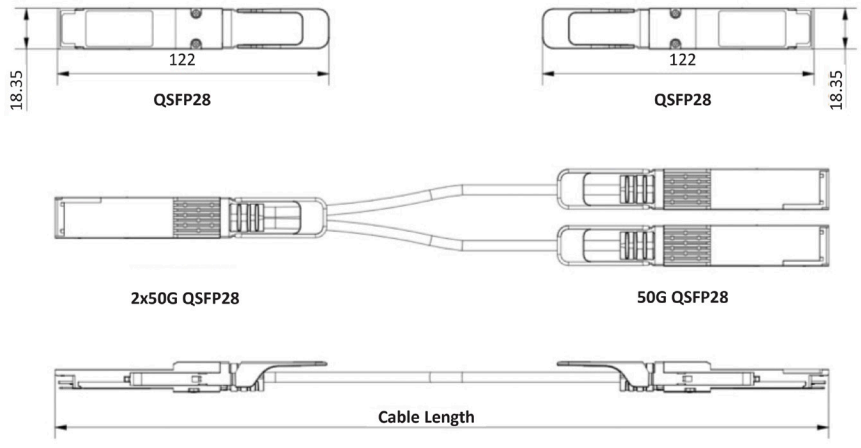
LP SWITCH AEC SPECIFICATION

Plug & Play AEC
Supporting Hot Failover of a NIC to Two TORs

100G (4x28G) QSFP28 NRZ to Two 100G (4x28G) QSFP28 NRZ or 50G (2x28G) QSFP28 NRZ to Two 50G (2x28G) QSFP28 NRZ

Credo's HiWire™ LP SWITCH Active Electrical Cable (AEC)
Designed to support hot failover of a server Network Interface Card (NIC) to two top of Rack (TOR) switches to avoid a failed TOR causing a full rack failure.

Credo's CAC1XX321Q2Q-E0-HW HiWire LP SWITCH AEC
Designed to support 100G and 50G NIC cards and provide automatic or manual switching functions without loss of link in less than 1ms. This allows TORs to be brought down for maintenance or firmware updates without impacting server SLAs or even requiring end-user notification. Credo's HiWire LP SWITCH AECs comply with the QSFP MSA and are simple and easy to use.



Features

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

- Recognizable, purple jacket (with fire retardant coating)
- 100G (4x28G) to Two 100G (4x28G) or 50G (2x28G) to Two 50G (2x28G) SWITCH operations
- TX equalization with programmable main-, pre-, and post-cursors
- Programmable RX equalization with CTLE and DFE•Built-in diagnostic features•SFF-8636 compliant
- Single 3.3V power supply
- Typ 4.5W power dissipation (NIC side), 0.1W TOR side
- BER < 1e^-12 (post FEC)
- Hot pluggable
- RoHS2 compliant
- I^2C management interface
- Operating case temperature range: 0 to +70°C

Supported Standards and Interfaces

- SNIA SFF-8636 Management Interface for 4 Lane Modules and Cables
- SNIA SFF-8679 QSFP28 Electrical Specification
- SFP+ MSA v4.1

Key Features

Parameter	Value
Module Form Factor	QSFP28
Number of Data Lanes	QSFP28 4 TX and 4 RX per Module (NRZ)
Maximum Aggregate Data Rate	100Gbps
Nominal Data Rate per Lane	QSFP28: 25.78125Gbps (NRZ), FEC must be disabled
Electrical Interface and Pin-out	38-pin edge connector
Pin Description	Per SFF-8679
Management Interface	I^2C, serial, timing per SFF-8636 (QSFP)
Length of Copper AEC	0.5m – 2.5m
BER (Pre-FEC)*	< 1eˆ-12

* Tested with QPRBS31 pattern

Product Selections

Part Number	Length	AWG	Weight
	0.5m	32	250g
	1.0m	32	300g
	1.5m	32	350g
	2.0m	32	400g

Mechanicals

Parameter	Cable Type	Typical
Diameter	8P 32AWG	6.2mm
QSFP28 Single End		
Minimum bend radius	8P 32AWG x 2	31mm
QSFP28 Split End		
Minimum bend radius	8P 30AWG	31mm

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**
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