WTQFP-A11HG-xxMC

100Gbps QSFP28 AOC, 1-100m Reach / Four-channel full-duplex active optical cable

Part Number
WTQFP-A11HG-xxMC



1. Product Overview

Features

- Four-channel full-duplex active optical cable
- Multirate capability: 10 Gb/s and 25 Gb/s per channel
- QSFP28 high-density form factor
- Reliable VCSEL array technology using multimode fiber
- Hot Pluggable
- power dissipation: <3.5W per cable end
- Commercial operating case temperature range: 0ºC to 70ºC
- UL certification optional cables
- Operating case temperature: MC 0 to +70°C; MI -40 to +85°C
- APPLICATION
- IEEE 802.3bm 100GBASE-SR4 and 40GBASE-SR4
- Infiniband FDR/EDR

Applications

2. Ordering Information

Part Number	Product Description
WTQFP-A11HG-xxMC / WTQFP-A11HG-xxMI	100Gbps, AOC, 1-100m Cable Length, MC: 0°C to +70°C; MI: -40°C to +85°C

3. Absolute Maximum Ratings

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Storage Temperature	Ts	-40	-	+85	ºC	
Maximum Supply Voltage	Vcc	-0.5	-	3.6	V	
Operating Relative Humidity	RH	5	-	+85	%	

4. Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Operating Case Temperature	Tc	0		70	ºC	MC; MI: -40 to +85°C
Power Supply Voltage	Vcc	3.13		3.47	V	
Data Rate	DR		25.78		Gb/s	

5. Recommended Operating Conditions

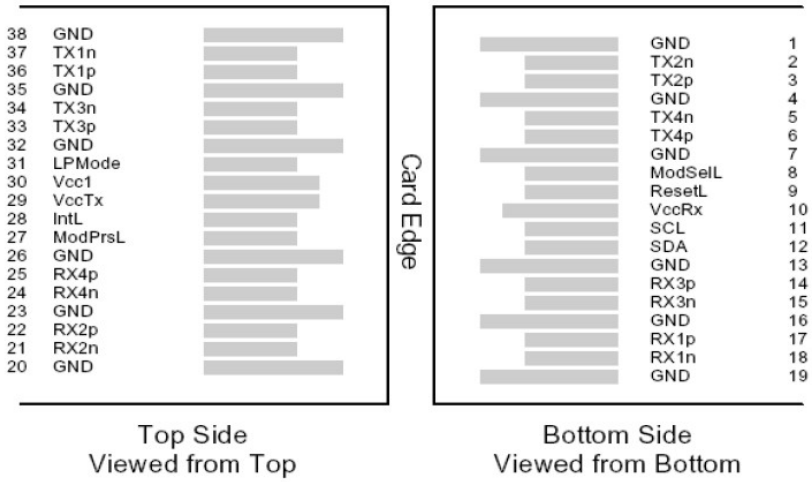
Parameter	Symbol	Symbol	Min	Typical	Max	Unit	Notes
Supply Voltage	Vcc	Vcc	3.13		3.47	V	
Supply Current	Icc	Icc	2.5		1000	mA	
Module total power	P	P	2.5		3.5	W	
Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter
Differential Date Input Swing	Differential Date Input Swing	Vout		-	900	mV	
Output Differential Impedance	Output Differential Impedance	ZD	90	100	110	Ω	
Transition Time, 20 to 80%	Transition Time, 20 to 80%	Tr, Tf	10			ps	
Receiver	Receiver	Receiver	Receiver	Receiver	Receiver	Receiver	Receiver
Differential Data Output Swing	Differential Data Output Swing	Vin		-	900	mV	
Bit Error Rate	Bit Error Rate	BER			1E-12		1
Input Differential Impedance	Input Differential Impedance	ZIN	90	100	110	Ω	
Transition Time, 20 to 80%	Transition Time, 20 to 80%	Tr, Tf	10			ps	

6. Pin Descriptions

Pin	Symbol	Name/Description	Ref.
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	+3.3 V Power supply receiver	

Pin	Symbol	Name/Description	Ref.
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	2
29	Vcc Tx	+3.3 V Power supply transmitter	
30	Vcc1	+3.3 V 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

