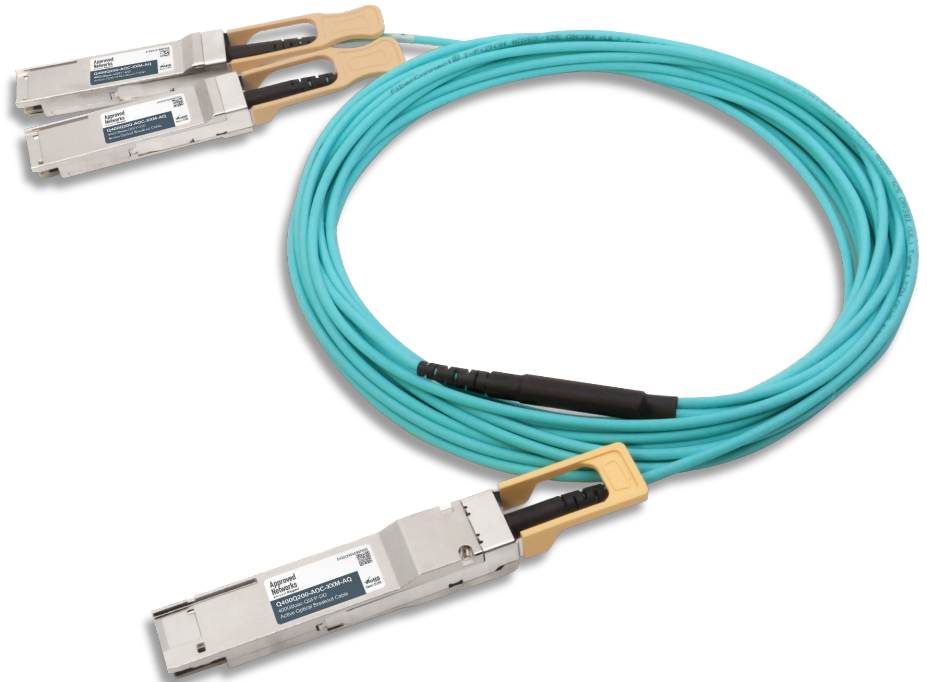


Features

- 400Gb/s to 2x200Gb/s data rate
- 8x 50Gb/s PAM4 modulation
- Single 3.3V power supply
- Max 4.5W power dissipation each 200G QSFP56 end
- Max 8W power dissipation QSFP-DD 400G end
- Compliant to CMIS V4.0
- Operating case temp
Commercial: 0°C to +70 °C
- Hot pluggable
- RoHS compliant



Applications

- 400Gb/s systems
- Other optical links

1. Absolute Maximum Ratings

| Parameter | Symbol | Min. | Typical | Max. | Unit | Notes |
|---------------------|--------|------|---------|------|------|-------|
| Supply Voltage | Vcc3 | -0.5 | - | +3.6 | V | |
| Storage Temperature | Ts | -10 | - | +70 | °C | |
| Operating Humidity | RH | +5 | - | +85 | % | 1 |

Note 1: No condensation

2. Recommended Operating Conditions

| Parameter | Symbol | Min. | Typical | Max. | Unit | Notes |
|---------------------------------------------------|--------------------|------|---------|------|------|-------|
| Operating Case Temperature | TC | 0 | - | +70 | °C | |
| Power Supply Voltage | Vcc | 3.14 | 3.3 | 3.47 | V | |
| Power dissipation (400G retiming on all lanes) | Pd _{400G} | - | - | 8 | W | 1 |

| | | | | | | |
|---------------------------------------------------|-------------|---|---|-----|---|---|
| Power dissipation (200G retiming on all lanes) | Pd_{200G} | - | - | 4.5 | W | 1 |
|---------------------------------------------------|-------------|---|---|-----|---|---|

