

400G QSFP112 SR4 50m Transceiver

ET7512-SR4



Edgecore's ET7512-SR4 is designed to transmit and receive serial optical data at a rate of up to 106.25 Gbps (per channel) by PAM4 modulation over multimode fiber. The transceiver is a small-form-factor hot-pluggable module integrated with high-performance VCSELs. The device is compliant with 400G Ethernet specifications and the QSFP-DD MSA.

Product Features

- Up to 106.25 Gbps data rate per channel by PAM4 modulation
- 4 duplex channels transmitters and receivers
- 4 × 100G PAM4 VCSEL
- Single MPO-12 connector receptacle optical interface
- Single +3.3 V power supply
- DDM function implemented
- Hot-pluggable QSFP112 form factor
- Maximum link length of 50 m on MMF fiber
- Low Power Dissipation: <8.5 W
- International Class 1 laser safety certified
- Operating Temperature Range: 25°C ~ +70°C
- Compliant with RoHS6.0

Applications

- 400GBASE-VSR4 Ethernet
- Switch and router connections
- Data centers
- Other 400G interconnect requirements

Ordering Information

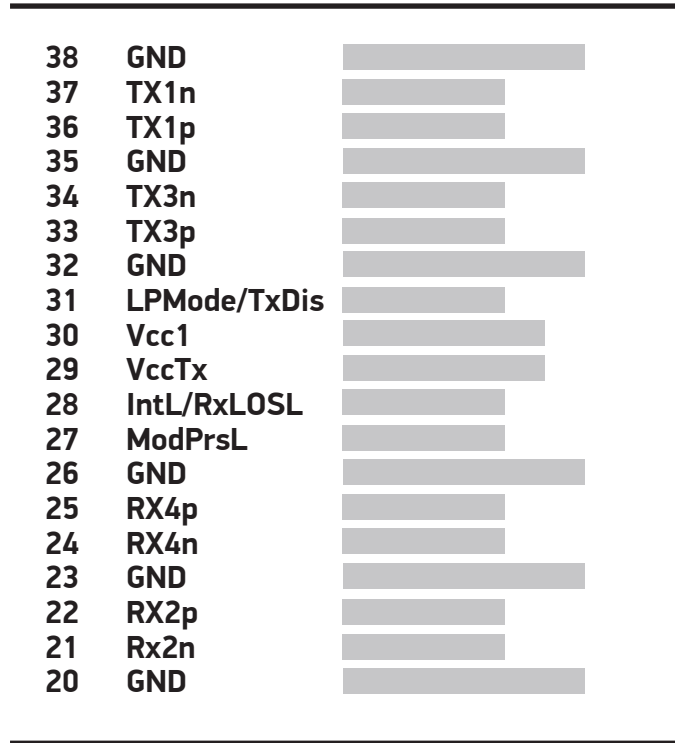
Part Number	Package	VCSEL Wavelength	Output Power	Receiver	Sensitivity (OMA)	Reach	Case Temp.	DDM	RoHS
ET7512-SR4	QSFP112	840~870 nm	-2.9~4 dBm	PD	<-4.4 dB @OMA	50 m	0°C ~ 70°C	Available	Compliant

