



## CLOS AEC SPECIFICATION

# Plug & Play AEC

## 1.6T OSFP-XD PAM4 to 1.6T OSFP-XD PAM4

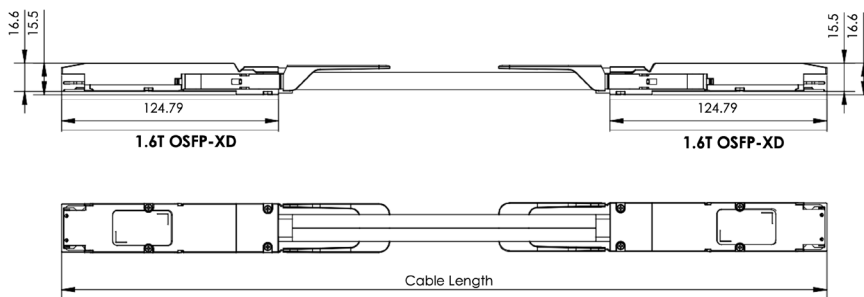
### For In-Rack Ethernet Applications in Distributed, Disaggregated Chassis (DDC)

#### Credo's HiWire CLOS Active Electrical Cable (CLOS AEC)

A thin, low-power 1.6T AEC specifically designed for in-rack applications replacing backplanes in Distributed, Disaggregated Chassis (DDC) implementations. Plug & Play CLOS AECs consume up to 50% less power than optical and take up to 75% less volume than DACs, enabling interconnect densities of up to 500 cables per rack.

#### Credo's CACHXX321T1T-C0-HW HiWire CLOS AEC

Designed for telecom and data center use. It can sustain 16 lanes of 106G-PAM4 signal in each direction, providing bi-directional 1.6Tbps traffic per cable. The use and replacement of CACHXX321T1T-C0-HW AEC is simple and straightforward as it adopts standard OSFP-XD form factor and complies to MSA specifications.



### Applications

- Recognizable, purple LSZH jacket
- 1.6T to 1.6T data rate
- CMIS 5.1 compliant
- Single 3.3V power supply
- Low power consumption:
  - Typ. 20W power dissipation each end
- BER <math>10^{-15}</math> (post FEC)
- Hot pluggable
- RoHS2 compliant
- I2C management interface
- Operating case temperature range: 0 to +70°C

### Supported Standards and Interfaces

- Common Management Interface Specification (CMIS) v5.1
- OSFP-XD MSA v0.1

## Key Features

Parameter	Value
Module Form Factor	OSFP-XD
Number of Data Lanes	16 TX and 16 RX per module (PAM4)
Maximum Aggregate Data Rate	1600Gbps
Nominal Data Rate per Lane	106.25Gbps (PAM4)
Electrical Interface and Pin-out	120-pin edge connector
Pin Description	Per OSFP-XD Hardware Specification
Management Interface	I <sup>2</sup> C, serial, timing per Common Management Interface Specification for 8X/16X Pluggable Transceivers v 5.1
Length of Copper AEC	0.5m - 2.75m
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
CACH05321T1T-C0-HW	0.5m	32
CACH1X321T1T-C0-HW	1.0m	32
CACH15321T1T-C0-HW	1.5m	32
CACH2X321T1T-C0-HW	2.0m	32
CACH25321T1T-C0-HW	2.5m	32
CACH27321T1T-C0-HW	2.75m	32

## Mechanicals

Parameter	Cable Type	Typical	Length
Diameter	32P 32AWG	2x6.8mm	0.5-2.75m

## 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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