WTQP200-SR4

QSFP56 200Gb/s SR4 100m DDM Transceiver / PRODUCT FEATURES

Part Number	Data Rate	Temperature
WTQP200-SR4	200G(4x53.125Gb/s)	0~70ºC



1. Product Overview

The 200G QSFP56 SR4 is a 4x 53.125Gbps multi mode fiber, hot pluggable optical transceiver. The module integrates four parallel lanes with baud rate at 26.5625GBd each lane. It can transmit up to 70m on fiber OM3 fiber or 100m on OM4 fiber with FEC.

Features

- Compliant with 200G-SR4 optical specifications
- 4x53.125Gb/s electrical interface (200GAUI-4)
- Reach up to 70m on MMF(OM3)
- Reach up to 100m on MMF(OM4)
- Single +3.3V power supply
- Case temperature range: 0 ~ +70℃
- Maximum power consumption 4.5W
- Single MPO12 connector
- Hot pluggable
- RoHS compliant

Applications

- 200G BASE-SR4 Ethernet links
- Data centers
- Standards
- IEEE 802.3cd
- SFF
- SFF8636

2. Ordering Information

Part No.	Data Rate	Distance	Fiber Type	Temp
WTQP200-SR4	200G(4x53.125Gb/s)	70m OM3 100m OM4 with FEC	MMF	0~70ºC

3. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Power Supply Voltage	Vcc	-0.3	3.6	V
Input Voltage	Vin	-0.3	Vcc+0.3	V
Storage Temperature	Tst	-40	85	ºC
Humidity(non-condensing)	RH	10	85	%
Receiver Damage Threshold, each lane	Pin	5		dBm
Maximum Power Consumption	Pmax		4.5	W

4. Recommended Operating Conditions

Parameter	Symbol	Min	Max	Unit
Case Operating Temperature	Top	0	70	ºC

5. Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Units	Notes
Operating Case Temperature	Tcase	0	-	70	ºC	
Power Supply Voltage	VCC	3.135	3.3	3.465	V	

6. Recommended Operating Conditions

Parameter	Min	Typical	Max	Unit
Transmitter	Transmitter	Transmitter	Transmitter	Transmitter
Signaling Rate, each lane (range)	26.5625±100ppm	26.5625±100ppm	26.5625±100ppm	GBd
Center Wavelength Range	840		860	nm
Modulation Format	PAM4	PAM4	PAM4	PAM4
RMS spectral width			0.6	nm
Average launch power, each lane	-6.5		4	dBm
Outer Optical Modulation Amplitude (OMAouter), each lane	-4.5		3	dBm
Launch power in OMAouter minus TDECQ	-5.9			dBm
Transmitter and dispersion eye closure for PAM4 (TDECQ), each lane			4.5	dB
Extinction ratio, each lane	3			dB
Optical return loss tolerance			12	dB
Receiver	Receiver	Receiver	Receiver	Receiver
Signaling Rate, each lane (range)	26.5625±100ppm	26.5625±100ppm	26.5625±100ppm	GBd
Center Wavelength Range	840		860	nm
Modulation Format	PAM4	PAM4	PAM4	PAM4
Average receive power, each lane	-8.4		4	dBm
Receive power, each lane (OMAouter)			3	dBm
Receiver reflectance			-12	dB
Stressed receiver sensitivity (OMAouter), each lane			-3.4	dBm

Parameter	Min	Typical	Max	Unit
Receiver sensitivity (OMAouter), each lane	Max(-6.5, SECQ-7.9)	Max(-6.5, SECQ-7.9)	Max(-6.5, SECQ-7.9)	dBm
Stressed eye closure for PAM4 (SECQ), lane under test		4.5		dB
SECQ – 10log10(Ceq) (max), lane under test			4.5	dB

7. Recommended Operating Conditions

PIN	Logic	Symbol	Name/Description	Note
1		GND	Ground	
2	CML-I	Tx2n	Transmitter Inverted Data Input	
3	CML-I	Tx2p	Transmitter Non-Inverted Data output	
4		GND	Ground	
5	CML-I	Tx4n	Transmitter Inverted Data Input	
6	CML-I	Tx4p	Transmitter Non-Inverted Data output	
7		GND	Ground	
8	LVTTL-I	ModSelL	Module Select	
9	LVTTL-I	ResetL	Module Reset	
10		VccRx	+ 3.3V Power Supply Receiver	
11	LVCMOS-I/O	SCL	2-Wire Serial Interface Clock	
12	LVCMOS-I/O	SDA	2-Wire Serial Interface Data	
13		GND	Ground	
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	
15	CML-O	Rx3n	Receiver Inverted Data Output	
16		GND	Ground	
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	
18	CML-O	Rx1n	Receiver Inverted Data Output	
19		GND	Ground	
20		GND	Ground	
21	CML-O	Rx2n	Receiver Inverted Data Output	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	
23		GND	Ground	

