HiWire™ LP CLOS AEC

LP CLOS AEC Specification

800G (8x112G) QSFP-DD PAM4 to 800G (8x112G) QSFP-DD PAM4

Plug & Play Active Electrical Cable for In-Rack Ethernet Applications in Distributed, Disaggregated Chassis (DDC)

Description

Credo's HiWire™ Low Power CLOS Active Electrical Cable (LP CLOS AEC) is a thin, low power 800G AEC specifically designed for in-rack applications replacing backplanes in Distributed, Disaggregated Chassis (DDC) implementations. Plug & Play LP CLOS AECs consume up to 75% less power and take 75% less volume than DACs, enabling interconnect densities of up to 1,000 cables per rack.

Credo's **CAC8XX321D1D-A0-HW HiWire LP CLOS AEC** is designed for telecom and data center use. It can sustain 8 lanes of 112G PAM4 signal in each direction, providing bi-directional 800Gbps 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.

Product Features

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

- Recognizable, purple PVC jacket
- 800G to 800G data rate
- Built-in diagnostic features
- CMIS 4.0 compliant
- Single 3.3V power supply
- Typ. 10W power dissipation each end
- BER < $10^{\wedge -15}$ (post FEC)
- Hot pluggable
- RoHS2 compliant
- I^2C management interface
- Operating case temperature range: 0^o to $+70^oC$

1:1 Direct LP CLOS AEC

Product Selections

Part Number	Length	AWG	Weight
CAC4XX321D1D-C0-HW	0.5m	32	275g
CAC4xx321D1D-D0-HW	1.0m	32	300g
CAC4xx321D1D-A0-HW	1.5m	32	325g
CAC4xx321D1D-D0-HW	2.0m	32	350g
CAC4xx321D1D-A0-HW	2.5m	32	350g

Mechanicals

Parameter	Cable Type	Typical	Length
Diameter	16P 32AWG	6.8mm	0.5 - 2.5m

Supported Standards

The following are the key features of the HiWire cable:

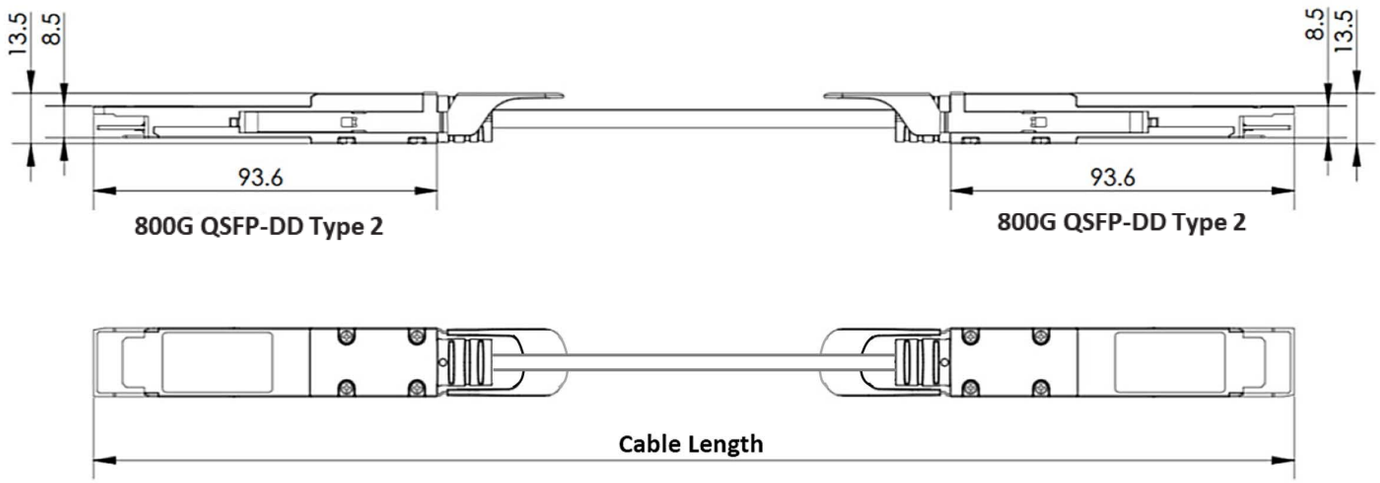
- Common Management Interface Specification (CMIS) v4.0
- QSFP-DD MSA v5.0

LP CLOS AEC

800G (8x112G) QSFP-DD PAM4 to 800G (8x112G) QSFP-DD PAM4

General Product Characteristics

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	800Gbps
Nominal Data Rate per Lane	106.25Gbps (PAM4)
Electrical Interface and Pin-out	76-pin edge connector
Pin Description	Per QSFP-DD Hardware Specification
Management Interface	I^2C, serial, timing per Common Management Interface Specification for 8X/16X Pluggable Transceivers (QSFP-DD)
Length of Copper AEC	0.5m - 2.5m in 0.5m increments
BER (Pre-FEC)*	Typ. $<10^{-8}$ * Tested with QPRBS31 pattern
BER (Post-FEC)*	$<10^{-15}$ * Tested with QPRBS31 pattern



