

QSRSMR07C00D – QSFP28 Receive Only

1310nm* / 100 Gigabit Ethernet

*1310nm LAN-WDM 800GHz

For your product safety, please read the following information carefully before any manipulation of the transceiver:



ESD

This transceiver is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 /JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.

The optical ports of the module need to be terminated with an optical connector or with a dust plug in order to avoid contamination.

1. Overview

QSRSMR07C00D is a high performance QSFP28 receive only module for 100 Gigabit Ethernet monitoring. The four receivers are PIN photodiodes which detect (after optical de-multiplexing) 4× 25Gbps optical input signals.

This receive only module is hot pluggable. Always contact Skylane Optics® commercial agents for compatibility with different equipment platforms.

2. Features

- Hot pluggable QSFP28 footprint
- Supports 103.125 Gbps Data Rate
- 4× 25.781Gbps Serial Electrical Interface (CEI-28G-VSR)
- Dual LC Connector
- 4× PIN LAN-WDM Receivers
- Operating temperature range 0°C to 70°C
- Power Dissipation < 1.5W (Power Class 1)
- Single +3.3V Power Supply

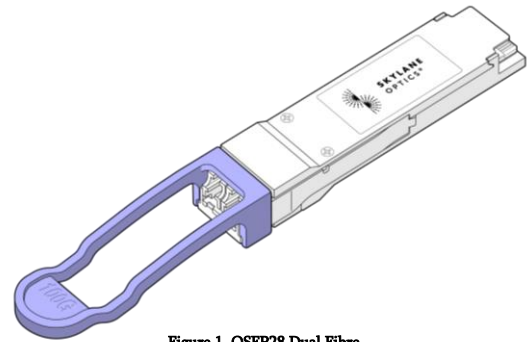


Figure 1. QSFP28 Dual Fibre
(non-binding illustration)

3. Applications

- 100 Gigabit Ethernet Monitoring

4. Optical Interface

P/N	Wavelength	Protocol	Optical Output Power ¹ [dBm]	Stressed Receiver Sensitivity ² (OMA) [dBm]	Optical Receiver Overload ³ [dBm]	Link Length ^{1,4} [km]
QSRSMR07C00D	1310nm LAN-WDM 800GHz	100GBASE	NA	≤ -6.8	4.5	NA

1. EOL over operating temperature range
2. 25.78Gbps, BER_≤ 10⁻¹², PRBS 2³¹-1, each lane
3. The optical input to the receiver (each lane) should not exceed this value. Transmitters must never be directly connected to receivers before ensuring that proper optical attenuation is used
4. Cabled optical fibre as per IEEE 802.3-2012

5. Technical Parameters

5.1. Recommended Operating Conditions					
Parameter	Min	Typ	Max	Unit	Notes
Storage temperature	-40		85	°C	
Operating Case Temperature	0		70	°C	
Relative Humidity	5		85	%	Non-Condensing
Power Supply Voltage	3.135	3.3	3.465	V	
Power Supply Current			450	mA	
Power Dissipation			1.5	W	

5.2. Receiver Optical Specifications					
Parameter	Min	Typ	Max	Unit	Notes
Operating Wavelength, Optical Lanes 0 to 3	1294.53	1295.56	1296.59	nm	
	1299.02	1300.05	1301.09		
	1303.54	1304.58	1305.63		
	1308.09	1309.14	1310.19		
Average Receive Power, each Lane	-10.6		4.5	dBm	5
Receiver Sensitivity (OMA), each Lane			-8.6	dBm	6
Stressed Receiver Sensitivity (OMA), each Lane			-6.8	dBm	7
Difference in receive power between any two lanes (OMA)			5.5	dB	

5. Average receive power, each lane (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance
6. Receiver sensitivity (OMA), each lane (max) is informative
7. 25.78Gbps, BER_≤10⁻¹², PRBS 2³¹-1

