

200G QSFP56 Active Optical Cables

Optronics 200G QSFP56 Active Optical Cable assemblies are high performance, cost effective, long reach interconnect I/O solutions for 200G Ethernet 200G Fibre Channel applications. This transceiver is a high-performance module for short-range multi-lane data communication and interconnection applications. It integrates four data lanes in each direction. The optical interface uses a 12 fiber MTP (MPO) connector. It has low power scattering and a rigid force tab for enhanced high-density installments. It is fully tested for compatibility with intended equipment.

Features

- Hot-pluggable QSFP56 form factor
- 4 channels full-duplex transceiver modules
- Transmission data rate up to 53Gbps per channel
- 4 channels 850nm VCSEL array
- 4 channels PIN photo detector array
- Internal CDR circuits on both receiver and transmitter channels
- Support CDR bypass
- Low power consumption < 5.5W per end
- MPO-12 connector receptacle
- Built-in digital diagnostic functions
- Operating case temperature 0°C to 70°C
- RoHS compliant

Applications

- 200G Ethernet
- Data Centres
- InfiniBand transmission
- High performance computing (HPC) application

Specifications

Absolute Maximum Ratings

| ELEMENT | Unit | Symbol | Min. | Max. |
|----------------------|------|--------|------|------|
| Power Supply Voltage | V | VCC | -0.5 | +3.6 |
| Storage Temperature | °C | Tc | -40 | +85 |
| Relative Humidity | % | RH | 15 | 85 |

Notes:

1. Non-condensing

Recommended Operating Conditions

| ELEMENT | VALUE | SYMBOL | MIN | TYPICAL | MAX |
|----------------------------|-------|-----------------|------|---------|------|
| Power Supply Voltage | V | V _{CC} | 3.15 | 3.30 | 3.45 |
| Supply current | mA | I _{CC} | - | | 1594 |
| Operating Case Temperature | °C | T _{Ca} | 0 | | 70 |

