APTICOM | AQQ-707[36-43]

QSFP+ to QSFP+ 40G P. DAC 0-70°C Cables - AOC and DAC

Features

- Compliant to SFF-8436
- Supports 41.25Gbps Data Rate
- Lengths up to 7m
- 30AWG/28AWG
- Operating Temperature 0 to 70°C
- Power Dissipation ≤0.5W
- Single 3.3V Power Supply

Applications

- 40 Gigabit Ethernet

Description

The AQQ-707[36-43] series are high-performance Direct Attach Cables (DAC) for 40 Gigabit Ethernet connections. It is compliant with the QSFP+ Multisource Agreement (MSA) and hot pluggable.

The cables are RoHS-6 compliant per Directive 2011/65/EU.

CAUTION! The DAC is a static-sensitive device. Always use an ESD wrist strap or similar individual grounding device when handling transceiver modules or coming into contact with modules.

Order Information

Part Number	Wavelength	Protocol	Tx Output Power	Rx Sensitivity	Reach	Temp.
AQQ-707[36-43]	N/A	40GBASE	N/A	N/A	≤7m	0-70°C

Ordering Guide

Part Number	Cable Length [m]	Part Number	Cable Length [m]
AQQ-70736	0.5 (30AWG)	AQQ-70740	3 (30AWG)
AQQ-70737	1 (30AWG)	AQQ-70741	4 (28AWG)
AQQ-70738	1.5 (30AWG)	AQQ-70742	5 (28AWG)
AQQ-70739	2 (30AWG)	AQQ-70743	7 (28AWG)

Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Min	Typ	Max	Unit
Storage Temperature	-40		125	°C
Relative Humidity			85	%
Supply Voltage	0		3.6	V

Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit
Operating Case Temperature	0		70	°C
Supply Voltage	3.135	3.3	3.465	V
Data Rate, per Lane		10.3125		Gbps

Transceiver Electrical Parameters

EOL, over the full temperature range, Vcc = 3.135 to 3.465V.

Parameter	Min	Typ	Max	Unit
Supply Current			160	mA
Power Dissipation			500	mW
Transmitter				
Input Differential Impedance		100		Ω
Differential Data Input Swing	180		1200	mVpp
Receiver				
Output Differential Impedance		100		Ω
Differential Output Data Swing	300		850	mVpp
Data Output Rise/Fall Time (20/80%)		30		ps
General				
Bit Error Ratio (BER)			10^-12	

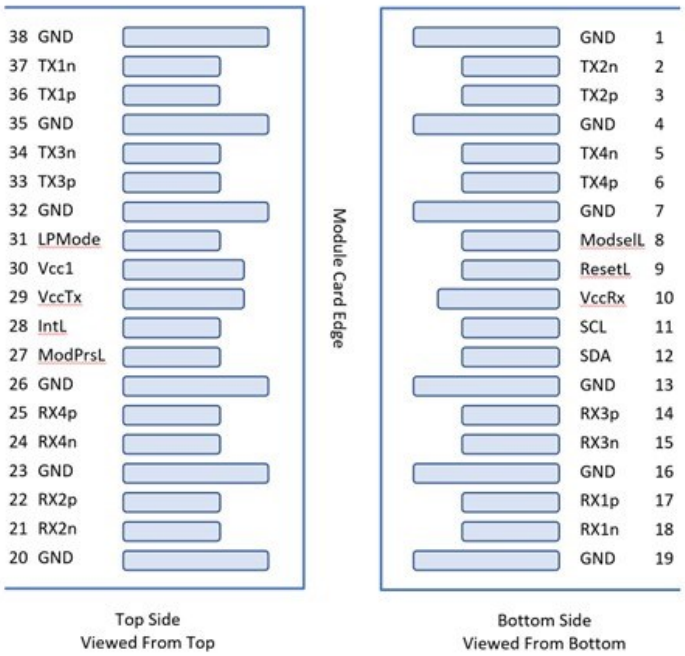
Transceiver Pins

Pin #	Name	Description	Pin #	Name	Description
1	GND	Ground	20	GND	Ground
2	TX2n	Transmitter Inverted Data Input	21	RX2n	Receiver inverted data output
3	TX2p	Transmitter non-Inverted Data Input	22	RX2p	Receiver non-inverted data output
4	GND	Ground	23	GND	Ground
5	TX4n	Transmitter Inverted Data Input	24	RX4n	Receiver Inverted Data Output
6	TX4p	Transmitter non-Inverted Data Input	25	RX4p	Receiver non-Inverted Data Output
7	GND	Ground	26	GND	Ground
8	ModSelL	Module Select [1]	27	ModPrsL	Module Present
9	ResetL	Module Reset [1]	28	IntL	Interrupt [1]
10	VccRx	+3.3V Power Supply Receiver	29	VccTx	+3.3V Power Supply Transmitter
11	SCL	2-wire Serial Interface Clock [1]	30	Vcc1	+3.3V Power Supply
12	SDA	2-wire Serial Interface Data [1]	31	LPMode	Low Power Mode [1]
13	GND	Ground	32	GND	Ground
14	RX3p	Receiver non-Inverted Data Output	33	TX3p	Transmitter non-Inverted Data Input
15	RX3n	Receiver Inverted Data Output	34	TX3n	Transmitter Inverted Data Input
16	GND	Ground	35	GND	Ground
17	RX1p	Receiver non-Inverted Data Output	36	TX1p	Transmitter non-Inverted Data Input
18	RX1n	Receiver Inverted Data Output	37	TX1n	Transmitter Inverted Data Input
19	GND	Ground	38	GND	Ground

1. Open collector, to be pulled upp with 4.7kohm

Transceiver Pad Layout

QSFP+ compliant 38-pin connector as per SFF-8679.



Regulatory Compliance

The AQQ-707[36-43] series is certified per the following standards:

Item	Agency	Standard
Electrical Safety	TÜV	EN 60950-1:2006+A11+A1+A12+A2

Revision Information

Revision	Date	Description
A	2024-02-01	Initial release

For more information

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