



## AEC SPAN SPECIFICATION

# Plug & Play Active Electrical Cable for Rack to Rack Ethernet Applications

## 800G OSFP to 2\* 800G400G Q112

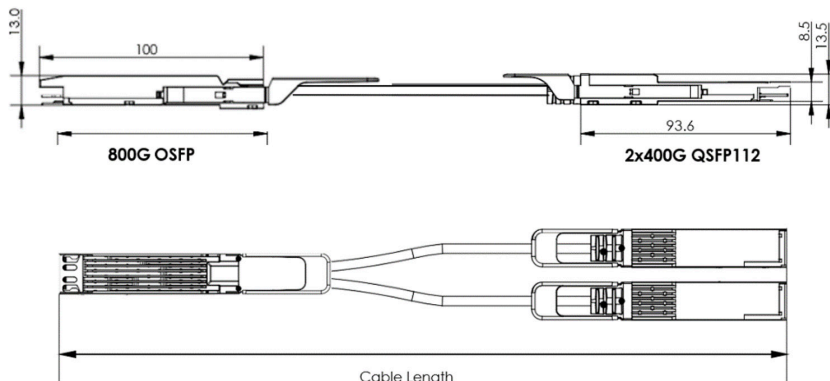
### Credo's ZeroFlap Family of HiWire™ SPAN Active Electrical Cable

A 800G AEC specifically designed for rack-to-rack connectivity, support up to 7 m reach, consume up to 50% less power than optical and take 75% less volume than DACs, and offer a 10-year service life.

With improved reach and signal integrity, these AECs deliver zero soft link flaps to support the lossless backend RDMA network that AI clusters are built on. With advances in liquid cooling, the 7 m length enables the full host to switch connectivity for leading GPU clusters.

### Credo's CAC8XXXX1A2N-C1-HW HiWire AEC

Designed to deliver highly reliable interconnect for artificial intelligence (AI) backend networks. It can sustain 8 lanes of 100G PAM4 signal in each direction, providing bi-directional 800Gbps traffic per cable. The use and replacement of CAC8XXXX1A2N-C1-HW AEC is simple and straightforward as it adopts standard OSFP form factor and complies to MSA specifications.



## Features

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

- Recognizable, purple PET braided jacket
- 800G to 800G data rate
- CMIS 5.1 compliant
- Single 3.3V power supply
- Low power consumption: Typically 10W power dissipation each end
- $BER < 10^{-15}$  (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) v5.1
- OSFP MSA v3.0

## Key Features

Parameter	Value
Module Form Factor	OSFP to 2*Q112
Number of Data Lanes	2 * (4 TX and 4 RX per module (PAM4))
Maximum Aggregate Data Rate	800Gbps
Nominal Data Rate per Lane	106.25Gbps (PAM4)
Electrical Interface and Pin-out	60-pin edge connector for OSFP / 38-Pin edge connector for Q112
Pin Description	Per OSFP/Q112 hardware specification
Management Interface	I <sup>2</sup> C, serial, timing per CMIS v5.1
Length of Copper AEC	3.0m - 7.0m
BER (Pre-FEC)*	Typ. <10 <sup>-8</sup>
BER (Post-FEC)*	<10 <sup>-15</sup>

\* Tested with QPRBS31 pattern

## Product Selections

Part Number	Length
CAC83X301A2N-C1-HW	3.0m
CAC835301A2N-C1-HW	3.5m
CAC84X301A2N-C1-HW	4.0m
CAC845301A2N-C1-HW	4.5m
CAC85X301A2N-C1-HW	5.0m
CAC855281A2N-C1-HW	5.5m
CAC86X281A2N-C1-HW	6.0m
CAC865281A2N-C1-HW	6.5m
CAC87X281A2N-C1-HW	7.0m

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

© 2024 Credo Semiconductor, Inc. All Rights Reserved. Credo Semiconductor Inc. and the Credo logo are trademarks of Credo Semiconductor Inc. All other marks are the property of their respective owners. This document is for information only. Specifications are subject to change without notice. REV 100924

