



CLOS AEC SPECIFICATION

PLUG & PLAY ACTIVE ELECTRICAL CABLE for In-Rack Ethernet Applications in Distributed, Disaggregated Chassis

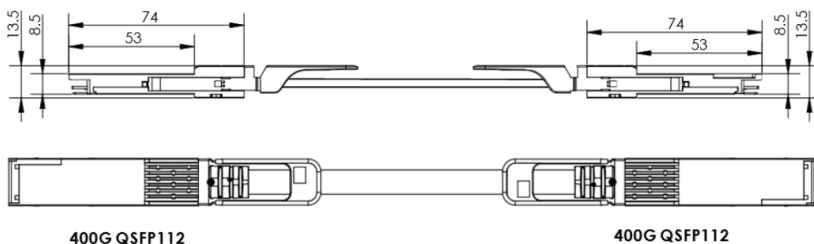
400G (4x112G) QSFP112 to 400G (4x112G) QSFP112

Credo's HiWire™ Low Power CLOS Active Electrical Cable (AEC)

A reliable replacement to Active Optical Cable (AOC) for TOR switch downlink (up to 400Gbps). Powered by Credo's best-in-class signal processing technology, AEC enables low-power, high-reliability and high-speed interconnections over very thin copper cables without using any optical components.

Credo's CAC4XXXX1N1N-C0-HW Active Electrical Cable

Designed for hyper-scale data center use. It can sustain 4 lanes of 112G-PAM4 signal and 4 lanes of 112G-PAM4 signal. It provides bi-directional 400Gbps traffic per cable. The use and replacement of CAC4XXXX1N1N-C0-HW AEC is simple and straightforward as it adopts standard QSFP112 form factor and complies to MSA specifications.



Features

The following are the key features of the HiWire CLOS AEC:

- Recognizable, purple PET Mash jacket
- 400G to 400G data rate
- CMIS v5.0 compliant
- Single 3.3V power supply
- QSFP112 connector
- Low power consumption:
Typ 5W power dissipation
- $BER < 10^{-15}$ (postFEC)
- Hot pluggable
- RoHS2 compliant
- I²C management interface
- Operating case temperature range: 0° to +70°C

Supported Standards and Interfaces

- QSFP112 MSA v5.0

Key Features

Parameter	Value
Module Form Factor	QSFP112
Number of Data Lanes	4 TX and 4 RX per module (PAM4)
Maximum Aggregate Data Rate	400Gbps
Nominal Data Rate per Lane	112.16Gbps (PAM4)
Electrical Interface and Pin-out	38 -pin edge connector
Pin Description	Per QSFP112 Hardware Specification
Management Interface	I ² C, serial, timing per Common Management Interface Specification for 8X Pluggable Transceivers
Length of Copper AEC	0.5m – 3.0m
BER (Pre-FEC)*	Typ. $<10^{-8}$ * Tested with QPRBS31 pattern
BER (Post-FEC)*	$<10^{-15}$ * Tested with QPRBS31 pattern

Product Selections

Part Number	Length	AWG	CMIS	Weight
CAC405321N1N-C0-HW	0.5m	32	CMIS 5.0	325g
CAC41X321N1N-C0-HW	1.0m	32	CMIS 5.0	350g
CAC415321N1N-C0-HW	1.5m	32	CMIS 5.0	375g
CAC42X321N1N-C0-HW	2.0m	32	CMIS 5.0	400g
CAC425321N1N-C0-HW	2.5m	32	CMIS 5.0	425g
CAC43X321N1N-C0-HW	3.0m	32	CMIS 5.0	450g

Mechanicals

Parameter	Cable Type	Typical	Length
Diameter	8P 32AWG	5.2.mm	0.5-3.0m

For more information please visit www.credosemi.com
or email sales@credosemi.com