

## 1.25G-SFP-550D

Optical Transceiver



### Key Features

- Media Type: **Multi-Mode Fiber (MMF)**
- Fiber Count: **Duplex**
- Connector: **Double LC/UPC**
- Maximum Distance: **550 m**
- Guaranteed Link Budget: **7.5 dB**
- Tx Wavelength: **850 nm**
- Supported Data Rate: **1.063 Gbps - 1.25 Gbps**
- DDM/DOM: **Supported**

## Product Description

Our EDGEOPTIC 1.25G-SFP-550D is a multi-vendor compatible 1000BASE-SX SFP dual-fiber optical module engineered for Gigabit Ethernet applications operating over multimode fiber infrastructure. The 1.25G-SFP-550D module operates at 850nm wavelength for both transmission and reception, supporting data rates from 1.063 to 1.25 Gbps and accommodating multiple protocol standards including Gigabit Ethernet and 1G Fiber Channel. Our 1000BASE-SX SFP transceiver utilizes VCSEL (Vertical-Cavity Surface-Emitting Laser) technology for transmission paired with PIN photodiode for receiving, delivering reliable short-reach connectivity for enterprise and data center environments.

The transceiver ensures a 7.5 dB guaranteed optical link budget, enabling transmission distances up to 550 meters over OM2/OM3 multimode fiber. While maximum reach depends on fiber quality and installation conditions, the module typically achieves 275 meters over 62.5/125µm fiber and full 550-meter capability on 50/125µm OM2 or better cabling. Distance specifications serve as identification parameters calculated using minimum optical budget and industry-standard fiber attenuation values, with actual performance varying based on specific deployment conditions.

1.25G-SFP-550D compatible 1000BASE-SX module features hot-pluggable SFP form factor with duplex LC/UPC connectors as the optical interface. The electrical interface conforms to INF-8074i MSA (Multi-Source Agreement) specifications, ensuring compatibility with standard SFP host systems across multiple vendor platforms. Our 1000BASE-SX SFP transceiver can be encoded for compatibility with over 80 different equipment brands. The module incorporates comprehensive DDM/DOM (Digital Diagnostic Monitoring) functionality, providing real-time operational data including transmitted and received optical power levels,



module temperature, laser bias current, and supply voltage. This diagnostic information accessible through the MSA-compatible EEPROM interface enables proactive network monitoring and maintenance.

Operating within a standard 0 to 70°C temperature range, the module maintains stable performance in controlled data center and enterprise environments. The transceiver draws power from a single +3.3V supply, with typical consumption well within SFP MSA specifications for Class 1 power dissipation. Standards compliance encompasses IEEE 802.3z for Gigabit Ethernet, alongside support for legacy Fast Ethernet operation and 1G Fiber Channel protocols. Multi-vendor interoperability is achieved through strict adherence to industry MSA standards, though systems employing vendor-specific module authentication may require custom EEPROM programming for seamless integration.

Our 1000BASE-SX SFP transceiver holds CE/RoHS certification and complies with Class 1 FDA and IEC60825-1 laser safety standards. Common deployment scenarios include enterprise campus networks, data center rack-to-rack connections, storage area networks, and metropolitan area network access rings. The module's multi-rate capability supports migration paths from legacy 100Mbps Fast Ethernet to full Gigabit speeds, providing investment protection for evolving network infrastructures.

Quality assurance procedures encompass comprehensive optical parameter verification, connector cleanliness inspection, and SFP transceiver EEPROM memory validation tests, ensuring each module meets stringent performance specifications before shipment.

## Technical Specifications

Specification	Value
Form Factor	SFP
Media Type	Multi-Mode Fiber (MMF)
Fiber Count	Duplex
Connector	Double LC/UPC
Maximum Distance	550 m
Guaranteed Link Budget	7.5 dB
TX Wavelength	850 nm
RX Wavelength	850 nm



Supported Data Rate	1.063 Gbps - 1.25 Gbps
Supported Ethernet Applications	Gigabit Ethernet (1.25 Gbps)
Supported Fiber Channel Applications	1G Fiber Channel (1.0625 Gbps)
DDM/DOM	Supported
Tx Wavelength Bandwidth	20 nm (840-860 nm)
Rx Wavelength Bandwidth	20 nm (840-860 nm)
Minimum Transmitting Power	-9.5 dBm
Maximum Transmitting Power	3 dBm
Receiver Sensitivity	-17 dBm
Receiver Overload	-3 dBm
Dispersion	110 ps/nm ps/nm
Transmitter Type	VSCEL Laser
Receiver Type	PIN photodiode
Temperature Range	Standard 0°-70°C
Power	+3.3V single power supply
Compliance	CE, Class 1 FDA and IEC60825-1 Laser Safety Compliant, INF-8074i, RoHS, SFP MSA

## Ordering Info

SKU	Description
1.25G-SFP-550D	Double Fiber 1.25G SFP Module (Tx/Rx 850/850nm, 100Mbps-1.25Gbps, Max. 550m over MMF, 9 dB, Temp. 0-70C, LC/UPC)

## Warranty



EDGE Optic's provides a limited warranty for **sixty (60) months** from Purchaser's receipt of the Equipment represented in this data sheet against defective design or workmanship.

## Compatibility

EDGE Optical transceivers can be provided with custom-encoded firmware, in order to provide compatibility with more than 100 vendor brands in data and telecom communications industry:

MS - General MSA	MS - EdgeWare	MS - KyLand	MS - Raisecom
AD - Adva (Adtran)	MS - Eltex	LN - Lenovo	MS - Ruckus
MS - Advantech	MS - Emulex	ML - Mellanox (NVIDIA)	MS - Ruijie Networks
MS - Allied Telesis	MS - Enterasys	ME - Meraki (Cisco)	MS - Sandvine
AR - Arista	ER - Ericsson	MS - MikroTik	MS - Silicom
MS - Arris	MS - EXFO	MO - Moxa	MS - SolarFlare
AG - Avago	EX - Extreme Networks	MS - MRV	SW - Sonicwall
AV - Avaya	F5 - F5 Networks	NC - NEC	MS - Sophos
BR - Broadcom	MS - Finisar	MS - NetApp	MS - Sumitomo
QL - Cavium (Qlogic)	FO - Fortinet	MS - Netgear	MS - Supermicro
MS - Ceragon	MS - Fujitsu	MS - Netinsight	MS - Synology
CH - Checkpoint	HI - Hirschmann	NK - Nokia (Alcatel)	MS - Telco Systems
CN - Ciena	HP - HP	MS - Nortel	MS - TP-LINK
CI - Cisco	AU - HP Aruba	NS - NSN	TM - Transmode
LI - Cisco (Linksys)	HU - Huawei	MS - OE Solutions	MS - Trendnet
MS - Comnet	IB - IBM	MS - Oracle	MS - Ubiquiti Networks
MS - D-link	IF - Infinera	MS - Palo Alto Network	MS - WatchGuard
MS - Dahua	MS - Innolight	MS - Planet	WS - Waystream
MS - DCN	IN - Intel	QL - Qlogic (Oracle)	WT - Westermo
DL - Dell	MS - JDSU	MS - QNAP	MS - ZTE
MS - DZS(Dasan-Zhone)	JU - Juniper	RD - RAD	MS - Zyxel
MS - EdgeCore	MS - KeyMile	MS - RadWare	XX - Other

## Version Control

Version: 3.0

Updated: November 21, 2025

CERTIFIED  
ISO 9001



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