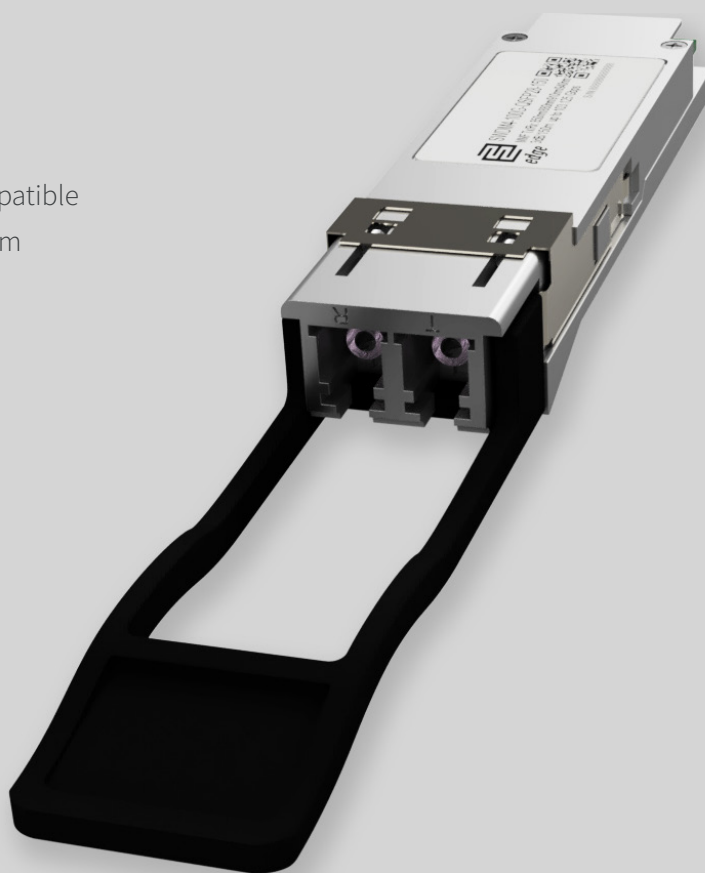# edge
OPTICAL SOLUTIONS

Product Data Sheet

Key Highlights:

- **Type**: 100GBASE SR4 QSFP28
- **Compatibility:** Multi-Vendor MSA Compatible
- **Tx/Rx Wavelength:** 850, 880, 910, 940nm
- **Laser:** VSCEL
- **Fiber Type:** Multi-Mode Fiber (MMF)
- **Connectors:** Double LC
- **Optical Budget:** 3 dB
- **Max. Distance:** 150m
- **Data Rate:** 103.125 Gbps
- **Forward Error Correction:** Supported
- **DDM/DOM:** Supported
- **Power Consumption:** ≤3.5W
- **Temperature:** Standard 0°-70°C

Optical Transceiver : SWDM4-100G-QSFP28-150

Product Description:

Our SWDM4-100G-QSFP28-150 is an Multi-Vendor MSA Compatible 100G QSFP28 (Quad Small Form-Factor Pluggable 28) SWDM4 Transceiver, operating over multi-mode optical fiber (MMF) with four independent optical communication lanes, separated from each other using SWDM4 technology. This 100G SWDM4 module has a minimum guaranteed optical budget of 3 dB, which in most cases is enough to reach 150 m distance using multi-mode cable. However, distance is just indicative parameter calculated for comfort of identification. Eventually we calculate distance taking in account minimal optical budget and average attenuation of optical cabling in industry. SWDM4-100G-QSFP28-150 uses 4×25.78Gbps SWDM4 channels (850, 880, 910, 940nm) VSCEL laser transmitter, where the SWDM4 technology multiplexes all wavelengths together and transmits the signal over MMF. On the other end SWDM4 technology demultiplexes the signal into 4×25.78Gbps PIN receiver lanes. Module supports DDM/DOM optical diagnostics, which provide diagnostic information about the present operating conditions. Additionally module supports FEC (Forward Error Correction) function which will help receiving side detect and correct bit errors and improve the overall quality of the link. It operates in Standard 0°-70°C temperature range and has

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double LC connectors. The SWDM4 QSFP28 supports data rate up to 103.125 Gbps and such applications as 100G Ethernet (103.125 Gbps). The SWDM4-100G-QSFP28-150 optical transceiver is multi-purpose module used in number of different places in today's networking environment. Most popular applications are Internet Service Provider (ISP) Fiber to the Home Aggregation and Backbone, Mobile Operator Core Networks and Mobile Backhaul and Data Center networking site interconnections.

