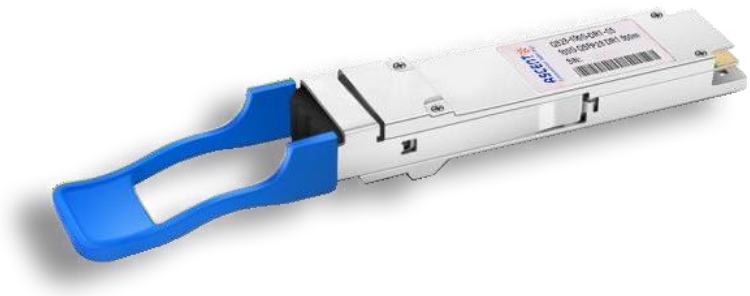
QSFP28 100G DR Single Lambda Transceiver



QSFP Series

Ascent's QSFP28 100G DR Single Lambda Ethernet module is a transceiver module designed for 500m optical communication applications, and it is compliant with IEEE 802.3cu 100GBASE-DR standard.

QS28-100G-DR1-05 can be used in Data Centers, High- speed interconnects within and between switches, routers and transport equipment, Server-Server Clusters, Super-computing interconnections and other network applications.

This module incorporates one channel optical signal, on 1310nm center wavelength. The transmitter path incorporates an EML Driver integrated in the DSP and a cooled EML together. On the receiver path, the input optical signal is coupled to a Pin photodiode detector. can convert 4-channel 25.78125Gbit/s electrical data to 1-channel 106.25Gbit/s optical signals. It has been designed to meet the harshest external operating conditions including temperature, humidity and EMI interference. The module offers very high functionality and feature integration, accessible via a two-wire serial interface.

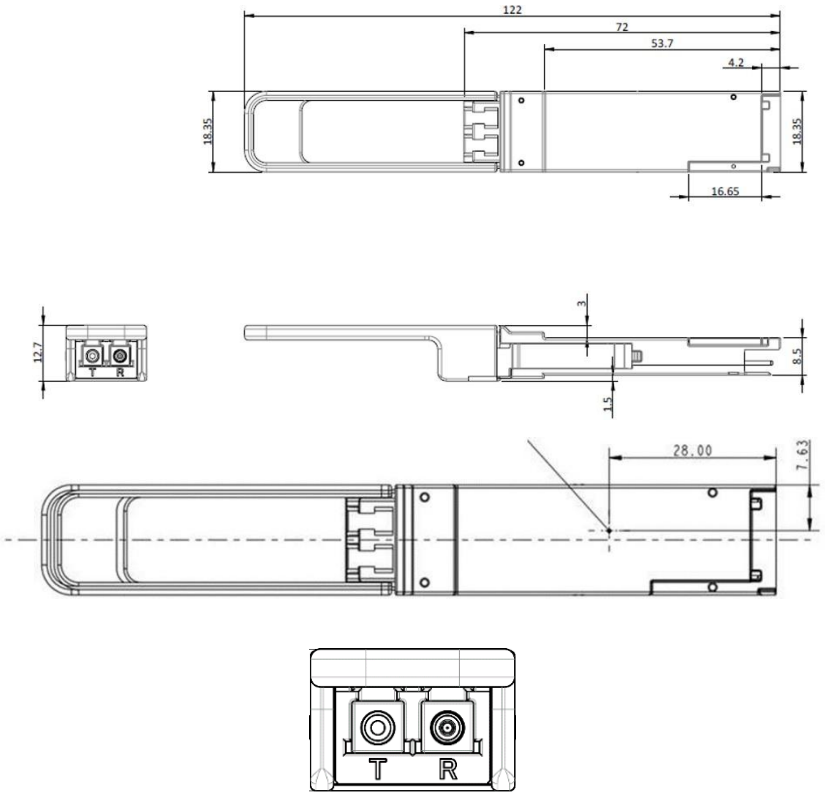
Key Features

- IEEE 100GBASE-DR compliant
- 100GE Single Protocol (103.125 Gb/s)
- CAUI-4 compliant - 4x 25.78125 Gb/s
- 100GAUI-4 compliant – 4x 26.5625 Gb/s
- RS-FEC(544,514) FEC coder/decoder function
- < 3.5 W MAX
- 0 to 70°C
- Single cooled 100Gb/s 1310nm EML
- Single PIN PD + low-power TIA
- SFF-8636 management interface

Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Operating Case Temperature	T_C	0	25	70	°C	
Power Supply Voltage	V_{cc}	3.135	3.3	3.465	V	
Power Supply Current		-	-	1010.1	mA	Steady state
Maximum Power Consumption		-	-	3.5	W	Target
PAM4 Signaling Rate		53.125 ± 100 ppm			GBd	
Lane Wavelengths		1304.5 - 1317.5			nm	
Average Launch Power		-2.9		4	dBm	
Average Launch Power of OFF Transmitter				-15	dBm	
Damage Threshold	5				dBm	
Average Receive Power		-5.9		4	dBm	
Receive Power (OMAouter)				4.2	dBm	
Receiver Sensitivity (OMAouter)				$-3.9, SECQ-5.$	dBm	
Differential Pk-Pk Input Voltage Tolerance		900	-	-	mV	at TP1a
Differential Output Voltage		-	-	900	mV	

Outline Diagram



Ordering Information

Product Name	Product Description
Q28-100G-DR1-05	QSFP28 Plug-in, 100GBASE-DR, Single Lambda 1310nm, SMF 500m Optical Transceiver, LC, DOM

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