PIN	Logic	Symbol	Name/Description	Note
24	CML-O	Rx4n	Receiver Inverted Data Output	
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	
26		GND	Ground	
27	LVTTL-O	ModPrsL	Module Present	
28	LVTTL-O	IntL	Interrupt	
29		VccTx	+3.3 V Power Supply transmitter	
30		Vcc1	+3.3 V Power Supply	
31	LVTTL-I	LPMode	Low Power Mode	
32		GND	Ground	
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	
34	CML-I	Tx3n	Transmitter Inverted Data Output	
35		GND	Ground	
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	
37	CML-I	Tx1n	Transmitter Inverted Data Output	
38		GND	Ground	

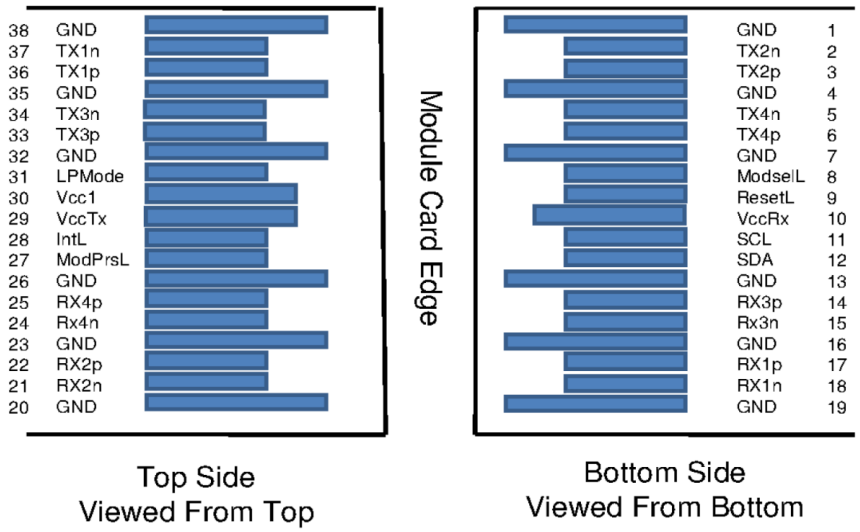
8. Recommended Operating Conditions

Parameter	Accuracy	Unit
Internally measured transceiver temperature	+/-3	deg.C
Internally measured transceiver supply voltage	+/-3	%
Measured Tx bias current	+/-10	%
Measured Tx output power	+/-3	dB
Measured Rx received average optical power	+/-3	dB

