

APTICOM | ASY-708[39-46]

SFP28 to SFP28 25G P. DAC 0-70°C Cables - AOC and DAC

Features

- Compliant to SFF-8402 and SFF-8432
- Supports 25.78125Gbps Data Rate
- Lengths up to 5m
- 30AWG/26AWG
- Operating Temperature 0 to 70°C
- Power Dissipation $\leq 0.5W$
- Single 3.3V Power Supply

Applications

- 25 Gigabit Ethernet

Description

The ASY-708[39-46] series are high-performance Direct Attach Cables (DAC) for 25 Gigabit Ethernet connections. It is compliant with the SFP28 Multisource Agreement (MSA) and hot pluggable.

The DAC is 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.
ASY-708[39-46]	N/A	25GBASE	N/A	N/A	$\leq 5m$	0-70°C

Ordering Guide

Part Number	Cable Length [m]	Part Number	Cable Length [m]
ASY-70839	0.5 (30AWG, MCU)	ASY-70843	2.5 (30AWG, MCU)
ASY-70840	1 (30AWG, MCU)	ASY-70844	3 (26AWG, MCU)
ASY-70841	1.5 (30AWG, MCU)	ASY-70845	4 (26AWG, MCU)
ASY-70842	2 (30AWG, MCU)	ASY-70846	5 (26AWG, MCU)

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		25.78125		Gbps

Transceiver Electrical Parameters

EOL, over the full temperature range, $V_{cc} = 3.135$ to $3.465V$.

Parameter	Min	Typ	Max	Unit
Supply Current			150	mA
Power Dissipation			0.5	W
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				
Post-FEC Bit Error Ratio [1]			10^{-12}	

1. FEC is not required for cable lengths less than 3m

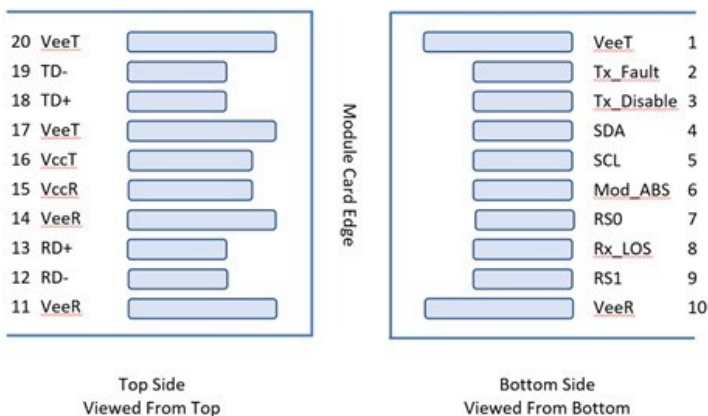
Transceiver Pins

Pin #	Name	Description	Pin #	Name	Description
1	VeeT	Module Transmitter Ground	11	VeeR	Module Receiver Ground
2	Tx_Fault	Module Transmitter Fault [1]	12	RD-	Receiver Inverted Data Output
3	Tx_Disable	Transmitter Disable	13	RD+	Receiver Non-Inverted Data Output
4	SDA	2-wire Serial Interface Data Line	14	VeeR	Module Receiver Ground
5	SCL	2-wire Serial Interface Clock	15	VccR	Module Receiver 3.3 V Supply
6	Mod_ABS	Module Absent	16	VccT	Module Transmitter 3.3 V Supply
7	RS0	Not Used	17	VeeT	Module Transmitter Ground
8	Rx_LOS	Receiver Loss of Signal Indication [1]	18	TD+	Transmitter Non-Inverted Data Input
9	RS1	Not Used	19	TD-	Transmitter Inverted Data Input
10	VeeR	Module Receiver Ground	20	VeeT	Module Transmitter Ground

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

Transceiver Pad Layout

SFP+-compliant 20-pin connector as per SFF-8431.



Regulatory Compliance

The ASY-708[39-46] 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	2023-02-13	Initial release
B	2023-08-21	Additional variants added
C	2024-03-05	The ASY-708[31-38] and ASY-708[47-52] series removed

For more information

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