Pin Description

Pin	Name	Function/Description	Plug Sequence	Notes
1	GND	Transmitter Ground (Common with Receiver Ground)	1	1
2	Tx2n	Transmitter Inverted Data Input	3	
3	Tx2p	Transmitter Non-Inverted Data Input	3	
4	GND	Transmitter Ground (Common with Receiver Ground)	1	1
5	Tx4n	Transmitter Inverted Data Input	3	
6	Tx4p	Transmitter Non-Inverted Data Input	3	
7	GND	Transmitter Ground (Common with Receiver Ground)	1	1
8	ModSelL	Module Select	3	
9	ResetL	Module Reset	3	
10	VccRx	+3.3V Power Supply Receiver	2	3
11	SCL	2-wire Serial Interface Clock	3	
12	SDA	2-wire Serial Interface Data	3	
13	GND	Transmitter Ground (Common with Receiver Ground)	1	1
14	Rx3p	Receiver Non-Inverted Data Output	3	
15	Rx3n	Receiver Inverted Data Output	3	
16	GND	Transmitter Ground (Common with Receiver Ground)	1	1
17	Rx1p	Receiver Non-Inverted Data Output	3	
18	Rx1n	Receiver Inverted Data Output	3	
19	GND	Transmitter Ground (Common with Receiver Ground)	1	1
20	GND	Transmitter Ground (Common with Receiver Ground)	1	1
21	Rx2n	Receiver Inverted Data Output	3	
22	Rx2p	Receiver Non-Inverted Data Output	3	
23	GND	Transmitter Ground (Common with Receiver Ground)	1	1
24	Rx4n	Receiver Inverted Data Output	3	
25	Rx4p	Receiver Non-Inverted Data Output	3	
26	GND	Transmitter Ground (Common with Receiver Ground)	1	1
27	ModPrsL	Module Present	3	
28	IntL/RxLOS	Interrupt	3	2
29	VccTx	+3.3 V Power Supply Transmitter	2	3
30	Vcc1	+3.3 V Power Supply	2	3
31	LPMoDe/TxDis	Low Power Mode	3	
32	GND	Transmitter Ground (Common with Receiver Ground)	1	1
33	Tx3p	Transmitter Non-Inverted Data Input	3	
34	Tx3n	Transmitter Inverted Data Input	3	
35	GND	Transmitter Ground (Common with Receiver Ground)	1	1
36	Tx1p	Transmitter Non-Inverted Data Input	3	
37	Tx1n	Transmitter Inverted Data Input	3	
38	GND	Transmitter Ground (Common with Receiver Ground)	1	1

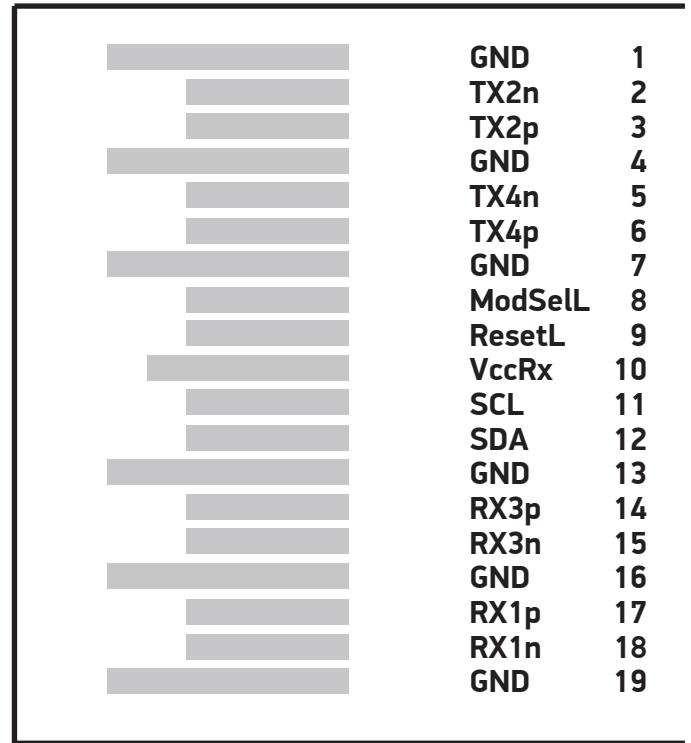
- Notes:
1. QSFP112 uses common ground (GND) for all signals and supply (power). All are common within the QSFP module and all module voltages are referenced to this potential unless otherwise noted. Connect these directly to the host board signal-common ground plane. Each connector GND contact is rated for a maximum current of 500 mA.
 2. This is an open collector/drain output that on the host board requires a 4.7KΩ to 10KΩ pull-up resistor to VccHostup.
 3. VccRx, Vcc1, and VccTx shall be applied concurrently. For power classes 4 and above the module differential loading of input voltage pads must not result in exceeding contact current limits. Each connector Vcc contact is rated for a maximum current of 1500 mA.