Transceiver is CE/RoHS certified and it is Compliant with product safety standards. SWDM4-100G-QSFP28-150 Transceiver is fully compliant to QSFP28 Multi Source Agreement (MSA), SWDM MSA, IEEE802.3bm CAUI-4 and SFF-8636 standard. Consequently compliance to above standards guarantees that module is compatible and works with majority of networking equipment, where is not implemented special algorithm for protection against third party modules. However – our technical team has accumulated deep expertise in custom-encoded firmware's for SWDM4-100G-QSFP28-150 transceiver in order to make it work in almost any brand equipment. We will be glad to know your requirements – Contact us.

Product Specification:

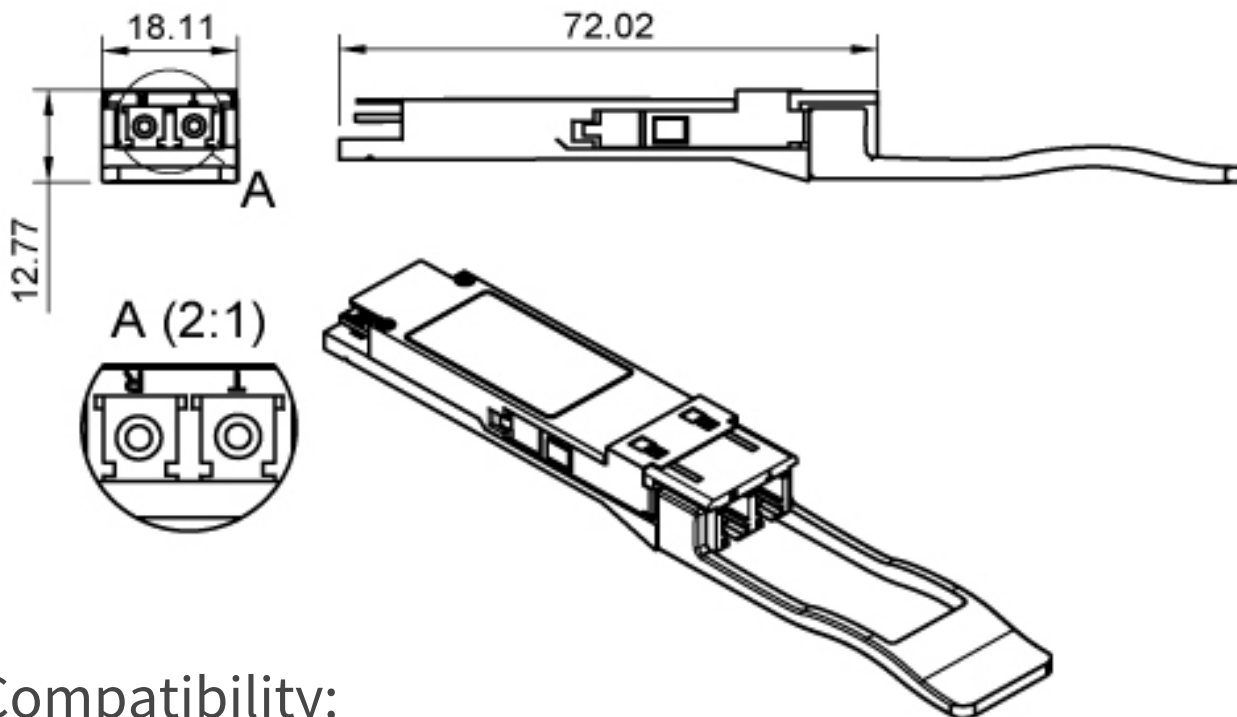| General parameter	Value
Media Type:	Multi-Mode Fiber (MMF)
Connectors:	Double LC
TX Wavelength:	850/ 880/ 910/ 940nm
RX Wavelength:	850/ 880/ 910/ 940nm
Minimum Optical Budget:	3 dB
Maximum Distance:	150m
Supported Data Rate:	103.125 Gbps
Supported Applications:	100G Ethernet (103.125Gbps)
Digital Diagnostic Monitoring (DDM):	Supported
Forward Error Correction (FEC):	Supported
Operating Temperature Range:	Standard 0°- 70°C
Storage Temperature Range:	- 40° to 85°C
Relative Humidity (Non-Condensation):	5 to 95%

