

QSFP28 100G AOC 850nm

AQ85423-CN-XXX

FEATURES

- Support 100GBASE-SR4/EDR application
- Compliant to QSFP28 Electrical MSA SFF-8636
- Multi rate of up to 25.78125Gbps
- +3.3V single power supply
- Low power consumption
- UL certification cables (optional)
- Operating case temp Commercial: 0°C to +70 °C
- RoHS compliant

APPLICATIONS

- 100GBASE-SR4 at 25.78125Gbps per lane
- InfiniBand QDR, EDR
- Other optical links

ORDERING INFORMATION

Part Number	Form Factor	Data Rate	Media	Distance (m)	Wavelength (nm)	Temperature (°C)
AQ85423-CN-XXX	QSFP28	100G	-	0.5~150	850	0~70

1 . ABSOLUTE MAXIMUM PARAMETERS

Exceeding the limits below may damage the active optical cable permanently.

Parameter	Symbol	Min.	Max.	Unit.
Supply Voltage	Vcc3	-0.5	+3.6	V
Storage Temperature	Ts	-10	+70	°C
Operating Humidity	RH	+5	+85	%

2 . RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Min.	Typ.	Max.	Unit.
Operating Case Temperature	TC	0	-	+70	°C
Power Supply Voltage	Vcc	3.14	3.3	3.47	V
Power Dissipation	Pd	-	-	2.5	W
Bit Rate	BR	10.3125	25.78125	-	Gbps

3 . ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Typical	Max	Unit	Notes	
Transmitter							
Differential Data Input Swing	Vout	200	-	1600	mV		
Output Differential Impedance	ZD	90	100	110	Ω		
ModPrsL	Normal Operation	VOL	0	-	0.4	V	
	Interrupt	VOL	0	-	0.4	V	
IntL	Normal Operation	VoH	2.4	-	VCC	V	
	Module Select	VOL	0	-	0.8	V	
ModSelL	Module Unselect	VOH	2.5	-	VCC	V	
	LPMODE	Low Power Mode	VIL	0	-	0.8	V
Normal Operation		VIH	2.5	-	VCC+0.3	V	
ResetL	Reset	VIL	0	-	0.8	V	
	Normal Operation	VIH	2.5	-	VCC+0.3	V	
Receiver							
Differential Data Output Swing	Vin,P-P	200	-	800	mVPP		

Bit Error Rate	BER			E-12		1
Input Differential Impedance	ZIN	90	100	110	Ω	

Note:

1 PRBS2^31-1@25.78125Gbps

4 . PIN DESCRIPTIONS

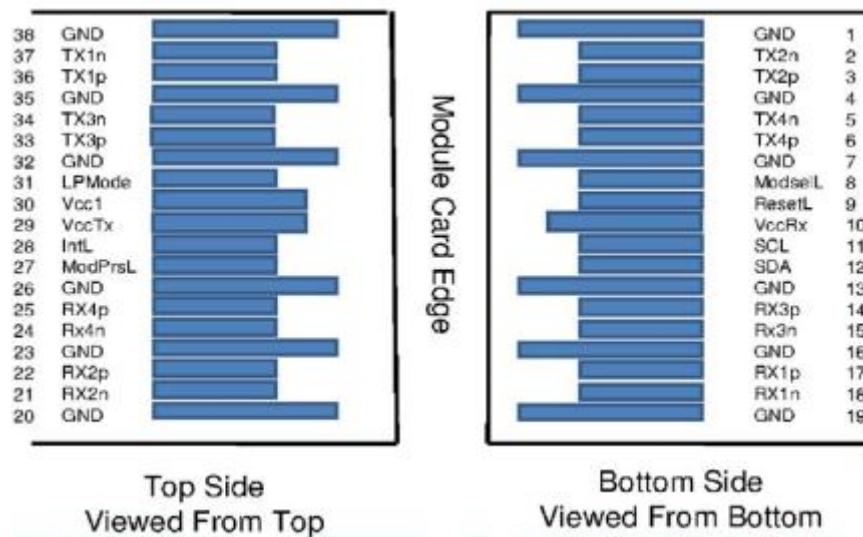
Pin	Symbol	Name/Description	Notes
1	GND	Ground	1
2	Tx2n	Transmitter Inverted Data Input	
3	Tx2p	Transmitter Non-Inverted Data Input	
4	GND	Ground	1
5	Tx4n	Transmitter Inverted Data Input	
6	Tx4p	Transmitter Non-Inverted Data Input	
7	GND	Ground	1
8	ModSelL	Module Select	
9	ResetL	Module Reset	
10	Vcc Rx	+3.3V Power Supply Receiver	
11	SCL	2-wire serial interface clock	
12	SDA	2-wire serial interface data	
13	GND	Ground	1
14	Rx3p	Receiver Non-Inverted Data Output	
15	Rx3n	Receiver Inverted Data Output	
16	GND	Ground	1
17	Rx1p	Receiver Non-Inverted Data Output	
18	Rx1n	Receiver Inverted Data Output	
19	GND	Ground	1
20	GND	Ground	1
21	Rx2n	Receiver Inverted Data Output	
22	Rx2p	Receiver Non-Inverted Data Output	
23	GND	Ground	1
24	Rx4n	Receiver Inverted Data Output	
25	Rx4p	Receiver Non-Inverted Data Output	
26	GND	Ground	1
27	ModPrsL	Module Present	
28	IntL	Interrupt	
29	Vcc Tx	+3.3V Power supply transmitter	
30	Vcc1	+3.3V Power supply	
31	LPMODE	Low Power Mode	
32	GND	Ground	1

33	Tx3p	Transmitter Non-Inverted Data Input	
34	Tx3n	Transmitter Inverted Data Input	
35	GND	Ground	1
36	Tx1p	Transmitter Non-Inverted Data Input	
37	Tx1n	Transmitter Inverted Data Input	
38	GND	Ground	1

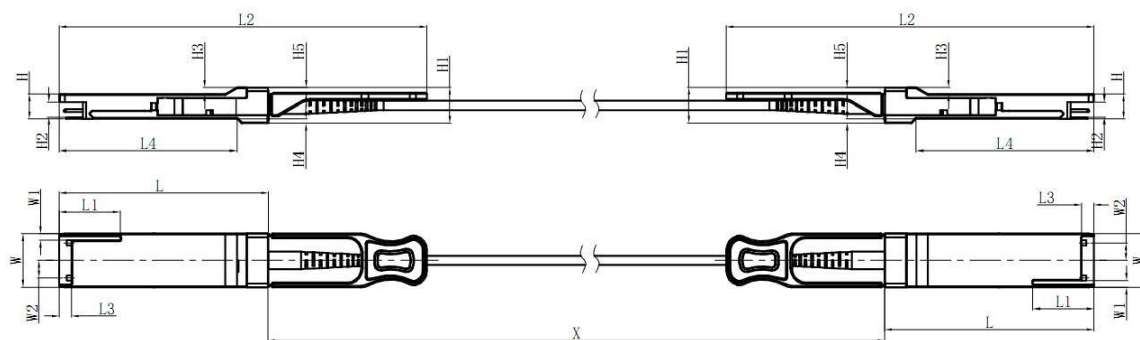
Notes:

1. Circuit ground is internally isolated from chassis ground

5 . PIN DIAGRAM



6 . Mechanical Design Diagram



7 . LABEL DIAGRAM



AQ85423-CN-XXX

QSFP28 100G AOC 850nm

Class 1 Laser
MADE IN CHINA



X.XX.XX.XXX

