



## LP SPAN AEC SPECIFICATION

# Plug & Play AEC

## for In-Rack Ethernet Applications in DDC: Distributed Disaggregated Chassis

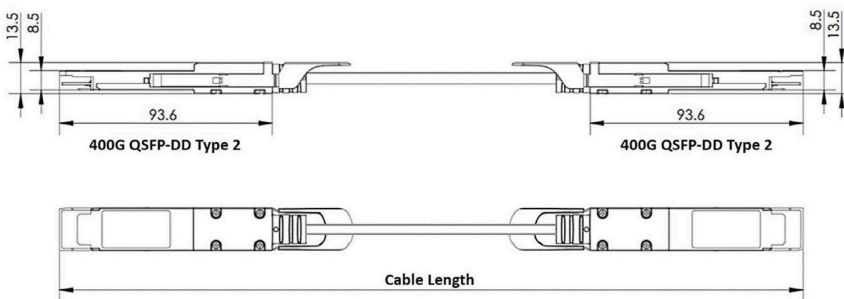
### 400G (8x56G) QSFP-DD PAM4 to 400G (8x56G) QSFP-DD PAM4

#### Credo's HiWire™ Low Power SPAN Active Electrical Cable (LP SPAN AEC)

A thin, low power 400G AEC specifically designed for rack-to-rack connectivity, these cables support up to 7m reach, consume up to 50% less power than optical and take 75% less volume than DACs, and offer a 10-year service life.

#### Credo's CAC4XX321D1D-DX-HW HiWire LP SPAN AEC

Designed for telecom and data center use. It can sustain 8 lanes of 56G-PAM4 signal in each direction, providing bi-directional 400Gbps traffic per cable. The use and replacement of this AEC is simple and straightforward as it adopts standard QSFP-DD type 2 form factor and complies to MSA specifications.



## Features

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

- Recognizable, purple PVC jacket
- 400G to 400G data rate
- Built-in diagnostic features
- CMIS compliant
- Single 3.3V power supply
- Typ.4.5W power dissipation each end
- BER<math>10^{-15}</math> (post FEC)
- Hot pluggable
- RoHS2 compliant
- I<sup>2</sup>C management interface
- Operating case temperature range: 0 to +70°C

## Supported Standards and Interfaces

- Common Management Interface Specification (CMIS) v4.0
- QSFP-DD MSA v4.0

## Key Features

Parameter	Value
Module Form Factor	QSFP-DD type 2
Number of Data Lanes	8 TX and 8 RX per module (PAM4)
Maximum Aggregate Data Rate	400Gbps
Nominal Data Rate per Lane	53.125Gbps (PAM4)
Electrical Interface and Pin-out	76-pin edge connector
Pin Description	Per QSFP-DD Hardware Specification
Management Interface	I <sup>2</sup> C, serial, timing per Common Management Interface Specification for 8X/16X Pluggable Transceivers (QSFP-DD)
Length of Copper AEC	3.0m – 7.0m in 2.0m increments
BER (Pre-FEC)*	Typ. <10 <sup>-8</sup>
BER (Post-FEC)*	<10 <sup>-15</sup>

\* Tested with QPRBS31 pattern

## Product Selections

Part Number	Length	AWG	Weight	CMIS
CAC43x321D1D-D0-HW	3 meters	32	580g	V4.0
CAC45X301D1D-D0-HW	5 meters	30	810g	V4.0
CAC47X281D1D-D0-HW	7 meters	28	1,050g	V4.0

## Mechanicals

Parameter	Cable Type	Typical	Length
Diameter	16P 32AWG	1 x 6.8mm	3 meters
Diameter	2 x 8P 30AWG	2 x 6.5mm	5 meters
Diameter	16P 28AWG	1 x 11mm	7 meters

## About Credo

Credo's mission is to advance high-speed connectivity solutions that deliver optimized performance, reliability, energy efficiency, and security for the next generation of AI driven applications, cloud computing, and hyperscale networks.

Optimized for both optical and electrical applications, our solutions support port speeds up to 1.6Tb. At the core of our technology is our proprietary Serializer/Deserializer (SerDes) IP. Our diverse solutions portfolio includes system-level products such as Active Electrical Cables (AECs), a range of Integrated Circuits, including Retimers, Optical DSPs, SerDes chipsets, and SerDes IP Licensing.

For more information please visit [www.credosemi.com](http://www.credosemi.com) or email [sales@credosemi.com](mailto:sales@credosemi.com)

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