

# 200G QSFP56 to 200G QSFP56 AOC LITE (4x 50G PAM4) FYH-200MxxxC

**Features**

- Up to 50Gbps data rate per channel by PAM4 modulation
- Support 200GAUI-4 electrical interface
- Integrated 850nm VCSEL array and PD array
- Single +3.3V power supply
- Case temperature range: 0 ~ +70°C
- Hot-pluggable QSFP form factor
- RoHS complaint



**Applications**

- Data centers and Cloud Networks

**Applications**

- IEEE 802.3cd
- SFF 8679
- CMIS V4.0

**Absolute Maximum Ratings**

Product	Electrical mode	Protocol	Nominal Rate			Specifications		Link
			Aggregate (Gbps)	Electrical Lanes(Gbaud)	ppm	High Speed Electrical	Pre-FEC Max BER	
200G-AOC	4X50	IEEE802.3cd	212.5	26.5625 PAM4	±100	200GAUI-4	2.4E-4	1~35m

Parameter	Symbol	Unit	Min	Max
Case Operating Temperature	Top	°C	0	+70
Storage Temperature Range	Ts	°C	-40	+85
Relative Humidity	RH	%	0	85
Power Supply Voltage	Vcc	V	-0.5	+3.6

**Recommended Operating Conditions**

Parameter	Symbol	Unit	Min	Typ	Max
Operating Case Temperature Range	Tca	oC	0	/	70
Power Supply Voltage	Vcc	V	3.135	3.3	3.465
Bit Rate(Per channel)	BR	Gbps		26.5625	

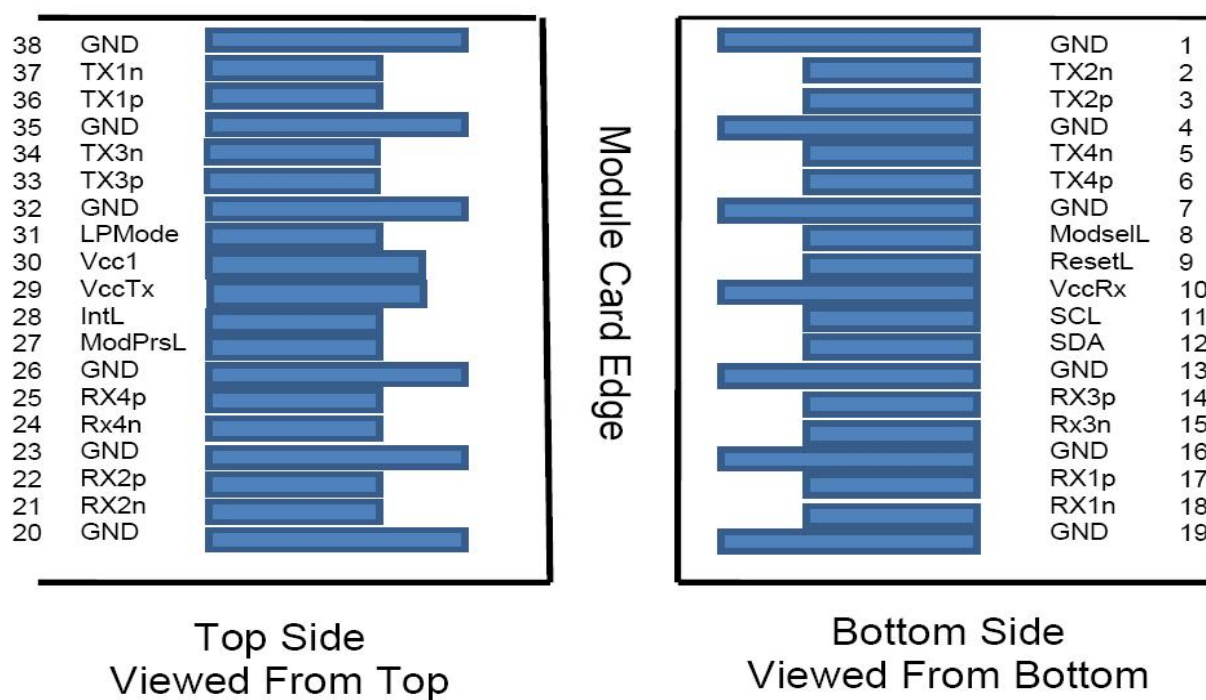


**Electric Ports Definition**

Parameter	Symbol	Unit	Min	Typ	Max	Notes
Supply Voltage	VCC	V	3.135	3.3	3.465	
Power Consumption	Pc	W		4	4.5	per end
<b>Transmitter</b>						
Input Differential Impedance	RIN	Ω	80	100	120	
Single Ended Data Input Swing	VIN	mVp-p	90		500	
Transmit Disable Voltage	VDIS	V	2		VCCHOST	
Transmit Enable Voltage	VEN	V	VEE		VEE+0.8	
Transmit Fault Assert Voltage	VFA	V	2		VCCHOST	
Transmit Fault De-Assert Voltage	VFDA	V	VEE		VEE+0.8	
<b>Receiver</b>						
Single Ended Data Output Swing	VOD	mVp-p	200		500	
LOS Fault	VLOSFT	V	2		VCCHOST	
LOS Normal	VLOSNR	V	VEE		VEE+0.8	
Differential termination mismatch		%			10	
<b>IIC communication</b>						
IIC Clock frequency	-	KHZ	/	100	400	
clock stretching	-	us	/	/	500	

**QSFP56 Connector and Pinout Description**

The electrical interface to the transceiver is a 38 pins edge connector. The 38 pins provide high speed data, low speed monitoring and control signals, IC communication, power and ground connectivity. The top and bottom views of the connector are provided below, as well as a table outlining the contact numbering, symbol and full description.