For more information please visit **www.credosemi.com/hiwire-aec** or email **hiwire@credosemi.com**

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REV 10132021

HiWire™ LP CLOS AEC

LP CLOS AEC Specification

800G (8x112G) OSFP PAM4 to 800G (8x112G) OSFP PAM4

Plug & Play Active Electrical Cable for In-Rack Ethernet Applications in Distributed, Disaggregated Chassis (DDC)

Description

Credo's HiWire™ Low Power CLOS Active Electrical Cable (LP CLOS AEC) is a thin, low power 800G AEC specifically designed for in-rack applications replacing backplanes in Distributed, Disaggregated Chassis (DDC) implementations. Plug & Play LP CLOS AECs consume up to 75% less power and take 75% less volume than DACs, enabling interconnect densities of up to 1,000 cables per rack.

Credo's **CAC8XX321D1D-A0-HW HiWire LP CLOS AEC** is designed for telecom and data center use. It can sustain 8 lanes of 112G PAM4 signal in each direction, providing bi-directional 800Gbps traffic per cable. The use and replacement of this AEC is simple and straightforward as it adopts standard OSFP form factor and complies to MSA specifications.

Product Features

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

- Recognizable, purple PVC jacket
- 800G to 800G data rate
- Built-in diagnostic features
- CMIS 4.0 compliant
- Single 3.3V power supply
- Typ. 10W power dissipation each end
- BER < $10^{\wedge -15}$ (post FEC)
- Hot pluggable
- RoHS2 compliant
- I^2C management interface
- Operating case temperature range: 0^{o} to $+70^{o}C$

1:1 Direct LP CLOS AEC

Product Selections

Part Number	Length	AWG	Weight
CAC4XX321D1D-C0-HW	0.5m	32	275g
CAC4xx321D1D-D0-HW	1.0m	32	300g
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CAC4xx321D1D-D0-HW	2.0m	32	350g
CAC4xx321D1D-A0-HW	2.5m	32	350g

Mechanicals

Parameter	Cable Type	Typical	Length
Diameter	16P 32AWG	6.8mm	0.5 - 2.5m

Supported Standards

The following are the key features of the HiWire cable:

- Common Management Interface Specification (CMIS) v4.0
- OSDP MSA v2.0 Compliant

LP CLOS AEC

800G (8x112G) OSFP PAM4 to 800G (8x112G) OSFP PAM4

General Product Characteristics

Parameter	Value
Module Form Factor	OSFP
Number of Data Lanes	8 TX and 8 RX per module (PAM4)
Maximum Aggregate Data Rate	800Gbps
Nominal Data Rate per Lane	106.25Gbps (PAM4)
Electrical Interface and Pin-out	76-pin edge connector
Pin Description	Per OSFP Hardware Specification
Management Interface	I^2C, serial, timing per Common Management Interface Specification for 8X/16X Pluggable Transceivers (QSFP-DD)
Length of Copper AEC	0.5m - 2.5m in 0.5m increments
BER (Pre-FEC)*	Typ. $<10^{-8}$ * Tested with QPRBS31 pattern
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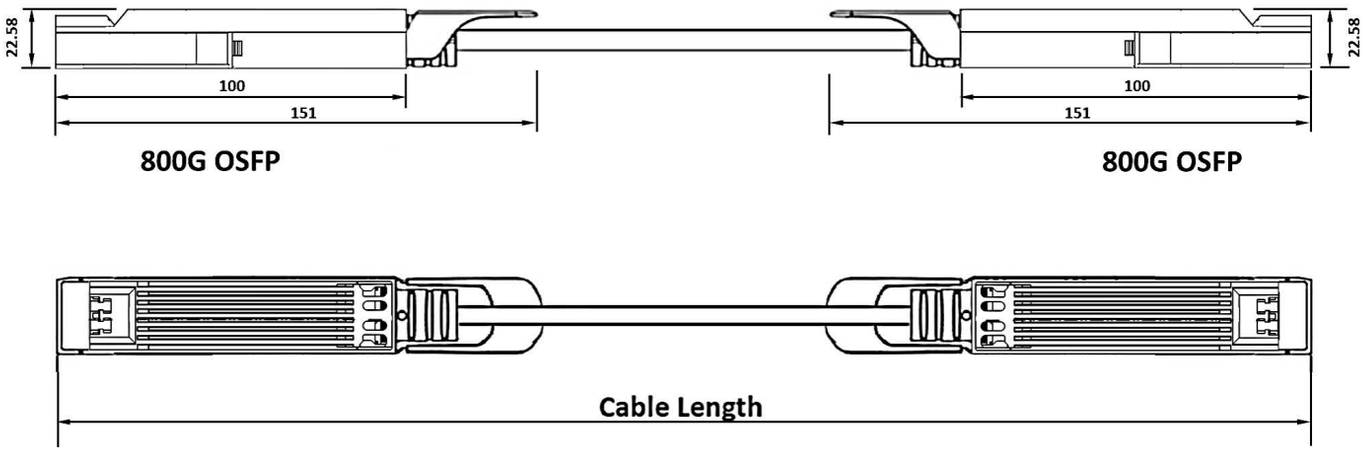

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