module (1550nm, 80km, LC)
SFP-10G-GE-LX	Functional Module - Switch Product - SFP-10G-GE-LX-10GBase LR/1000base LX Optical Module - SFP-10G/GE Single Mode Module (1310nm, 10km, LC)
SFP-10G-GE-EX	Functional Module - Switch Product - SFP-10G-GE-EX-10GBase ER/1000base EX Optical Module - SFP-10G/GE Single Mode Module (1550nm, 40km, LC)
SFP-10G-LR-C	Functional Module - Switch Product - SFP-10G-LR-C - Optical Module - SFP+-10G - Single Mode Module (1310nm, 10km, LC)
SFP-10G-LR-I	Functional Modules - Network Products - SFP-10G-LR-I - Optical Modules - SFP+-10G Single Mode Modules (1310nm, 10km, LC, Industrial Grade)
XFP-STM64-LX-SM1310	Functional Module - Switch Product - DP0M0XFP Optical Module - XFP-10G Single Mode Module (1310nm, 10km, LC)
OMXD30000	Functional Module - Switch Product - LE0M0XSM88 Optical Module - SFP+-10G Multimode Module Block (850nm, 0.3km, LC)
OSX010000	Functional Module - Switch Product - LE0M0XS1DD Optical Module - SFP+-10G Single Mode Module (1310nm, 10km, LC)

10GE BIDI

Product appearance	Product model	Product Description
	SFP-10G-ER-SM1330-BIDI	Functional Module - Enterprise Network Product - SFP-10G-ER-SM1330-BIDI - Optical Module - SFP+-10G-BIDI Single Mode Module (TX 1330nm/RX 1270nm, 40km, LC)
	SFP-10G-ER-SM1270-BIDI	Functional Module - Enterprise Network Products - SFP-10G-ER-SM1270-BIDI Optical Module - SFP+-10G-BIDI Single Mode Module (TX 1270nm/RX 1330nm, 40km, LC)

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Product appearance	Product model	Product Description
	SFP-25G-LR	Functional Module - Network Products - SFP-25G-LR-25GBase LR Optical Module - SFP28-25G Single Mode Module (1310nm, 10km, LC)

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Product appearance	Product model	Product Description
	QSFP-40G-iSR4	Functional Module - Enterprise Network Product - QSFP-40G-iSR4-40GBase-iSR4 Optical Module-
	QSFP-40G-LR4	QSFP+-40G multimode module (850nm, 0.15km, MPO) (can dock with 4 SFP+)
	QSFP-40G-eSR4	Functional Module - Enterprise Network Product - QSFP-40G-LR4-40GBase-LR4 Optical Module - QSFP+-40G Single Mode Module (1310nm, 10km, LC)

100GE

Product appearance	Product model	Product Description
	QSFP28-100G-SR4	Functional Module - Enterprise Network Product - QSFP28-100G-SR4-100GBase-SR4 Optical Module - QSFP28-100G Multimode Module (850nm, 0.1km, MPO)
	QSFP28-100G-LR4	Functional Module - Enterprise Network Product - QSFP28-100G-LR4-100GBase-LR4 Optical Module - QSFP28-100G Single Mode Module (1310nm, 10km, LC)
	QSFP28-100G-PSM4	Functional Module - Enterprise Network Product - QSFP28-100G-PSM4-100GBase-PSM4 Optical Module - QSFP28-100G Single Mode Module (1310nm, 0.5km, MPO)
	QSFP-100G-CWDM4	Functional Module - Enterprise Network Product - QSFP-100G-CWDM4-100GBase - CWDM4 Optical Module - QSFP28-100G Single Mode Module (1310nm, 2km, LC)
	QSFP-100G-4WDM-40	Functional Module - Data Communication Product - QSFP-100G-4WDM-40-100GBase-4WDM-
	QSFP-100G-ER4	40 Optical Module - QSFP28-100G Single Mode Module (1310nm, 40km, LC)

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Product appearance	Product model	Product Description
	OGSM01880	Functional modules - Switch products - OGSM01880- Optical transceiver integrated module - eSFP (industrial grade) - 850nm-1.25Gb/s -10dBm--2.5dBm--17dBm-LC - Multimode-0.55km
	OGSC10DD0	Functional modules - Switch products - OGSC10DD0- Optical transceiver integrated module - eSFP (industrial grade) - 1310nm-1.25Gb/s -9.5dBm-3dBm-20dBm-LC - Single mode-10km
	OGSC40DD0	Functional modules - Switch products - OGSC40DD0- Optical transceiver integrated module - eSFP (industrial grade) -1310nm-1.25Gb/s -4.5dBm-3dBm-22.5dBm-LC - Single mode -40km

Optoelectronic hybrid module

Product appearance	Product model	Product Description
	SFP-GE-Hybrid	SFP-GE-Hybrid-SFP-GE-(1310nm,10km-PDLC)
	SFP-10G-Hybrid	SFP-10G-Hybrid-SFP- 10G/2.5G/GE-(1310nm,1.4km-,PDLC)