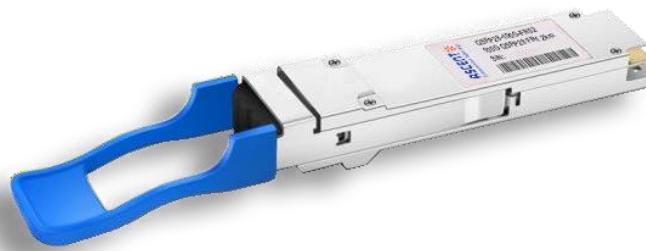


# 100G QSFP28 FR 2km Transceiver



## QSFP28 Series

ASCENT's QSFP28 FR 100Gb/s transceiver is a compact, high-performance single-lambda optical module designed for 2 km transmission over single-mode fiber. Compliant with IEEE 100GBASE-FR, it delivers a reliable 100G Ethernet link in a QSFP28 form factor, making it ideal for high-density data center and enterprise network deployments.

Leveraging PAM4 modulation and integrated DSP technology, the module converts four high-speed electrical lanes into a single 1310 nm optical wavelength, enabling efficient, cost-optimized short-reach connectivity. A cooled EML laser on the transmit side and a PIN photodiode receiver ensure stable signal performance and excellent link margin, while RS-FEC support enhances transmission robustness.

Designed for operational efficiency, the product offers low power consumption (<3.5 W) and supports standard digital diagnostic monitoring (DDM) for real-time performance visibility. With its proven reliability and compact footprint, it is well suited for switch-to-switch, router interconnect, and 100G data center networking applications.

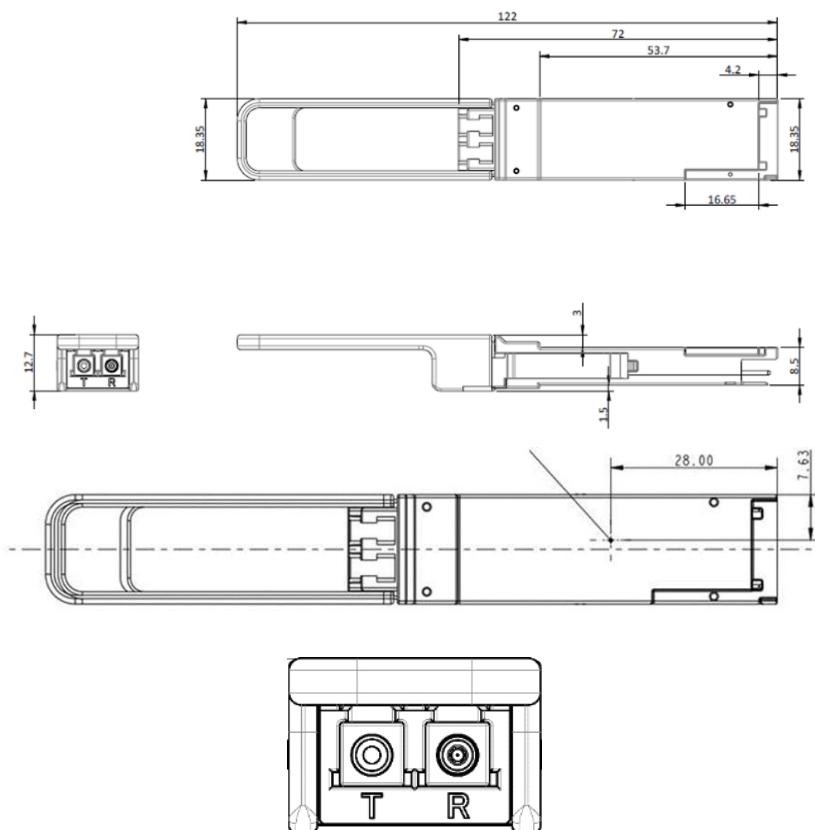
## Key Features

- IEEE 100GBASE-FR compliant
- 100GE Single Protocol (103.125Gb/s)
- CAUI-4 compliant – 4 x 25.78Gb/s
- 100GAUI-4 compliant – 4 x 26.562Gb/s
- RS-FEC (544,514) FEC coder/decoder function
- Power Consumption < 3.5 W Max
- Operating case temperature: 0 °C 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
Power Supply Voltage	$V_{cc}$	3.135	3.3	3.465	V	
Maximum Power Consumption		-	-	3.5	W	Target
Power Supply Current		--	-	1010.1	mA	Steady state
Operating Case Temperature	$T_c$	0	25	70	°C	
PAM4 Signaling Rate		$53.125 \pm 100$ ppm		GBd		
Lane Wavelengths		1304.5 to 1317.5		nm		
Average Launch Power	-3.1	4		dBm		
Average Launch Power of OFF Transmitter		-15		dBm		
Damage Threshold	5			dBm		
Average Receive Power	-7.1	4		dBm		
Differential Pk-Pk Input Voltage Tolerance	900	-	-	mV		
Differential Output Voltage	-	-	900	mV		

## Outline Diagram



## Ordering Information

**Product Name**  
QSFP28-100G-FR02

**Product Description**  
QSFP28 Plug-in, 100GBASE-FR, Single Channel 1310nm, SMF 2km Optical Transceiver, LC, DOM



## Ascent Communication Technology Ltd

### AUSTRALIA

140 William Street, Melbourne  
Victoria 3000, AUSTRALIA  
Phone: +61-3-8691 2902

### Hong Kong SAR

Room 1210, 12th Floor, Wing Tuck Commercial Centre  
181 Wing Lok Street, Sheung Wan , Hong Kong SAR  
Phone: +852-2851 4722

### CHINA

Unit 1933, 600 Luban Road  
200023, Shanghai, CHINA  
Phone: +86-21-60232616

### USA

2710 Thomes Ave  
Cheyenne, WY 82001, USA  
Phone: +1 203 350 9822

### EUROPE

Pfarrer-Bensheimer-Strasse 7a  
55129 Mainz, GERMANY  
Phone: +49 (0) 6136 926 3246

### VIETNAM

11th Floor, Hoa Binh Office Tower  
106 Hoang Quoc Viet Street, Nghia Do Ward  
Cau Giay District, Hanoi 10649, VIETNAM  
Phone: +84-24-37955917

**WEB:** [www.ascentcomtec.com](http://www.ascentcomtec.com)

**EMAIL:** [sales@ascentcomtec.com](mailto:sales@ascentcomtec.com)

Specifications and product availability are subject to change without notice.

Copyright © 2026 Ascent Communication Technology Limited. All rights reserved.

Ver. ACT\_QSFP28-100G-FR02\_Overview\_V2a\_Nov\_2020