7. Pin Assignment

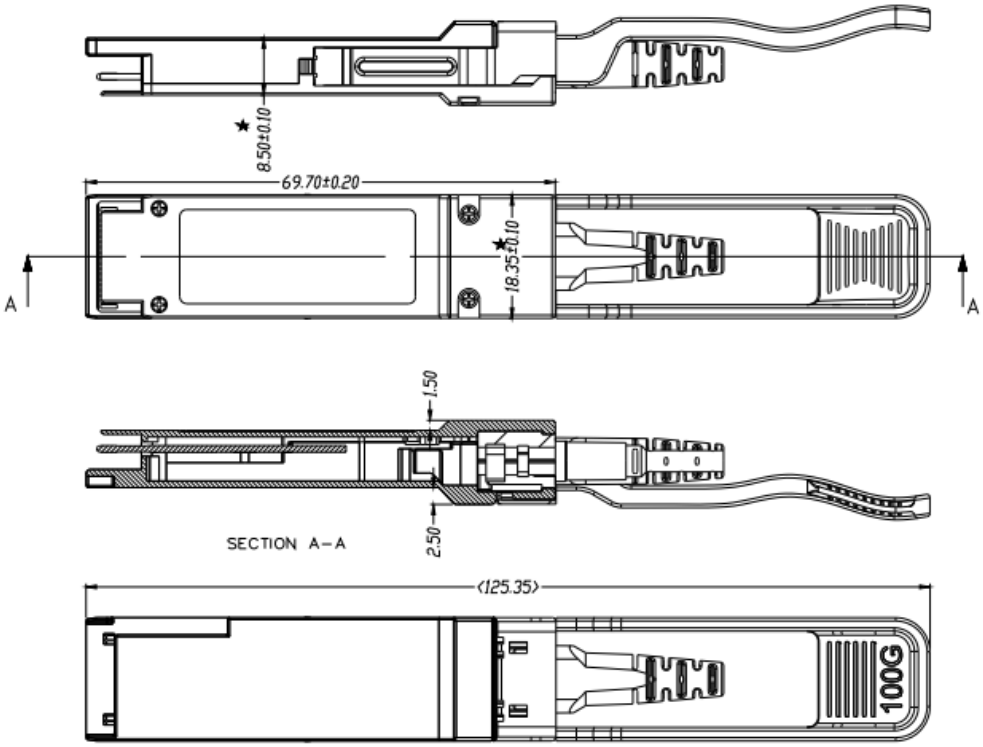


8. Digital Diagnostics Memory Map

2-Wire Serial Address 1010000x
Lower Page 00h
0 Identifier
1- 2 Status
3- 21 Interrupt Flags
22- 33 Free Side Device Monitors
34- 81 Channel Monitors
82- 85 Reserved
86- 98 Control
99 Reserved
100-104 Hardware Interrupt Pin Masks
105-106 Vendor Specific
107 Reserved
108-110 Free Side Device Properties
111-112 Assigned for use by PCI Express
113 Free Side Device Properties
114-118 Reserved
119-122 Password Change Entry Area (Optional)
123-126 Password Entry Area (Optional)
127 Page Select Byte

Upper Page 00h	Optional Page 01h	Optional Page 02h	Optional Page 03h
128 Identifier	128 CC_APPS	128-255 User EEPROM Data	128-175 Free Side Device Thresholds
129-191 Base ID Fields	129 AST Table Length (TL)		
	130-131 Application Code Entry 0		
	132-133 Application Code Entry 1		
	134-253 other entries		176-223 Channel Thresholds
192-223 Extended ID			224 Tx EQ & Rx Emphasis Magnitude ID
224-255 Vendor Specific ID			225 RX output amplitude indicators
			226-241 Channel Controls
			242-251 Channel Monitor Masks
	254-255 Application Code Entry TL		252-255 Reserved

9. Mechanical Specifications



10. Revision History

Version	Date	Description	Prepared by
V6	2025	Unified WincoTek datasheet format	WincoTek
V6.1	2026-10-23	Engineering and format review	WincoTek