

CAB-Q-S-AOC-3M-PRO

Arista Networks® CAB-Q-S-AOC-3M Compatible TAA 40GBase-AOC QSFP+ to 4xSFP+ Active Optical Cable (850nm, MMF, 3m)

Features

- 850nm VCSEL transmitter, PIN photo-detector receiver
- Electrical interface compliant to QSFP+ connector (SFF-8436) and SFP+ connectors (SFF-8431)
- All-metal housing for superior EMI performance
- Operating temperature: 0 to 70 Celsius
- RoHS compliant and Lead free
- Hot Pluggable



Applications:

- 40GBase Ethernet
- Fiber Channel Application
- InfiniBand QDR, SDR, DDR
- Servers, switches, storage, and host card adapters

Product Description

This is a Arista Networks® CAB-Q-S-AOC-3M Compatible 40GBase-AOC QSFP+ to 4xSFP+ active optical cable that operates over active fiber with a maximum reach of 3m. It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. We stand behind the quality of our products and proudly offer a limited lifetime warranty. This cable is TAA (Trade Agreements Act) compliant and is built to comply with MSA (Multi-Source Agreement) standards.

Proline's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S. – made or designated country end products.



QSFP Interface Specifications

| Parameter | Description |
|-----------------------------|--------------------------------------|
| Module Form Factor | QSFP+ (Supports SFF-8436/SFF-8472) |
| Channel Data Rate | Rate 40Gbps |
| BER | $<10^{-12}$ |
| Operating Case Temperature | 0 °C to 70°C |
| Storage Temperature | -20 °C to 85°C |
| Supply Voltage | 3.3V |
| Supply Current | 180mA Per End Typical |
| Management Interface Serial | I ² C (Supports SFF-8472) |

Optical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|--|-----------------|-------------------------------------|------|------|------|--------------------------------|
| Transmitter | | | | | | |
| Center Wavelength | λ_C | 840 | 850 | 860 | nm | |
| RMS Spectral Width | $\Delta\lambda$ | | | 0.65 | nm | |
| Average Launch Power Per Lane | POUT | -7.5 | | -2.5 | dBm | |
| Difference in Launch Power Between Any Two Lanes (OMA) | | | | | dB | |
| Extinction Ratio | ER | 3 | | | dB | |
| Peak Power Per Lane | | | | 4 | dBm | |
| Transmitter and Dispersion Penalty (TDP) Per Lane | TDP | | | 3.5 | dB | |
| Average Launch Power of Off Transmitter Per Lane | | | | -30 | dB | |
| Eye Mask Coordinates: (X1, X2, X3, Y1, Y2, Y3) | | (0.23, 0.34, 0.43, 0.27, 0.33, 0.4) | | | | Hit Ratio = 5×10^{-5} |
| Receiver | | | | | | |
| Center Wavelength | λ_C | 840 | 850 | 860 | nm | |
| Stressed Receiver Sensitivity in OMA Per Lane | | | | -5.4 | | 1 |
| Maximum Average Power at Receiver Input Per Lane | | | | 2.4 | | |
| Receiver Reflectance | | | | -12 | | |
| Peak Power Per Lane | | | | 4 | | |
| LOS Assert | | -30 | | | | |
| LOS De-Assert – OMA | | | | 7.5 | | |
| LOS Hysteresis | | 0.5 | | | | |

Notes:

1. Measured with conformance test signal at TP3 for BER= $10E^{-12}$.

SFP+ Interface Specifications

| Parameter | Description |
|-----------------------------|---|
| Module Form Factor | SFP+ (Supports SFF8431/SFF8432/SFF8472) |
| Channel Data Rate | Rate 1 to 10.3125Gbps |
| BER | $<10^{-12}$ |
| Operating Case Temperature | 0 to 70°C |
| Storage Temperature | -20 to 85°C |
| Supply Voltage | 3.3V |
| Supply Current | 455mA Maximum |
| Management Interface Serial | I ² C (Supports SFF-8472) |

Optical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|--------------------------------|-----------------|------|------|--------|-------|-----------------|
| Transmitter | | | | | | |
| Center Wavelength | λ_C | 840 | 850 | 860 | nm | |
| RMS Spectral Width | $\Delta\lambda$ | | | Note 1 | nm | |
| Average Optical Power | P_{avg} | -6.5 | | -1 | dBm | 2 |
| Extinction Ratio | ER | 3.5 | | | dB | 3 |
| Transmitter Dispersion Penalty | TDP | | | 3.9 | dB | |
| Relative Intensity Noise | RIN | | | -128 | dB/Hz | -12B Reflection |
| Optical Return Loss Tolerance | | | | 12 | dB | |
| Receiver | | | | | | |
| Center Wavelength | λ_C | 840 | 850 | 860 | nm | |
| Receiver Sensitivity | P_{sens} | | | -11.1 | dBm | 4 |
| Stressed Sensitivity in OMA | | | | -7.5 | dBm | 4 |
| LOS Function | LOS | -30 | | -12 | dBm | |
| Overload | P_{in} | | | -1.0 | dBm | 4 |
| Receiver Reflectance | | | | -12 | dB | |

Notes:

1. Trade-offs are available between spectral width, center wavelength, and minimum OMA.
2. The optical power is launched into MMF.
3. Measured with a PRBS $2^{31}-1$ test pattern @10.3125Gbps.
4. Measured with a PRBS $2^{31}-1$ test pattern @10.3125Gbps and $BER \leq 10^{-12}$.

Mechanical Specifications



About Us:

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.



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