

## Key Highlights:

- **Type:** 100GBASE-LR4 RX Only QSFP28
- **Compatibility:** Multi-Vendor MSA Compatible
- **Tx/Rx Wavelength:** Rx Only: 1295.56, 1300.05, 1304.58, 1309.14 nm
- **Laser:** Rx only: PIN ROSA (without TOSA)
- **Fiber Type:** Single-Mode Fiber (SMF)
- **Connectors:** Single LC
- **Average Receiver Sensitivity (Min) Each Lane:** -10.6 dBm
- **Max. Distance:** 10km
- **Data Rate:** 103.125-112.2 Gbps
- **DDM/DOM:** Supported
- **Power Consumption:** ≤1.5W
- **Temperature:** Standard 0° - 70°C



## Optical Transceiver : 100G-QSFP28-10RX

### Product Description:

100G-QSFP28-10RX is Multi-Vendor MSA Compatible 100GBASE-LR4 Rx Only QSFP28 (Quad Small Form-Factor Pluggable 28) Transceiver. As global online traffic is asymmetrical - especially this statement is valid nowadays when biggest share of global traffic is video streaming, there is much more downlink traffic than uplink. To address this challenge and help engineers design networks more cost efficiently 100GBASE-LR4 Rx Only comes in play. 100GBASE-LR4 Rx Only doesn't have 4x25Gb/s TOSA transmitters, it only has 4x28Gb/s PIN ROSA receivers comparing to classical 100GBASE-LR4 module which has both components - 4x28Gb/s TOSA transmitters and 4x28Gb/s PIN ROSA receivers. With help of that 100GBASE-LR4 Rx Only becomes cost efficient alternative comparing to classical 100GBASE-LR4 and can be used in network scenario in combination with 100GBASE-LR4 to make most optimal 100G connections according to real requirements for downlink and uplink in your network. Module operates over one single-mode optical fiber where it receives four independent optical communication lanes, separated from each other using LAN WDM technology.



Module has guaranteed average receiver sensitivity for each lane: -10.6 dBm, which in most cases is enough to receive signal from 10 km distance using single-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. Module support DDM/DOM optical diagnostics, which provide diagnostic information about the present operating conditions. 100G-QSFP28-10RX operates in Standard 0°-70°C temperature range and has single LC connector. 100GBASE-LR4 Rx Only QSFP28 support up to 103.125-112.2 Gbps data rate and such applications as 100G Ethernet (103.125Gbps), Optical Transport Network OTU4 4I1-9D1F (112 Gbps) and 128G Fiber Channel (112.2 Gbps). 100G-QSFP28-10RX 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), Mobile Operator and Data Center Backbone and Core networks to address traffic asymmetry challenge, and as well can be used in networking scenarios where Deep Packet Inspection (DPI) is performed.

Transceiver is CE/RoHS certified and it is Compliant with product safety standards. 100G-QSFP28-10RX Transceiver is fully compliant to QSFP28 Multi Source Agreement (MSA), IEEE 802.3ba 100GBASE-LR4 and IEEE 802.3bm, Optical Transport Network OTU4 4I1-9D1F and 128G Generation 6 Fiber Channel standards. 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 100GBASE-LR4 Rx Only QSFP28 transceiver in order to make it work in almost any brand equipment. We will be glad to know your requirements.

## Product Specification:

General parameter	Value
Media Type:	Single-Mode Fiber (SMF)
Connectors:	Single LC
RX Wavelength:	1295.56, 1300.05, 1304.58, 1309.14 nm
Average Receiver Sensitivity (Min) Each Lane:	- 10.6 dBm
Maximum Distance:	10 km
Supported Data Rate:	103.125 - 112.2 Gbps
Data Rate, each Lane up to:	28.05 Gbps
Supported Applications:	100G Ethernet (103.125Gbps), OTU4 4I1-9D1F (112 Gbps), 128GFC (112.2 Gbps)
Digital Diagnostic Monitoring (DDM):	Supported
Optical Clock And Data Recovery (CDR):	Supported