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General parameter	Value
Power Consumption:	≤3.5W
Power Supply Voltage Typical:	+ 3.3V
Power Supply Voltage Range:	-3.135 to 3.465V
Compliance:	IEEE802.3bm CAUI-4, SWDM MSA, CE, QSFP28 MSA, RoHS, SFF-8636

Transmitter Parameters:	Value
Transmitter Type:	4xVSCEL Laser
Tx Wavelength Bandwidth:	850-940 nm
Average Launch Power, Each Lane (Max):	-7.5 dBm
Average Launch Power, Each Lane (Min):	3 dBm
Extinction Ratio (Min):	2 dB

Receiver Parameters:	Value
Receiver Type:	PIN Photodiode Array
Rx Wavelength Bandwidth:	850-940 nm
Average Receive Power Each Lane (Min):	-9.4 dBm
Average Receive Power Each Lane (Max):	3.4 dBm
Damage Threshold Each Lane:	4.4 dBm

Product Data Sheet

Mechanical Drawing

Compatibility:

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

MS - General MSA
AD - ADVA
AE - Advantech
AL - Alcatel (Nokia)
AT - Allied Telesis
AR - Arista
AS - Arris
AV - Avaya
BC - Barracuda
BR - Broadcom
QL - Cavium (Qlogic)
CR - Ceragon
CP - Checkpoint
CH - Chelsio
CN - Ciena
CI - Cisco
LI - Cisco (Linksys)
CE - Comnet
CO - Coriant
DH - Dahua
DC - DCN
DL - Dell & Force10
DK - D-Link

DZ - DZS(Dasan-Zhone)
EI - ECI
EC - EdgeCore
EW - EdgeWare
EL - Eltex
EM - EMC2
EN - Enterasys
ER - Ericsson
EF - EXFO
EX - Extreme Networks
F5 - F5 Networks
FI - Finisar
FO - Fortinet
FU - Fujitsu
H3 - H3C
HI - Hirschmann
HU - Huawei
IB - IBM
IF - Infinera
IN - Intel
IX - Ixia
JU - Juniper Networks
KM - KeyMile

KY - KyLand
LN - Lenovo
ML - Mellanox
ME - Meraki (Cisco)
MT - MikroTik
MO - Moxa
MR - MRV
NC - NEC
NG - Netgear
NK - Nokia
NT - Nortel
NS - NSN
OR - Oracle
PA - Palo Alto Network
PL - Planet
QC - QCT(Quanta)
QN - QNAP
RD - RAD
RW - RadWare
RC - Raisecom
RK - Ruckus
RU - Ruijie Networks
SG - Samsung

SV - Sandvine
SC - Silicom
SF - SolarFlare
SW - Sonicwall
SM - Supermicro
SY - Synology
TC - Telco Systems
TP - TP-LINK
TN - Trendnet
UN - Ubiquiti Networks
VX - VeEx
WG - WatchGuard
WS - Waystream
WT - Westermo
ZT - ZTE
ZX - Zyxel
HP - HP
AG - Avago
OC - Oclaro
EU - Emulex
TM - Transmode
AU - HP Aruba
XX - Other

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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. Warranty does not cover damage caused by improper deployment, misuse and accidents.