6. Transceiver Electrical Pad Layout

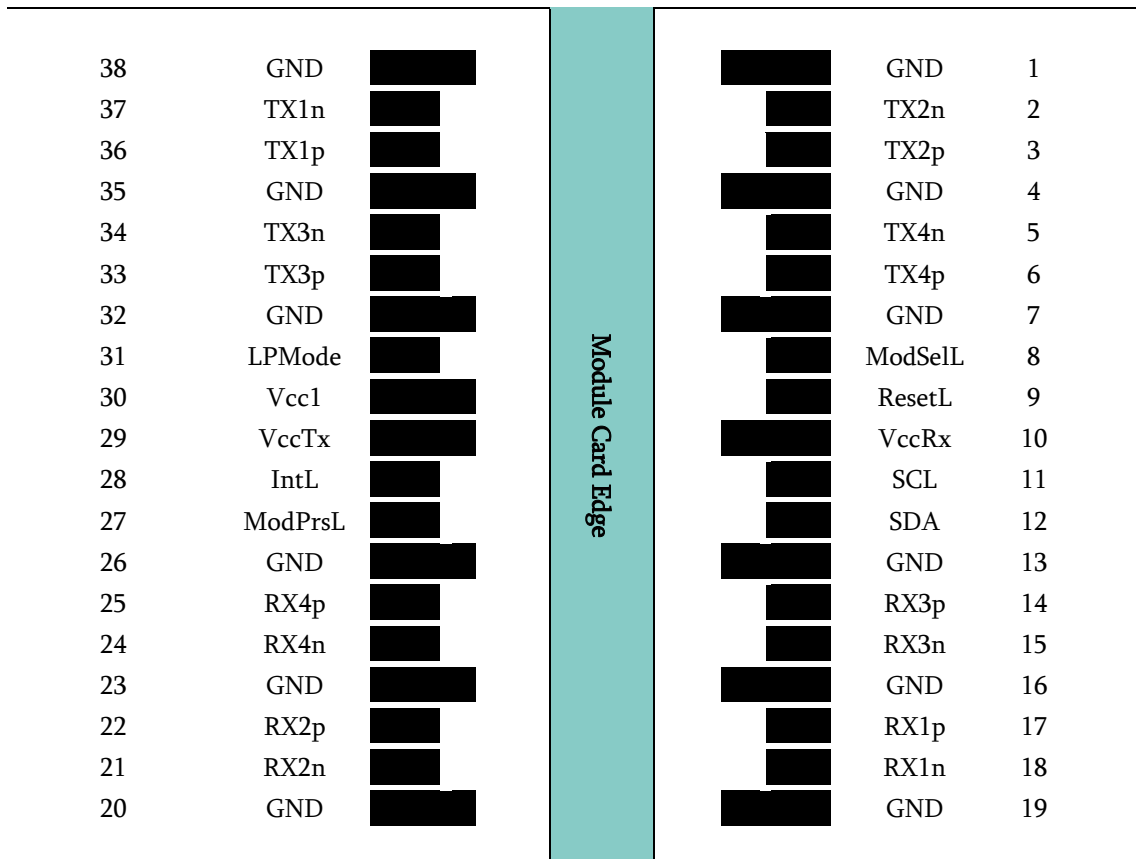


Figure 2. QSFP28 Electrical Pad Layout

7. Module Electrical Pin Definition

Pin Number	Name	Function	Pin Number	Name	Function
1	GND	Ground	20	GND	Ground
2	TX2n	Not Connected	21	RX2n	Receiver Inverted Data Output
3	TX2p		22	RX2p	Receiver Non-Inverted Data Output
4	GND	Ground	23	GND	Ground
5	TX4n	Not Connected	24	RX4n	Receiver Inverted Data Output
6	TX4p		25	RX4p	Receiver Non-Inverted Data Output
7	GND	Ground	26	GND	Ground
8	ModSelL	Module Select	27	ModPrsL	Module Present
9	ResetL	Module Reset	28	IntL	Interrupt
10	VccRx	+3.3V Power Supply Receiver	29	VccTx	+3.3V Power supply transmitter
11	SCL	2-wire serial interface clock	30	Vcc1	+3.3V Power supply
12	SDA	2-wire serial interface data	31	LPMoDe	Low Power Mode
13	GND	Ground	32	GND	Ground
14	RX3p	Receiver Non-Inverted Data Output	33	TX3p	Not Connected
15	RX3n	Receiver Inverted Data Output	34	TX3n	
16	GND	Ground	35	GND	Ground
17	RX1p	Receiver Non-Inverted Data Output	36	TX1p	Not Connected
18	RX1n	Receiver Inverted Data Output	37	TX1n	
19	GND	Ground	38	GND	Ground

8. EEPROM

QSFP+ MSA (SFF-8436)

