PRODUCT SPECIFICATION

Part No.:	AC-QSFP28-100G-SRBD	
Description:	100G QSFP28 SR4 Transceiver MMF SR-BIDI 850-900nm 100m LC	
Release Date	Rev.	Revision Change Description
2020/10/15	A0	New Release
2023/11/20	A1	Template Update

Features

- QSFP28 module form factor
- 2x53.125Gbps(26.5625GBd) PAM4 parallel optics architecture
- Bandwidth density of 100Gbps bi-directional
- Duplex LC connector
- Maximum link length of 100m over OM4, and 70m over OM3
- Built-in digital diagnostic functions
- Operating case temperature range: 0 to 70℃
- Single 3.3V power supply
- Low power consumption < 4W
- RoHS compliant (lead free)

Application

- 100GBASE-SR-BD applications
- High-speed interconnects within and between switches, routers and transport equipment
- Server-server clusters, super-computing interconnections
- Proprietary backplanes
- Interconnects rack-to-rack, shelf-to-shelf, board-to-board, board-to-optical backplane

Standard

- QSFP28 MSA
- SFF-8636

Add: 2-4# Building, Tongfuyu Industrial Zone, Ai qun Road, Shiyan street, Baoan District, Shen zhen, China.
Tel: +86-755-8891 4745 Fax: +86-755-2946 6959 E-mail: sales@lonte.com.cn www. lonte.com.cn

LONTE 隆特

Specification

Absolute Maximum Ratings				
Parameter	**Symbol**	**Min**	**Max**	**Unit**
Supply Voltage	Vcc	-0.3	3.6	V
Input Voltage	Vin	-0.3	Vcc+0.3	V
Storage Temperature	Ts	-20	85	ºC
Case Operating Temperature	Tc	0	70	ºC
Humidity (non-condensing)	Rh	5	85	%

Recommended Operating Conditions					
Parameter	**Symbol**	**Min**	**Typical**	**Max**	**Unit**
Supply Voltage	Vcc	3.13	3.3	3.47	V
Operating Case temperature	Tc	0	-	70	ºC
Signal Rate per Electrical Channel (4 x 25G)			25.78125		Gbps
Signal Rate per Optical Channel (2 x 50G)			53.125		Gbps
Humidity	Rh	5		85	%
Power Dissipation	Pm			4	W
Fiber Length for OM3				70	m
Fiber Length for OM3				100	m

Electrical Characteristics						
Parameter	**Symbol**	**Min**	**Typical**	**Max**	**Unit**	**Notes**
Differential Input Impedance	Z_{in}	90	100	110	ohm	
Differential Output Impedance	Z_{out}	90	100	110	ohm	
Differential Input Voltage Amplitude1	ΔV_{in}	-	-	1200	mVp-p	
Differential Output Voltage Amplitude2	ΔV_{out}	-	-	1200	mVp-p	

Notes:

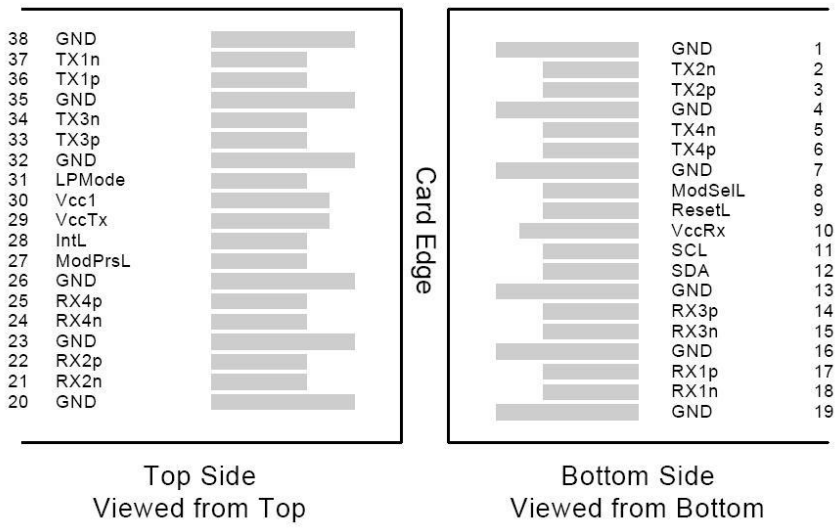
1. Differential input voltage amplitude is measured between TxnP and TxnN.
2. Differential output voltage amplitude is measured between RxnP and RxnN.

