



# SFP, QSFP, QSFP-DD, **OSFP** ACTIVE OPTICAL CABLE ASSEMBLIES

Our active optical cable assembly portfolio provides improved cable flexibility and longer reach as compared to both traditional passive copper and emerging active copper (ACC/AEC) solutions, supporting high performance computing, data center and networking interconnect applications.



## **Features and Benefits**

#### **Comprehensive Product Range**

- 28G NRZ, 56G and 112G PAM-4 per channel
- SFP, QSFP, QSFP-DD, OSFP form factors in both straight and breakout configurations

#### **Ease of Installation**

- Offers longer reach and lighter weight interconnects compared to copper cables
- Smaller bend radius than copper alternatives

#### **Reduced Power and Latency**

• Lower power consumption and lower latency for 56G PAM-4 using analog CDR as compared to DSP (25% power reduction, 100x latency improvement)

#### **Product Versatility**

- Meets MSA operating requirements within the end-customers applications
- Digital Diagnostics Monitoring (DDM) Interface allows customer management and monitoring of key modules parameters
- Cables available in custom lengths as required



# **Applications**

- High-speed interconnects within and between switches, routers and transport equipment
- High Performance Computing
- Server-Server Clusters (AI/ML)
- Interconnects rack-to-rack, shelf-to-shelf,board-to-board, board-to-optical backplane
- InfiniBand applications

# 28G NRZ Active Optical Cables (AOC)

## 28G SFP28 AOC



- Multi-rate capability: 10 Gbps to 25.78125 Gbps, full-duplex
- Single 3.3 V power supply
- Low power consumption: < 1 W
- Up to 70m (OM3) / 100m (OM4)
- Built-in digital diagnostic functions (SFF-8472)
- Hot pluggable
- RoHS compliant
- Commercial operating case temperature range: 0 to 70°C

Product	Part number	Length (m)
SFP28-SFP28, AOC	2418078-1	1
SFP28-SFP28, AOC	2418078-2	2
SFP28-SFP28, AOC	2418078-3	3
SFP28-SFP28, AOC	2418078-4	5
SFP28-SFP28, AOC	2418078-5	10
SFP28-SFP28, AOC	2418078-6	15
SFP28-SFP28, AOC	2418078-7	20
SFP28-SFP28, AOC	2418078-8	30

## 100G QSFP28 AOC



- Multi-rate capability: 10 Gbps to 25.78125 Gbps per channel, 4-channel full-duplex
- Single 3.3 V power supply
- Low power consumption:  $\leq 2.5$  W per cable end
- Up to 70m (OM3) / 100m (OM4)
- Built-in digital diagnostic functions (SFF-8636)
- Hot pluggable
- RoHS compliant
- Commercial operating case temperature range: 0 to 70°C

Product	Part number	Length (m)
QSFP28-QSFP28, AOC	2368650-1	1
QSFP28-QSFP28, AOC	2368650-2	2
QSFP28-QSFP28, AOC	2368650-3	3
QSFP28-QSFP28, AOC	2368650-4	5
QSFP28-QSFP28, AOC	2368650-5	10
QSFP28-QSFP28, AOC	2368650-6	15
QSFP28-QSFP28, AOC	2368650-7	20
QSFP28-QSFP28, AOC	2368650-8	30

#### 100G QSFP28 to SFP28 AOC



- Multi-rate capability: 10 Gbps to 25.78125 Gbps, 4 independent full-duplex
- Single 3.3 V power supply
- Low power consumption: ≤ 2.5W on QSFP end, < 1 W on SFP end
- Up to 70m (OM3) / 100m (OM4)
- Built-in digital diagnostic functions (SFF-8636 and SFF-8472)
- Hot pluggable
- RoHS compliant
- Commercial operating case temperature range: 0 to 70°C

Product	Part number	Length (m)
QSFP28-4xSFP28, AOC	2418079-1	1
QSFP28-4xSFP28, AOC	2418079-2	2
QSFP28-4xSFP28, AOC	2418079-3	3
QSFP28-4xSFP28, AOC	2418079-4	5
QSFP28-4xSFP28, AOC	2418079-5	10
QSFP28-4xSFP28, AOC	2418079-6	15
QSFP28-4xSFP28, AOC	2418079-7	20
QSFP28-4xSFP28, AOC	2418079-8	30