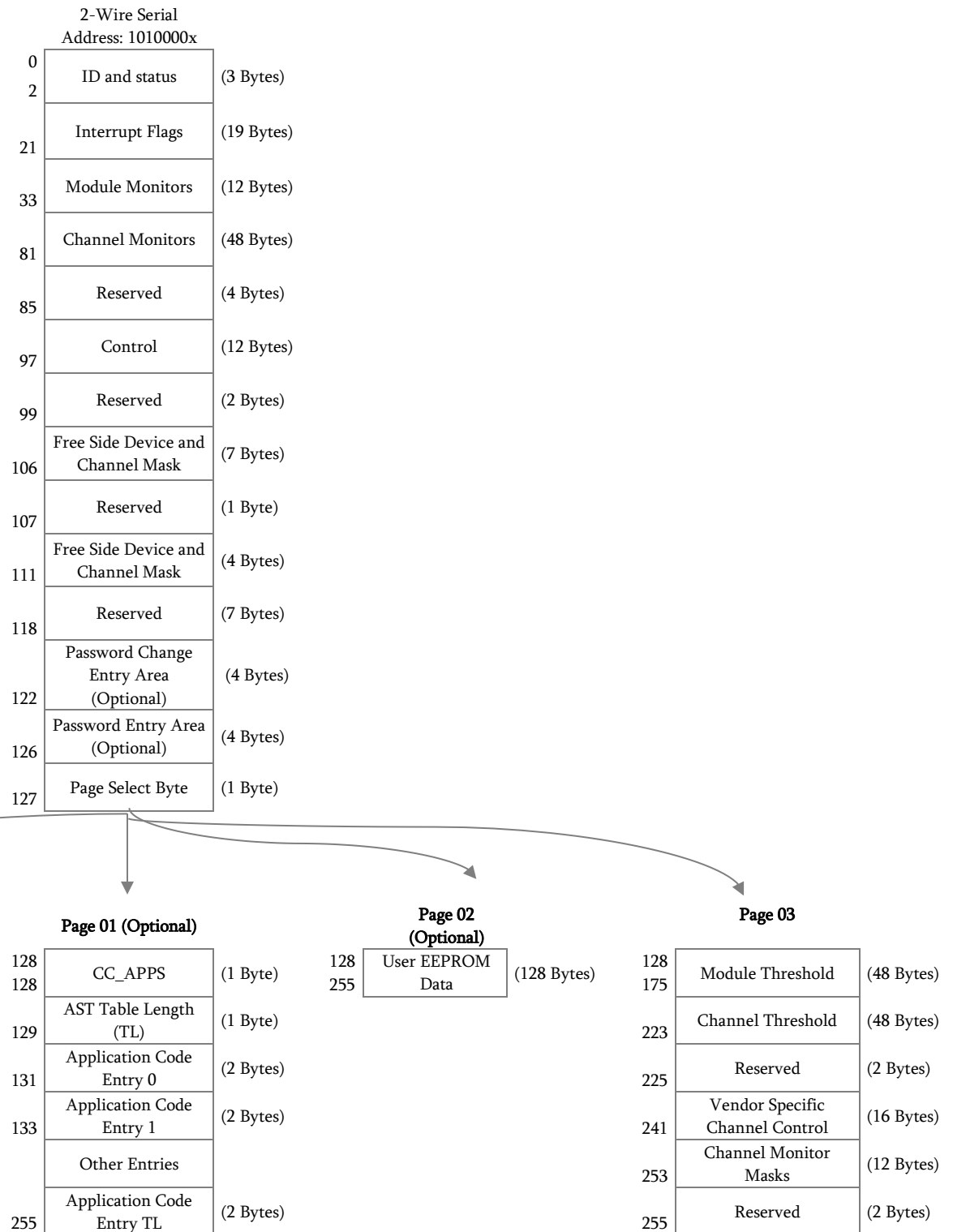


Figure 3. QSFP28 Memory Map

9. Ordering Information

Part Number	Description
QSRSMR07C00D	QSFP28 Receive Only, 1310nm LAN-WDM, Rx (PIN), 100 Gigabit Ethernet, dual LC connector, Pull-Tab, 0°C to 70°C, DDM

10. Document Revision Information

Revision	Description
A	Initial release

Skylane Optics® supplies a broad range of optical transceivers. Our engineers work closely with our customers to find the best solutions for every application. We are committed to provide high quality products and services to our customers.

For questions on this product please contact:
support@skylaneoptics.com

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Quality**

**Reliable
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Smartly**