Approved Networks
A brand of legrand

QSFP100G-AOC-xxM-EDR-AQ

100GBASE, QSFP28, ACTIVE OPTICAL CABLE

Features:

- 4-channel bi-directional AOC with aggregate bandwidth of 100Gbps (25Gbps x 4ch)
- Compliant with SFF 8636 Rev 2.7
- Supports 100-Gbps aggregate data-rate links up to 100m by using OM4 MMF.
- Low power consumption of max 2W
- Full Digital Diagnostics Monitor Interface
- Hot pluggable electrical interface
- 0 to 70°C case temperature operating range
- RoHS Compliance and Lead Free

Applications:

- 100GBASE SR4 Ethernet
- Datacom/Telecom switch & router connections
- Data Aggregation and Backplane Application
- Infiniband transmission at 4ch QDR,FDR and EDR

1. Absolute Maximum Ratings

Not necessarily applied together. Exceeding these values may cause permanent damage. Functional operation under these conditions is not implied.

Parameter	Min	Max	Unit
Storage Temperature	-40	85	°C
3.3V Power Supply Voltage	-0.5	3.6	V
Data Input Voltage- Single Ended	-0.5		Vcc+0.5
Control Input Voltage	-0.5	3.6	V
Relative Humidity	5	85	%

2. Recommended Operating Conditions

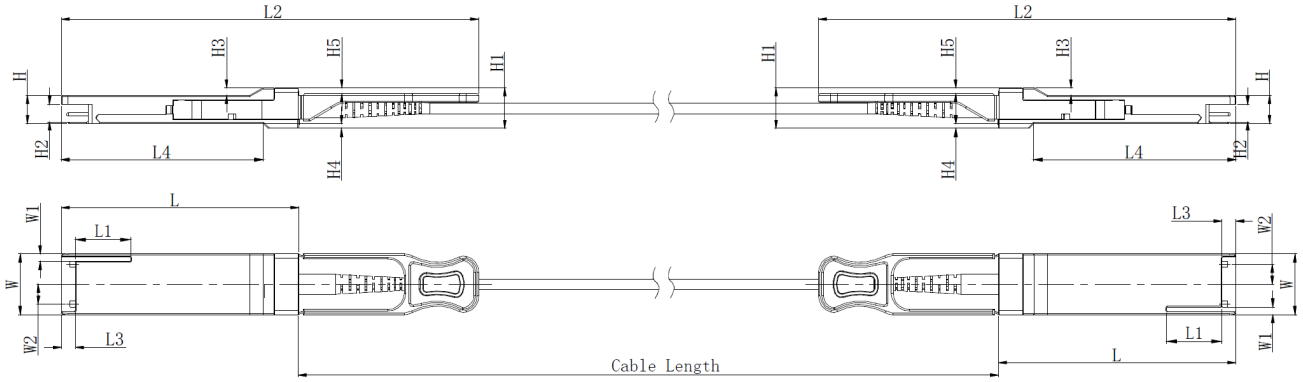
Parameter	Min	Typical	Max	Unit
Case Operating Temperature	0	40	85	°C
Power Supply Voltage	3.135	3.3	3.465	V
			600	mA

Data Rate		103.125		Gbps
Bit Error Ratio (BER)		10-12		
Standard Cable Lengths	1, 3, 5, 10, 20, 30, 50,60, 70, 80, 100			m

3. Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Transmitter (per Lane)					
Input Voltage Peak to Peak Swing	Vin,pp			900	mV
Differential Input Impedance	Zind	90	100	110	ohm
Common Mode Noise RMS				17.5	mV
Differential input return loss	SDD22	Per OIF CEI-28G-VSR and CAUI-4 requirements			dB
Mode to Differential conversion and Differential to Common Mode Conversion	SDC22, SCD22				dB
Common Mode Return Loss	SCC22				dB
Transition Time, 20 to 80%	Tr, Tf	10			ps
Common Mode Voltage	Vcm	-0.3		2.8	V
Eye Width at 1E-15 probability	EW15	0.46			UI
Eye Height at 1E-15 probability	EH15	94			mv
Receiver (per Lane)					
Output Voltage Peak to Peak Swing	Vopp	300		900	mV
Differential output Impedance	Zos	90	100	110	ohms
Common Mode Voltage	Vcm	-0.35		2.85	V
Common Mode Noise RMS				17.5	mv
Differential output return loss	SDD22	Per OIF CEI-28G VSR and CAUI-4 requirements			dB
Common Mode to Differential conversion and Differential to Common Mode Conversion	SDC22, SCD22				dB
Common Mode Return Loss	SCC22			-2	dB
Transition Time, 20 to 80%	Tr, Tf	10			ps
Vertical Eye Closure	VEC			5.5	dB
Eye Width at 1E-15 probability	EW15	0.57			UI

4. Mechanical Diagram



Note: External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

Parameter	Specification	Notes
Minimum Cable Bending Radius	30mm	
Cable Cross-Section Dimension	Round Cable with 3 mm in Diameter	
Cable Cover Type	LSZH or OFNR	1
Standard Cable Length	1, 3, 5, 10, 20, 30, 50, 60, 70, 80, 100m	2
Cable Length Tolerance	+100/-0	cm

Notes:
1. Cable jacket type standard is LSZH. Other types can be available upon request.
2. Different cable length may be recommended to adopt different multi-mode fiber (MMF) grades of OM3, or OM4.

5. Ordering Information

OEM	Part Number	OEM	Part Number
Nvidia/Mellanox	MFA1A00-E001-A	Nvidia/Mellanox	MFA1A00-E009-A
Nvidia/Mellanox	MFA1A00-E002-A	Nvidia/Mellanox	MFA1A00-E010-A
Nvidia/Mellanox	MFA1A00-E003-A	Nvidia/Mellanox	MFA1A00-E015-A
Nvidia/Mellanox	MFA1A00-E004-A	Nvidia/Mellanox	MFA1A00-E020-A
Nvidia/Mellanox	MFA1A00-E005-A	Nvidia/Mellanox	MFA1A00-E025-A
Nvidia/Mellanox	MFA1A00-E007-A	Nvidia/Mellanox	MFA1A00-E030-A

6. Contact Information

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