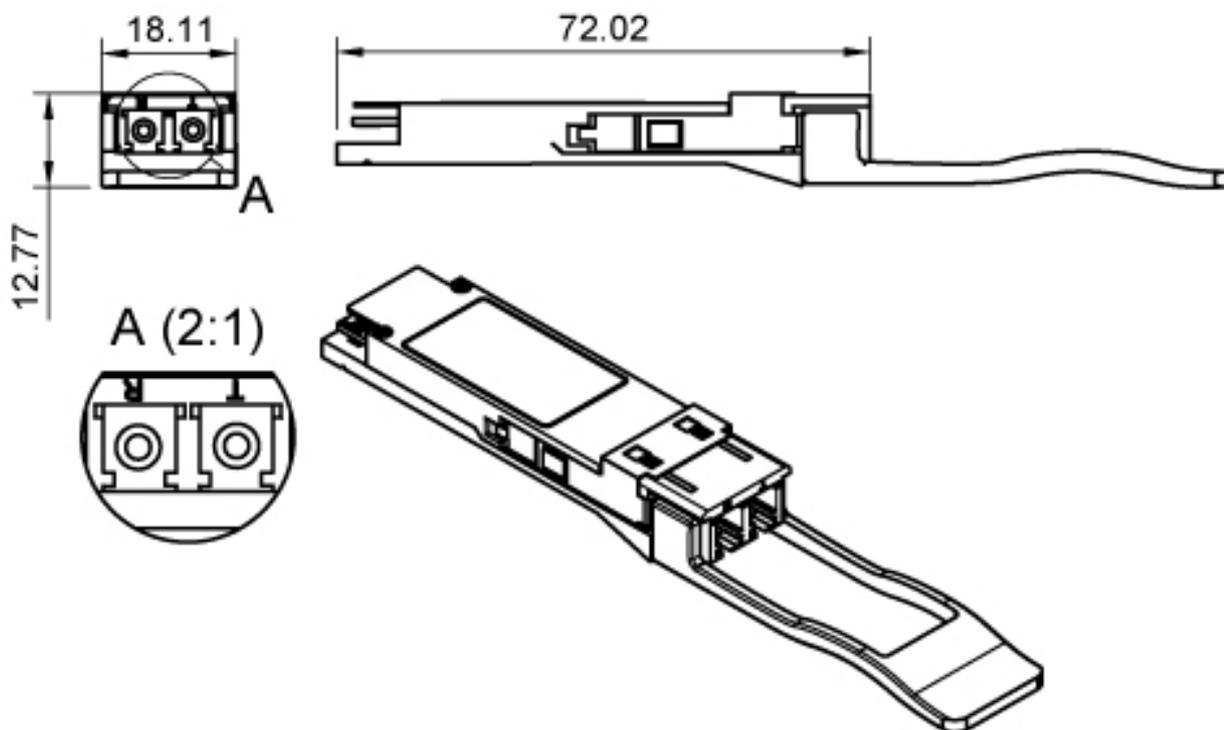


General parameter	Value
Operating Temperature Range:	Standard 0°-70°C
Storage Temperature Range:	- 40° to 85°C
Relative Humidity (Non-Condensation):	0 to 85%
Power Consumption:	≤ 1.5W
Power Supply Voltage Typical:	+ 3.3V
Power Supply Voltage Range:	- 3.135 to 3.465V
Chipset:	Macom, Sumitomo, Samtech, Oclaro, Avago, II-IV
Compliance:	QSFP28 MSA, IEEE 802.3ba 100GBASE-LR4, OTN OTU4 4 1-9D1F, 128GFC Gen 6, SFF-8636, SFF-8665, CE, RoHS-6, Class 1 FDA, IEC60825-1 Laser Safety Compliant

Receiver Parameters:	Value
Receiver Type:	PIN ROSA
Rx Wavelength Bandwidth:	4 LAN WDM Separated 1310 nm Lanes (15.66 nm 1294.53 – 1310.19nm) (L0 Tx center 1295.56nm, L1 Tx center 1300.05nm, L2 Tx center 1304.58nm, L3 Tx center 1309.14nm)
Average Receive Power (Min):	- 10.6 dBm
Average Receive Power (Max):	4.5 dBm
Receiver Overload:	5.5 dBm
Receiver Reflectance (Max) Each Lane:	-26 dB
Receive Power OMA (Max) Each Lane:	4.5 dBm
Receiver Sensitivity OMA (Max) Each Lane:	-8.6 dBm@100GE / 8.4 dBm@OTU4
Difference in Receive Power between any Two Lanes OMA:	5.5 dB
Stressed Receiver Sensitivity OMA (Max) Each Lane:	- 6.8 dBm
LOS Assert (Min):	-18 dBm
LOS De-assert (Max):	- 15 dBm
LOS Hysteresis (Min):	0.5 dB



## Mechanical Dimensions:



## 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  
**AD** - ADVA  
**AL** - Alcatel-Lucent  
**AR** - Arista  
**AV** - Avaya  
**BR** - Brocade  
**CN** - Ciena  
**CI** - Cisco  
**DL** - Dell & Force10  
**DK** - D-Link  
**EM** - EMC2  
**ET** - Enterasys

**ER** - Ericsson  
**EX** - Extreme Networks  
**F5** - F5 Networks  
**FO** - Fortinet  
**FU** - Fujitsu  
**H3** - H3C  
**HI** - Hirschmann  
**HP\*** - HP Networking  
**HS\*** - HP Storage  
**HU** - Huawei  
**IB** - IBM  
**IF** - Infinera

**IN** - Intel  
**JU** - Juniper Networks  
**LI** - Linksys  
**ML** - Mellanox  
**ME** - Meraki (Cisco)  
**MT** - MikroTik  
**MO** - Moxa  
**MR** - MRV  
**NG** - Netgear  
**NS** - NSN  
**PA** - Palo Alto Network  
**QL** - Qlogic

**RD** - RAD  
**RU** - Ruijie Networks  
**SM** - Supermicro  
**SY** - Synology  
**TC** - Telco Systems  
**TP** - TP-LINK  
**TN** - Trendnet  
**WG** - WatchGuard  
**ZT** - ZTE  
**XX** - Other



## 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.