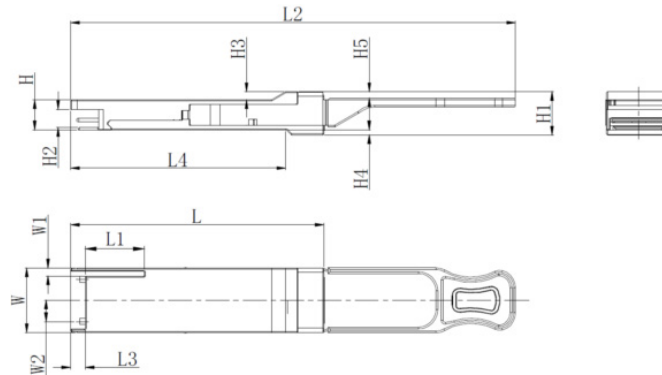
1. Per terminal

3. Electrical Characteristics

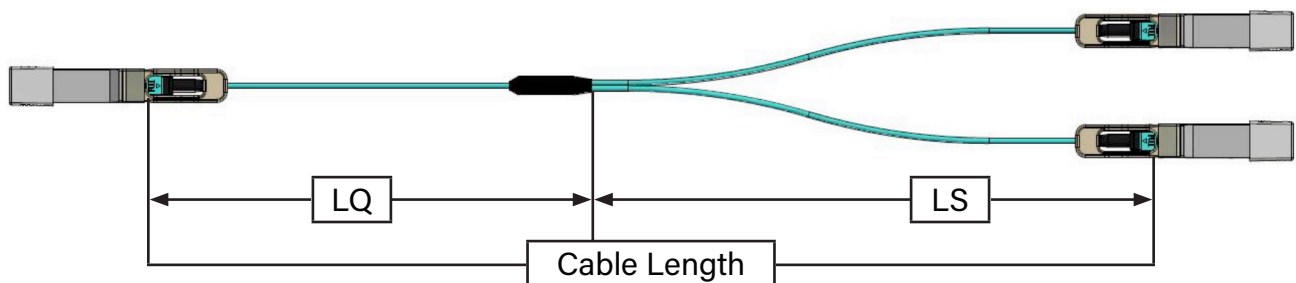
| Parameter | Symbol | Unit | Min | Typ | Max | Notes |
|------------------------------------------|------------------|------|-------------------|-----|--------|-------|
| Transmitter | | | | | | |
| Signaling rate (each lane) | SR | GBd | 26.5625 ± 100 ppm | | | |
| Differential data input voltage per lane | $V_{in,pp,diff}$ | mV | - | - | 900 | |
| Differential termination mismatch | - | % | - | - | 10 | |
| Single-ended voltage tolerance range | - | V | -0.4 | - | 3.3 | |
| DC common mode voltage | - | mV | -350 | - | 2850 | |
| Receiver | | | | | | |
| Signaling rate (each lane) | SR | GBd | 26.5625 ± 100 ppm | | | |
| Differential output voltage | - | mV | - | - | 900 | |
| Differential termination mismatch | - | % | - | - | 10 | |
| Transition time (min, 20% to 80%) | - | ps | 9.5 | - | - | |
| DC common mode voltage | - | mV | -350 | - | 2850 | |
| Bit Error Ratio | - | - | - | - | 2.4E-4 | 1 |

1. PRBS31Q@26.5625Gbd PAM4

4. Mechanical Diagrams



| QSFP56 (Unit: mm) | | | | | | | | | | | | | | | |
|-------------------|------|------|-----|------|------|-------|-----|-----|-----|------|------|-----|-----|-----|------|
| | L | L1 | L2 | L3 | L4 | W | W1 | W2 | H | H1 | H2 | H3 | H4 | H5 | H6 |
| Max | 72.2 | - | 128 | 4.35 | 61.4 | 18.45 | - | 6.2 | 8.6 | 12.4 | 5.35 | 2.5 | 1.6 | 2.0 | - |
| Type | 72.0 | - | - | 4.20 | 61.2 | 18.35 | - | - | 8.5 | 12.2 | 5.2 | 2.3 | 1.5 | 1.8 | 6.55 |
| Min | 68.8 | 16.5 | 124 | 4.05 | 61.0 | 18.25 | 2.2 | 5.8 | 8.4 | 12.0 | 5.05 | 2.1 | 1.3 | 1.6 | - |



Note: External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

| Parameter | Value | Units |
|---------------------|---------------------------------|-------|
| Diameter | 3±0.2 | mm |
| Minimum bend radius | 30 | mm |
| Length tolerance | 1 m ≤ length ≤ 4.5 m: +15 / -0 | cm |
| | 5 m ≤ length ≤ 14.5 m: +30 / -0 | cm |
| | Length ≥ 15.0 m: +2% / -0 | m |
| Cable color | Aqua | |

| Total Length X (Unit: m) | Breakout Point Measured from QSFP-DD LQ (Unit: m) | Breakout Point Measured from QSFP56 LS(Unit: m) |
|--------------------------|---------------------------------------------------|-------------------------------------------------|
| 1 | 0.3 | 0.7 |
| 2 | 0.6 | 1.4 |
| 3 | 1 | 2 |
| 5 | 2 | 3 |
| 7 | 4 | 3 |
| 10 | 7 | 3 |
| 15 | 12 | 3 |
| 20 | 17 | 3 |
| 25 | 22 | 3 |
| 30 | 27 | 3 |
| 40 | 37 | 3 |
| 50 | 47 | 3 |

5. Ordering Information

| OEM | Part Number | OEM | Part Number |
|-----|----------------------|-----|-------------|
| MSA | CAB-Q400Q200-AOC-XXM | | |

6. Contact Information

Tel: 800.590.9535

Web: <http://www.approvednetworks.com>