

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

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

Description

Credo's HiWire™ SPAN Active Electrical Cable (SPAN AEC) is a reliable, plug & play replacement of Active Optical Cable (AOC) for high speed interconnects (up to 400Gbps). Intended for rack-to-rack connectivity, these cables support up to 7m reach, consume 50% less power than optics, cost up to 50% less than optics, and offer a 10-year service life.

Credo's **CAC4XXXX1D1D-A0-HW HiWire SPAN AEC** is 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 CAC4XXXX1D1DXX-XX 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 SPAN AEC:

- Recognizable, purple PVC jacket
- 400G to 400G data rate
- CMIS compliant
- Single 3.3V power supply
- Typ. 8.5W power dissipation each end
- BER < 10⁻¹⁵ (post FEC)
- Hot pluggable
- RoHS2 compliant
- I²C management interface
- Operating case temperature range: 0° to +70°C



1:1 Direct SPAN AEC

Product Selections

Part Number	Length	AWG	Weight
CAC43X301D1D-A0-HW	3m	30	580g
CAC45X301D1D-A0-HW	5m	30	810g

Mechanicals

Parameter	Cable Type	Typical
Diameter	8P 30AWG	2x6.5mm

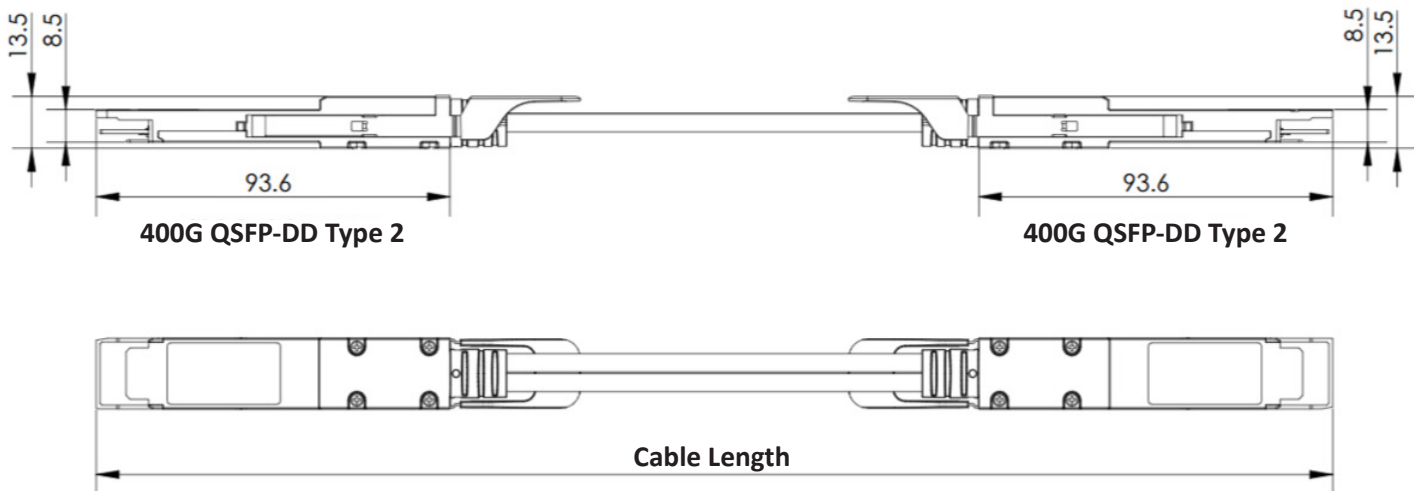
Supported Standards

The following are the key features of the HiWire cable:

- Common Management Interface Specification (CMIS) v3.0
- QSFP-DD MSA v3.0

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	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 ² C, serial, timing per Common Management Interface Specification for 8X/16X Pluggable Transceivers (OSFP)
Length of Copper AEC	3m-5m, 30AWG 2x6.5mm
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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