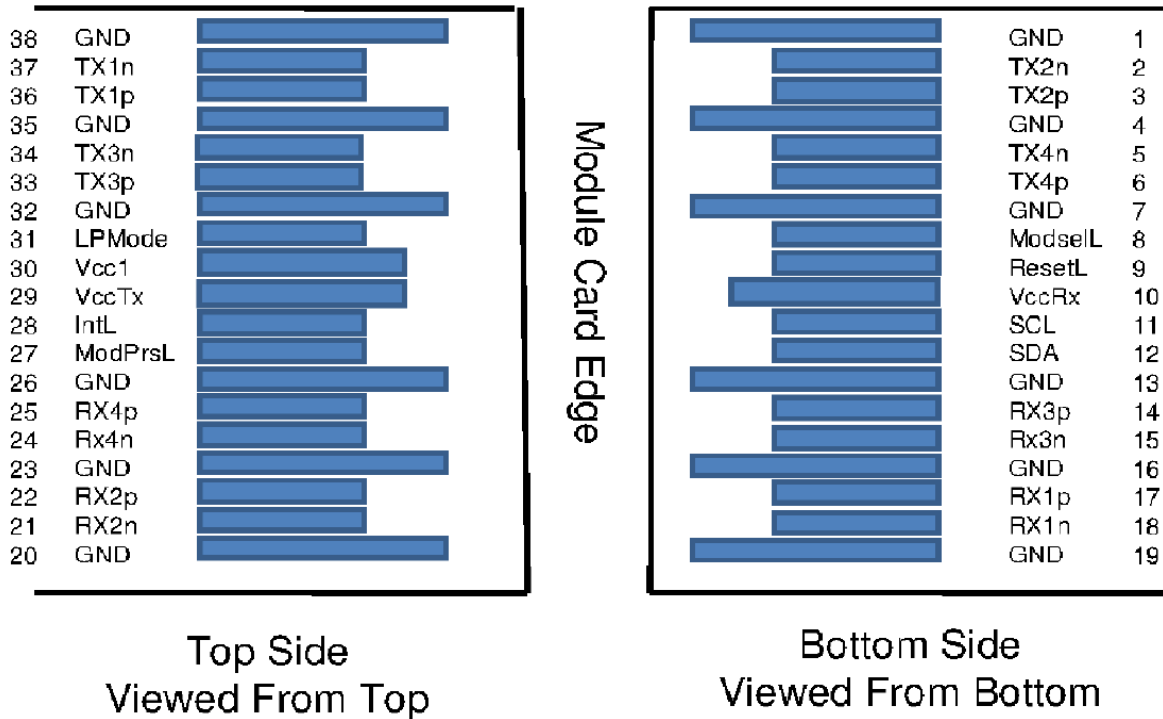
Electrical Characteristics

| ELEMENT | VALUE | SYMBOL | MIN | TYPICAL | MAX |
|--------------------------------------|-------|-----------------|---------|------------------|-----|
| Signaling rate per lane | Gbps | - | | 26.5625± 100 ppm | |
| Differential Input Voltage Amplitude | mV | V _{in} | 900 | 450 | - |
| Differential termination mismatch | % | - | - | 100 | 10 |
| Input Logic Level High | V | V _{IH} | 2.0 | | VCC |
| Input Logic Level Low | V | V _{IL} | 0 | | 0.8 |
| Output Logic Level High | V | V _{OH} | VCC-0.5 | | VCC |
| Output Logic Level Low | V | V _{OL} | 0 | | 0.4 |

Notes:

1. Differential input voltage amplitude is measured between TxnP and TxnN.

Pin Descriptions



Pin Definitions

| Pin | Symbol | Name/Description |
|-----|---------|-------------------------------------|
| 1 | GND | Ground |
| 2 | Tx2n | Transmitter Inverted Data Input |
| 3 | Tx2p | Transmitter Non-Inverted Data Input |
| 4 | GND | Ground |
| 5 | Tx4n | Transmitter Inverted Data Input |
| 6 | Tx4p | Transmitter Non-Inverted Data Input |
| 7 | GND | Ground |
| 8 | ModSelL | Module Select |
| 9 | ResetL | Module Reset |
| 10 | VCC Rx | +3.3 V Power supply receiver |
| 11 | SCL | 2-wire serial interface clock |
| 12 | SDA | 2-wire serial interface data |
| 13 | GND | Ground |
| 14 | Rx3p | Receiver Non-Inverted Data Output |
| 15 | Rx3n | Receiver Inverted Data Output |
| 16 | GND | Ground |
| 17 | Rx1p | Receiver Non-Inverted Data Output |
| 18 | Rx1n | Receiver Inverted Data Output |
| 19 | GND | Ground |
| 20 | GND | Ground |
| 21 | Rx2n | Receiver Inverted Data Output |

| | | |
|----|---------|-------------------------------------|
| 22 | Rx2p | Receiver Non-Inverted Data Output |
| 23 | GND | Ground |
| 24 | Rx4n | Receiver Inverted Data Output |
| 25 | Rx4p | Receiver Non-Inverted Data Output |
| 26 | GND | Ground |
| 27 | ModPrsL | Module Present |
| 28 | IntL | Interrupt |
| 29 | VCC Tx | +3.3 V Power supply transmitter |
| 30 | VCC 1 | +3.3 V Power Supply |
| 31 | LPMode | Low Power Mode |
| 32 | GND | Ground |
| 33 | Tx3p | Transmitter Non-Inverted Data Input |
| 34 | Tx3n | Transmitter Inverted Data Input |
| 35 | GND | Ground |
| 36 | Tx1p | Transmitter Non-Inverted Data Input |
| 37 | Tx1n | Transmitter Inverted Data Input |
| 38 | GND | Ground |

Ordering Information

DESCRIPTION

PART NUMBER

Optronics 200G QSFP+ Active Optical Cable

OQSFP-AOC-200200-XXX

**where XXX is 1-70 cable length in metres on OM3 MMF
1-100 cable length in metres on OM4 MMF*