SIEMON

ETHERNET COMPATIBILITY GUIDE

Siemon DAC & AOC High Speed Cable Assembly

DAC or AOC options: SFP+, SFP28, QSFP28, & QSFP28 x 4 SFP28 Breakout

Introduction

The Siemon Company has a comprehensive product mix of Ethernet industry standard passive Direct Attach Copper (DAC) and Active Optical Cable's (AOC) to support today's faster Data Center switch-to-server applications. Siemon high speed cable assemblies are IEEE and MSA compliant, which means they are compatible with network equipment with industry standard 802.3 compliant ports. High speed cable assemblies are available from a variety of sources, including Ethernet switch vendors and third-party cable manufacturers. Due to limited options and availability from the switch vendors, third-party cable assembly manufacturers like The Siemon Company are an attractive option for making a reliable Ethernet network connection.

The purpose of industry standards is so network equipment in the same Ethernet ecosystem can work together properly. There are many large vendors in the Ethernet network equipment ecosystem. Ethernet connectivity is not network equipment vendor specific. The goal of this technical reference is to provide guidance for understanding the compatibility of various high speed cable assembly types and Ethernet network equipment. Testing cable assemblies' connections in your specific network environment is the ultimate path for network specific validation. If you would like additional help in understanding what cables to evaluate fill out the questionnaire below and Siemon will help in selecting cables for evaluation.

High Speed Cabling Customer Questionnaire

Compatibility Guide

The table below provides links to specific Ethernet network equipment landing pages with detailed product-to-optical port compatibility charts and third-party warranty statements where available. This list of switches, network interface cards (NIC) and servers are known to be compatible with Ethernet industry standard DAC and AOC cable assemblies unless specified. This list does not include every Ethernet industry standard network equipment vendor but an overview of some of the most popular brands. This list will be updated anytime Siemon is aware of a change to the open Ethernet compatibility of the network equipment listed. Siemon will help in selecting cables for evaluation.

Vendor	Equipment	Compatibility Comments
ARISTA	Switch	Third party small form factor pluggable (SFP's) that are compliant to industry standard specifications can be used and are recognized by the Arista switch.
ARUBA	Switch	Third party transceivers are allowed on the following models using the 'allow-unsupported-transceiver' command.

Vendor	Equipment	Compatibility Comments
CISCO	Switch/NIC	When a customer reports a product fault or defect and Cisco believes the fault or defect can be traced to the use of third-party memory products, cables, GBIC's, filters, or other non-Cisco components by a customer or reseller, then, at Cisco's discretion, Cisco may withhold support under warranty or a Cisco support program such as SMARTnet™ service. When a product fault or defect occurs in the network, and Cisco concludes that the fault or defect is not attributable to the use of third-party memory, cables, GBICs, filters, or other non-Cisco components installed by a customer or reseller, Cisco will continue to provide support for the affected product under warranty or covered by a Cisco support program. Nexus 2000/5000/7000/9000 switches are open to third-party cables. Optics-to-Device Compatibility Matrix
DELL/EMC	Switch/NIC	Please reach out to your Dell Support representative for review.
INTEL	NIC	DAC/AOC compatible on all models.
JUNIPER	Switch	If you face a problem running a Juniper Networks device that uses a third-party optic or cable, the Juniper Networks Technical Assistance Center (JTAC) can help you diagnose the source of the problem. Your JTAC engineer might recommend that you check the third-party optic or cable and potentially replace it with an equivalent Juniper Networks optic or cable that is qualified for the device. DAC/AOC compatible on all models. Compatibility Tool
MELLANOX	NIC	DAC/AOC compatible on all models.

Making an Initial Network Connection

DAC/AOC Making an initial network connection is the first step in testing 3rd party cable assemblies. Below are the common steps to make an initial network connection. Not all network equipment is the same and Siemon technical support is available to help in making an initial network connection.

- Review specific network equipment data sheet (or) product-to-optics matrix (see links above)
  - Match supported: speed, cable type and length to what is supported/recognized by the network equipment being connected on both ends
  - Siemon DAC and AOC are compatible with MSA compliant SFP+, SFP28, QSFP+ or QSFP28 ports, unless the product has a vendor lock-out which requires special proprietary code in the EEPROM and does not work on any third-party cables.
- Review network equipment advanced port configuration settings
  - FEC setting options (not need for 10G and 40G)
  - FEC-disabled, Auto-FEC, FC-FEC, RS-FEC
- If making a breakout connection manually configure port for breakout mode on the port
- For backwards compatibility match the slower port speeds on network equipment connected both ends

Troubleshooting DAC/AOC - After Initial Network Connection

When troubleshooting a network connection issue use a known "good" cable assembly to compare against as validation that it is not a cabling issue. This is the typical procedure used to confirm a third-party cable assembly is not the root cause of a connection problem. This is the same procedure used when calling the network equipment OEM for technical support. If the link does come up, it will be a problem with the cable assembly and will require warranty replacement. However, if the link does not come up, it is not a cable assembly problem and will require the troubleshooting scope to extend beyond the cable assembly.

High Speed Interconnects Product Information

North America
P: (1) 860 945 4200

Asia Pacific
P: (61) 2 8977 7500

Latin America
P: (571) 657 1950/51/52

Europe
P: (44) 0 1932 571771

China
P: (86) 215385 0303

India, Middle East & Africa
P: (971) 4 3689743

Siemon Interconnect Solutions
P: (1) 860 945 4213
www.siemon.com/SIS

Mexico
P: (521) 556 387 7708/09/10