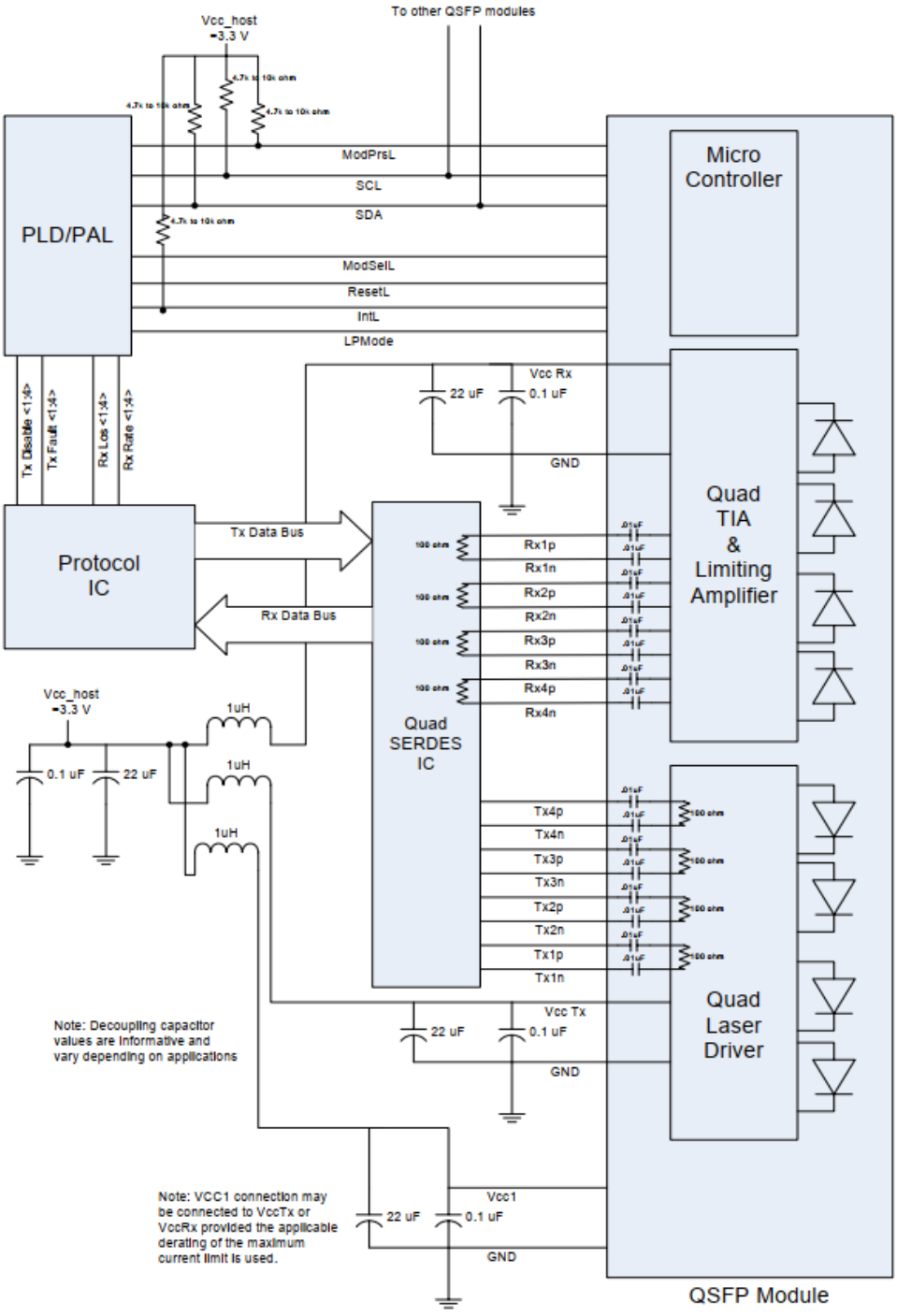
9. Revision History

Version No.	Date	Description
1.0	June 24, 2021	Specification datasheet

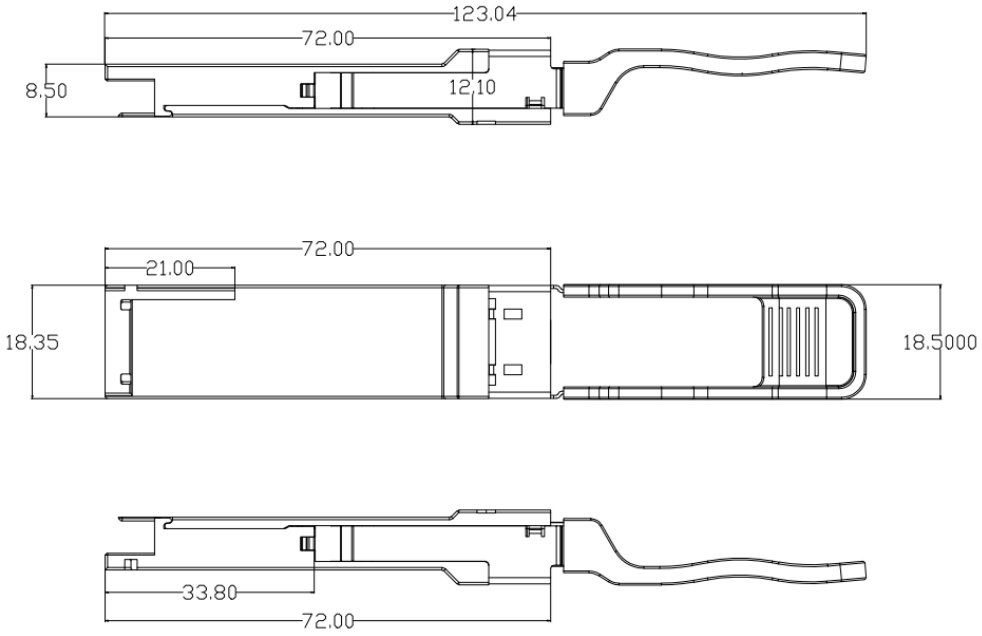
10. Pin Assignment



11. Recommended Interface Circuit



12. Mechanical Specifications



13. Revision History

Version	Date	Description	Prepared by
V6	2025	Unified WincoTek datasheet format	WincoTek
V6.1	2026-10-23	Engineering and format review	WincoTek