200G QSFP56 Active Optical Cable TSQS-852HG-xxxC

Features

- Hot-pluggable QSFP56 form factor
- 4 channels full-duplex transceiver modules
- Transmission data rate up to 53Gbps per channel
- 4 channels 850nm VCSEL array
- 4 channels PIN photo detector array
- Internal CDR circuits on both receiver and transmitter channels
- Support CDR bypass
- Low power consumption < 5.5W per end
- MPO-12 connector receptacle
- Built-in digital diagnostic functions
- Operating case temperature:0°C to +70°C
- RoHS6 compliant (lead free)



Applications

- 200G 100m Ethernet Applications
- Other optical links

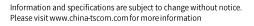
Description

The TSQS-852HG-XXXC is a Four-Channels, Pluggable, Parallel, Fiber-Optic QSFP56 for 200 Gigabit Ethernet Applications. This transceiver is a high performance module for short-range multi-lane data communication and interconnection applications. It integrates four data lanes in each direction. The optical interface uses a 12 fiber MTP (MPO) connector.

Absolute Maximum Ratings

Parameter	Symbol	Min	Typical	Max	Unit
Power Supply Voltage	VCC	-0.5	-	+3.6	V
Storage Temperature	Тс	-40	-	+85	°C
Relative Humidity	RH	15	-	85	%







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Recommended Operating Environment

Parameter	Symbol	Min	Typical	Мах	Unit
Power Supply Voltage	VCC	3.135	3.30	3.45	V
Supply Current	Icc	-	-	1594	mA
Operating Case Temperature	тс	0	25	70	°C

Electrical Characteristics

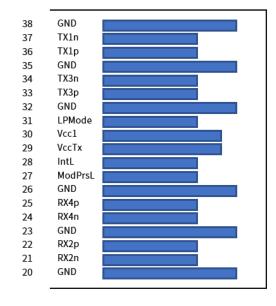
Parameter	Symbol	Min	Typical	Max	Unit
Signaling Speed per Lane	-	:	26.5625±100ppı	m	Gbps
Differential Input Voltage Amplitude ¹	Vin	900	-	-	mV
Differential termination mismatch	-	-	-	10	%
Input Logic Level High	VIH	2.0	-	VCC	V
Input Logic Level Low	VIL	0	-	0.8	V
Output Logic Level High	VOH	VCC-0.5	-	VCC	V
Output Logic Level Low	VOL	0	-	0.4	V

Module Card Edge

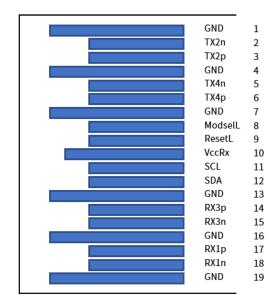
Notes:

[1] Differential input voltage amplitude is measured between TxnP and TxnN.

Electrical Pad Layout







Bottom Side Viewed From Bottom

Pin Definition

Pin	Symbol	Name/Description	
1	GND	Ground	
2	Tx2n	Transmitter Inverted Data Input	
3	Tx2p	Transmitter Non-Inverted Data Input	
4	GND	Ground	
5	Tx4n	Transmitter Inverted Data Input	
6	Tx4p	Transmitter Non-Inverted Data Input	
7	GND	Ground	
8	ModSelL	Module Select	
9	ResetL	Module Reset	
10	Vcc Rx	+3.3 V Power supply receiver	
11	SCL	2-wire serial interface clock	
12	SDA	2-wire serial interface data	
13	GND	Ground	
14	Rx3p	Receiver Non-Inverted Data Output	
15	Rx3n	Receiver Inverted Data Output	
16	GND	Ground	
17	Rx1p	Receiver Non-Inverted Data Output	
18	Rx1n	Receiver Inverted Data Output	
19	GND	Ground	
20	GND	Ground	
21	Rx2n	Receiver Inverted Data Output	
22	Rx2p	Receiver Non-Inverted Data Output	
23	GND	Ground	
24	Rx4n	Receiver Inverted Data Output	
25	Rx4p	Receiver Non-Inverted Data Output	
26	GND	Ground	
27	ModPrsL	Module Present	
28	IntL	Interrupt	
29	VCC Tx	+3.3 V Power supply transmitter	
30	VCC1	+3.3 V Power Supply	
31	LPMode	Low Power Mode	

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32	GND	Ground
33	Тх3р	Transmitter Non-Inverted Data Input
34	Tx3n	Transmitter Inverted Data Input
35	GND	Ground
36	Tx1p	Transmitter Non-Inverted Data Input
37	Tx1n	Transmitter Inverted Data Input
38	GND	Ground

Ordering Information

Part Number	Product Description
TSQS-852HG-XXXC	QSFP56 200G AOC 0°C ~ +70°C

XXX:001~070,1~70 Length in meters on OM3 MMF XXX:001~100,1~100 Length in meters on OM4 MMF

References

- 1. SFF-8665: "QSFP+ 28Gb/s 4X Pluggable Transceiver Solution (QSFP28)", Rev 1.9, June 29, 2015 and associated SFF documents referenced therein: SFF-8661
 - 1) SFF-8679
 - 2) SFF-8662
 - 3) SFF-8663
 - 4) SFF-8672
 - 5) SFF-8472
- 2. Directive 2011/65/EU of the European Parliament and of the Council, "on the restriction of the use of certain hazardous substances in electrical and electronic equipment," July 1, 2011.
- 3. IEEE P802.3bm.

Important Notice

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