

SO-QSFP28-PCUxM

QSFP28, 100GBase, DAC, AWGxx, xm, passive

OVERVIEW

The SO-QSFP28-PCUxM, QSFP to QSFP copper direct-attach 100GBASE-CR4 cables are cost effective I/O solutions for 100 GB Ethernet and OTU4 applications requiring high-performance metrics. The main pros of the QSFP28 copper modules are high port density, configurability and utilization whilst operating within a reduced power budget and at very low cost.

PRODUCT FEATURES

- Supports 103.125Gb/s and 111.8Gb/s bit rates
- Lower power consumption for single module < 0.5W
- 30AWG up to 3 meters distance
- Power supply: +3.3V
- Compatible with SFF-8436
- Temperature range 0 - 70°C
- RoHS6 compliant

APPLICATIONS

- 100G Ethernet links
- OTU4

ORDERING INFORMATION

Part Number	Description
SO-QSFP28-PCU.5M	QSFP, Passive, AWG30, 27.95G per lane, 0.5m
SO-QSFP28-PCU1M	QSFP, Passive, AWG30, 27.95G per lane, 1m
SO-QSFP28-PCU2M	QSFP, Passive, AWG30, 27.95G per lane, 2m
SO-QSFP28-PCU3M	QSFP, Passive, AWG30, 27.95G per lane, 3m

REGULATORY COMPLIANCE

Parameter	Symbol	Min
TUV	R50135086	EN 60950-1:2006+A11+A1+A12+A2
		EN 60825-1:2014
		EN 60825-2:2004+A1+A2
UL	E317337	UL 60950-1
		CSA C22.2 No. 60950-1-07
EMC CE	AE 50285865 0001	EN 55022:2010
		EN 55024:2010
FCC	WTF14F0514417E	47 CFR PART 15 OCT., 2013

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FDA	/	CDRH 1040.10
ROHS	/	2011/65/EU

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min	Max	Unit
Maximum Supply Voltage	Vcc	-0.5	4	V
Storage Temperature	T _s	-40	85	°C

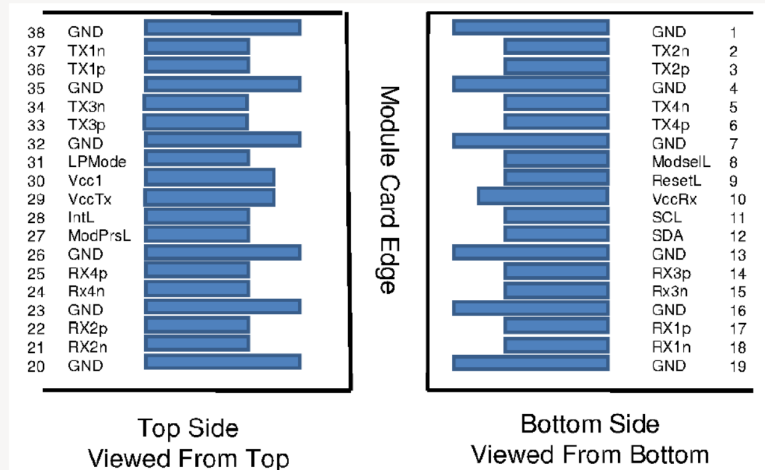
NORMAL OPERATING CONDITIONS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T _c	0		70	°C
Supply Voltage	Vcc	3.135	3.3	3.465	V
Power Consumption (per QSFP28 single module)	P			0.5	W
Data Rate(per channel)				27.95	Gbps

ELECTRICAL CHARACTERISTICS – TRANSMITTER & RECEIVER (EACH LANE)

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter Differential Input Voltage	V _{IN}	500	-	1200	mVpp	
Impedance	Z _{cable}	90	100	110	Ohms	

QSFP28 TRANSCEIVER ELECTRICAL PAD LAYOUT



PIN FUNCTION DEFINITIONS

PIN	Signal Name	Description	PIN	Signal Name	Description
1	GND	Ground (1)	20	GND	Ground (1)
2	Tx2n	Transmitter Inverted Data Input	21	Rx2n	Receiver Inverted Data Output
3	Tx2p	Transmitter Non-Inverted Data Input	22	Rx2p	Receiver Non-Inverted Data Output