Pin Map



Top Side

Module Card Edge



Bottom Side

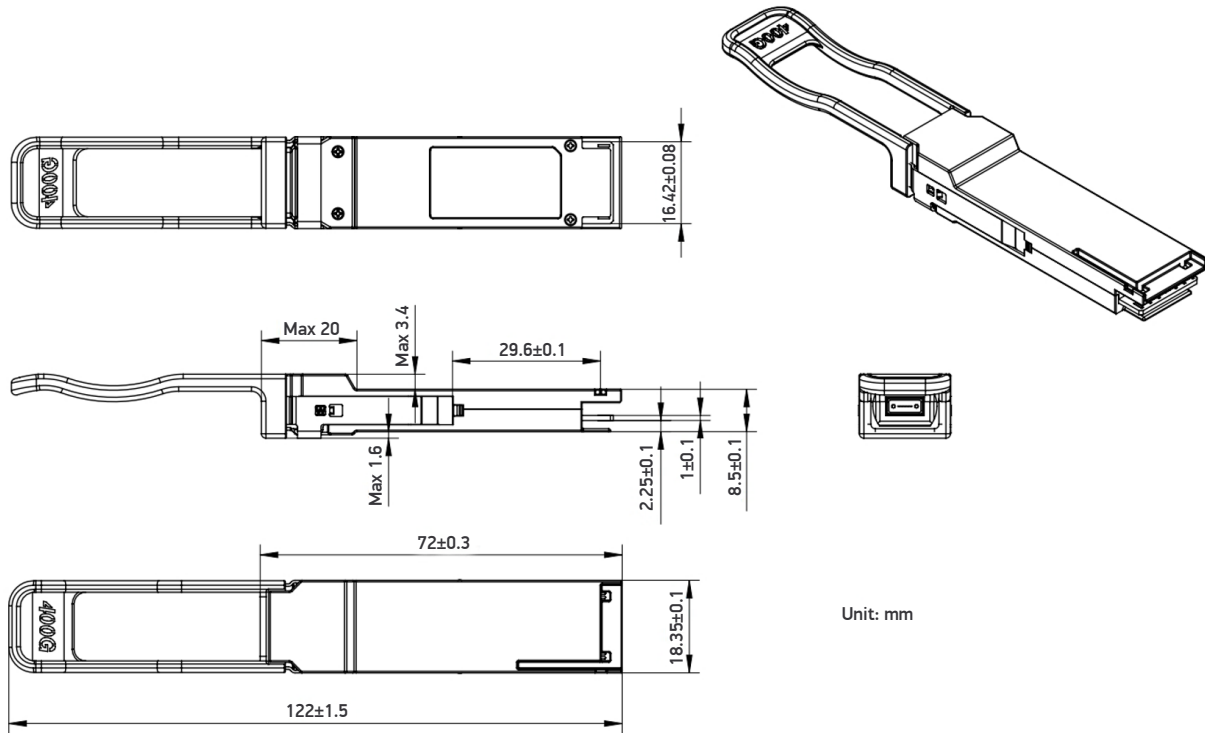
Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Storage Temperature	Ts	-40	85	°C
Relative Humidity	RH	5	95	%
Supply Voltage	Vcc	-0.5	3.6	V

Recommended Operating Conditions

Parameter	Symbol	Minimum	Type	Maximum	Unit
Operating Temperature	Tc	0	40	70	°C
Supply Voltage	Vcc	3.135	3.3	3.465	V
Data Rate			25.78125	-	Gb/s

Mechanical Specifications



Warranty

Please check www.edge-core.com for the warranty terms in your country.

For More Information

To find out more about Edgecore Networks Corporation products and solutions, visit www.edge-core.com.

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