# 56G PAM-4 Active Optical Cables (AOC)

#### 56G SFP56 AOC



- Up to 53.125 Gbps data rate per channel by PAM 4 modulation, full-duplex
- Single 3.3 V power supply
- Low power consumption: 2W
- Up to 70m (OM3)
- Built-in digital diagnostic functions (SFF-8472)
- Hot pluggable
- Commercial operating case temperature range: 0 to 70°C

Product	Part number	Length (m)
SFP56 to SFP56, AOC	2420139-1	1
SFP56 to SFP56, AOC	2420139-2	2
SFP56 to SFP56, AOC	2420139-3	3
SFP56 to SFP56, AOC	2420139-4	5
SFP56 to SFP56, AOC	2420139-5	10
SFP56 to SFP56, AOC	2420139-6	15
SFP56 to SFP56, AOC	2420139-7	20
SFP56 to SFP56, AOC	2420139-8	30

#### 200G QSFP56 AOC



- Up to 53.125 Gbps data rate per channel by PAM 4 modulation, 4-channel full-duplex
- Single 3.3 V power supply
- Low power consumption: < 4 W per cable end
- Up to 70m (OM3) / 100m (OM4)
- Built-in digital diagnostic functions (CMIS rev 4.0)
- Hot pluggable
- RoHS compliant
- Commercial operating case temperature range: 0 to 70°C

Product	Part number	Length (m)
QSFP56-QSFP56, AOC	2368651-1	1
QSFP56-QSFP56, AOC	2368651-2	2
QSFP56-QSFP56, AOC	2368651-3	3
QSFP56-QSFP56, AOC	2368651-4	5
QSFP56-QSFP56, AOC	2368651-5	10
QSFP56-QSFP56, AOC	2368651-6	15
QSFP56-QSFP56, AOC	2368651-7	20
QSFP56-QSFP56, AOC	2368651-8	30

### 400G QSFP-DD AOC



- Up to 53.125 Gbps data rate per channel by PAM 4 modulation
- Single 3.3 V power supply
- Low power consumption: < 8 W per cable end
- Up to 70m (OM3) / 100m (OM4)
- Built-in digital diagnostic functions (CMIS rev 4.0)
- Hot pluggable
- RoHS compliant
- Commercial operating case temperature range: 0 to 70°C

Product	Part number	Length (m)
QSFP-DD-QSFP-DD, AOC	2368652-1	1
QSFP-DD-QSFP-DD, AOC	2368652-2	2
QSFP-DD-QSFP-DD, AOC	2368652-3	3
QSFP-DD-QSFP-DD, AOC	2368652-4	5
QSFP-DD-QSFP-DD, AOC	2368652-5	10
QSFP-DD-QSFP-DD, AOC	2368652-6	15
QSFP-DD-QSFP-DD, AOC	2368652-7	20
QSFP-DD-QSFP-DD, AOC	2368652-8	30

#### 400G QSFP-DD to 2x QSFP56 AOC



- Up to 53.125 Gbps data rate per channel by PAM 4 modulation
- Single 3.3 V power supply
- Low power consumption: < 8 W on QSFP-DD end, < 4 W on QSFP56 end
- Up to 70m (OM3) / 100m (OM4)
- Built-in digital diagnostic functions (CMIS rev 4.0)
- Hot pluggable
- RoHS compliant
- Commercial operating case temperature range: 0 to 70°C

Product	Part number	Length (m)
QSFP-DD to 2X QSFP56, AOC	2418081-1	1
QSFP-DD to 2X QSFP56, AOC	2418081-2	2
QSFP-DD to 2X QSFP56, AOC	2418081-3	3
QSFP-DD to 2X QSFP56, AOC	2418081-4	5
QSFP-DD to 2X QSFP56, AOC	2418081-5	10
QSFP-DD to 2X QSFP56, AOC	2418081-6	15
QSFP-DD to 2X QSFP56, AOC	2418081-7	20
QSFP-DD to 2X QSFP56, AOC	2418081-8	30

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