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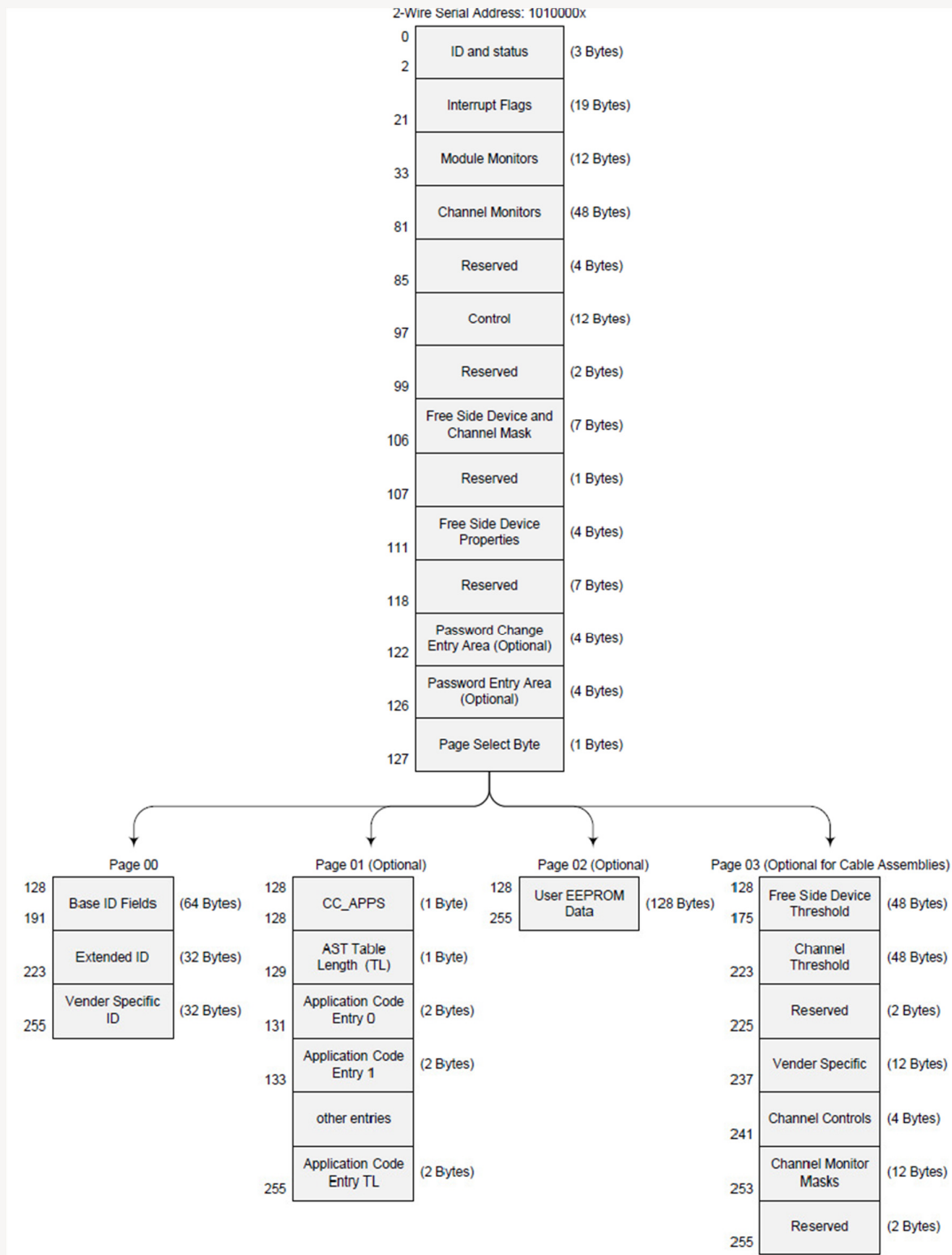
4	GND	Ground (1)	23	GND	Ground (1)
5	Tx4n	Transmitter Inverted Data Input	24	Rx4n	Receiver Inverted Data Output
6	Tx4p	Transmitter Non-Inverted Data Input	25	Rx4p	Receiver Non-Inverted Data Output
7	GND	Ground (1)	26	GND	Ground (1)
8	ModSelL	Module Select	27	ModPrsL	Module Present
9	ResetL	Module Reset	28	IntL	Interrupt
10	VccRx	+3.3V Power Supply Receiver (2)	29	VccTx	+3.3V Power supply transmitter (2)
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 (1)	32	GND	Ground (1)
14	Rx3p	Receiver Non-Inverted Data Output	33	Tx3p	Transmitter Non-Inverted Data Input
15	Rx3n	Receiver Inverted Data Output	34	Tx3n	Transmitter Inverted Data Input
16	GND	Ground (1)	35	GND	Ground (1)
17	Rx1p	Receiver Non-Inverted Data Output	36	Tx1p	Transmitter Non-Inverted Data Input
18	Rx1n	Receiver Inverted Data Output	37	Tx1n	Transmitter Inverted Data Input
19	GND	Ground (1)	38	GND	Ground (1)

Notes:

All Ground (GND) are common within the QSFP+ module and all module voltages are referenced to this potential unless noted otherwise. Connect these directly to the host board signal common ground plane.

VccRx, Vcc1 and VccTx are the receiving and transmission power suppliers and shall be applied concurrently. The connector pins are each rated for a maximum current of 500mA.

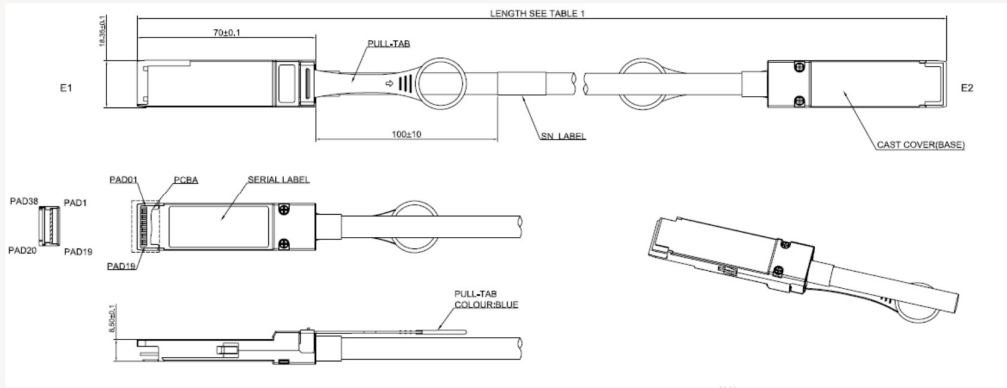
MEMORY MAP



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MECHANICAL SPECIFICATIONS



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