### Pin Descriptions

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
32	GND	Ground
33	Tx3p	Transmitter Non-Inverted Data Input
34	Tx3n	Transmitter Inverted Data Input
35	GND	Ground

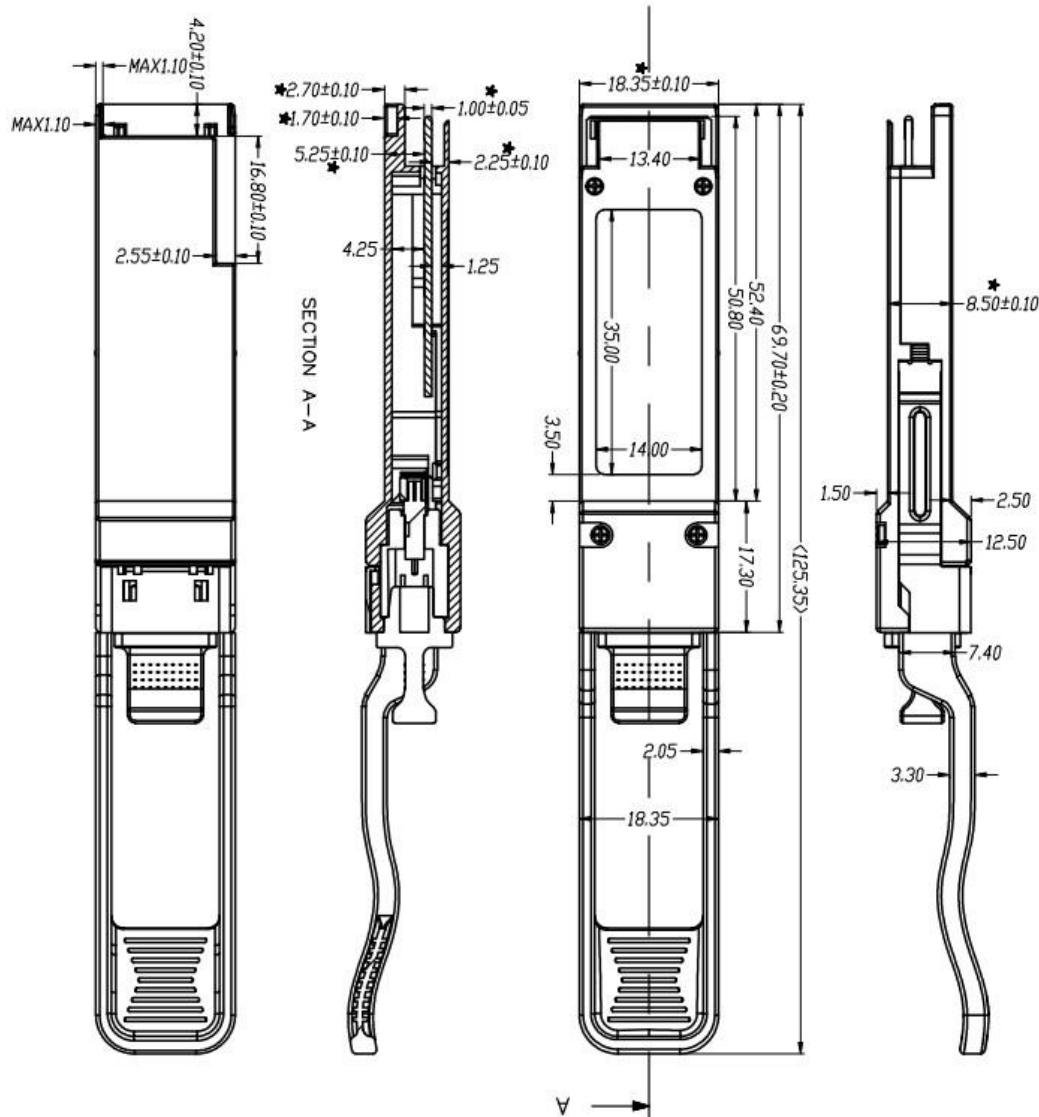


Pin	Symbol	Name/Description
36	Tx1p	Transmitter Non-Inverted Data Input
37	Tx1n	Transmitter Inverted Data Input

**Memory Map**

Compatible CMIS V4.0

**Mechanical Dimensions**



**Ordering information**

Part Number	Product Description
FYH-200MxxxC	200G QSFP56 AOC Lite Active Optical Cable up to 35m on OM3 (MMF) , operating case temperature 0°C to 70°C

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