Optical Characteristics						
Parameter	**Symbol**	**Min**	**Typical**	**Max**	**Unit**	**Notes**
Transmitter						
Optical Wavelength CH1	λ1	844	850	863	nm	3
Optical Wavelength CH2	λ2	900	910	918	nm	4
Average launch power	Pavg	-6.2		4	dBm	
Optical Modulation Amplitude(OMA outer)	OMA	-4.2		3	dBm	
Transmitter and dispersion eye closure(TDEC)	TDEC			4.5	dB	
Extinction Ratio	ER	3			dB	
Average launch power of OFF transmitter				-30	dBm	
Receiver						
Parameter	**Symbol**	**Min**	**Typical**	**Max**	**Unit**	**Notes**
Optical Wavelength CH1	λ1	844	850	863	nm	
Optical Wavelength CH2	λ2	900	910	918	nm	
Receiver Sensitivity in OMA outer	RXsen			(-6.6,-3.5)	dBm	1
Average receive power	Pin	-8.2		4	dBm	
Receiver Reflectance				-12	dB	
LOS Assert			-11		dBm	
LOS De-Assert			-9		dBm	
LOS Hysteresis		0.5			dB	

Notes:

1. Measured with conformance test signal at TP3 for BER = 2.4E-4 Pre-FECs

Pin Descriptions



Electrical Pin-out Details

Add: 2-4# Building, Tongfuyu Industrial Zone, Ai qun Road, Shiyan street, Baoan District, Shen zhen, China.
Tel: +86-755-8891 4745 Fax: +86-755-2946 6959 E-mail: sales@lonte.com.cn www. lonte.com.cn

Pin	Logic	Symbol	Name/Description
1		GND	Module Ground1
2	CML-I	Tx2-	Transmitter inverted data input
3	CML-I	Tx2+	Transmitter non-inverted data input
4		GND	Module Ground1
5	CML-I	Tx4-	Transmitter inverted data input
6	CML-I	Tx4+	Transmitter non-inverted data input
7		GND	Module Ground1
8	LVTTL-I	MODSEIL	Module Select2
9	LVTTL-I	ResetL	Module Reset2
10		VCCRx	+3.3V Receiver Power Supply
11	LVCMOS-I	SCL	2-wire Serial interface clock2
12	LVCMOS-I/O	SDA	2-wire Serial interface data2
13		GND	Module Ground1
14	CML-O	RX3+	Receiver non-inverted data output
15	CML-O	RX3-	Receiver inverted data output
16		GND	Module Ground1
17	CML-O	RX1+	Receiver non-inverted data output
18	CML-O	RX1-	Receiver inverted data output
19		GND	Module Ground1
20		GND	Module Ground1
21	CML-O	RX2-	Receiver inverted data output
22	CML-O	RX2+	Receiver non-inverted data output
23		GND	Module Ground1
24	CML-O	RX4-	Receiver inverted data output
25	CML-O	RX4+	Receiver non-inverted data output
26		GND	Module Ground1
27	LVTTL-O	ModPrsL	Module Present, internal pulled down to GND
28	LVTTL-O	IntL	Interrupt output, should be pulled up on host board2
29		VCCTx	+3.3V Transmitter Power Supply
30		VCC1	+3.3V Power Supply
31	LVTTL-I	LPMode	Low Power Mode2
32		GND	Module Ground1
33	CML-I	Tx3+	Transmitter non-inverted data input
34	CML-I	Tx3-	Transmitter inverted data input
35		GND	Module Ground1
36	CML-I	Tx1+	Transmitter non-inverted data input
37	CML-I	Tx1-	Transmitter inverted data input
38		GND	Module Ground1

Notes:

1. Module circuit ground is isolated from module chassis ground within the module.
2. Open collector should be pulled up with 4.7K to 10K ohms on host board to a voltage between 3.15V and 3.6V.

Regulatory Compliance

Feature	Standard
Laser Safety	IEC 60825-1:2014 (3rd Edition) IEC 60825-2:2004/AMD2:2010 EN 60825-1-2014 EN 60825-2:2004+A1+A2
Electrical Safety	EN 62368-1: 2014 IEC 62368-1:2014 UL 62368-1:2014
Environmental protection	Directive 2011/65/EU with amendment(EU)2015/863
CE EMC	EN55032：2015 EN55035：2017 EN61000-3-2:2014 EN61000-3-3:2013
FCC	FCC Part 15, Subpart B ANSI C63.4-2014