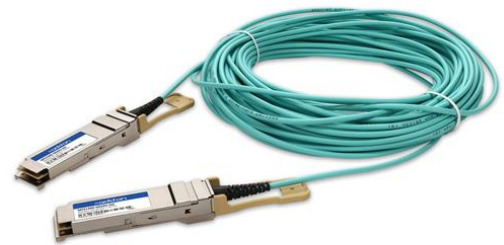


## MFS1S00-H020V-AO

Mellanox® MFS1S00-H020V Compatible TAA 200GBase-AOC QSFP56 DSP Active Optical Cable (850nm, MMF, 20m)

### Features

- 4 independent parallel optical channels
- Hot Pluggable
- Each channel data rate up to 26.56GBaud
- CML Compatible electrical I/O
- Operating Temperature Range: 0 to 70 Celsius
- OM3 Multi-mode
- RoHS Compliant and lead-free
- Color: Aqua



### Applications

- 200GBase Ethernet

### Product Description

This is a Mellanox® MFS1S00-H020V Compatible 200GBase-AOC QSFP56 to QSFP56 active optical cable that operates over active fiber with a maximum reach of 20m. 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.

AddOn'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."



## General Specifications

| Parameter                   | Symbol | Min. | Typ. | Max. | Unit |
|-----------------------------|--------|------|------|------|------|
| Storage Temperature         | Tstg   | -40  |      | 85   | °C   |
| Operating Case Temperature  | Tc     | 0    | 25   | 70   | °C   |
| Supply Voltage              | Vcc    | 0    |      | 3.6  | V    |
| Relative Operating Humidity | RH     | 5    |      | 85   | %    |
| Relative Storage Humidity   | RH     | 0    |      | 95   | %    |

### Notes:

1. Exceeding the Absolute Maximum Ratings may cause irreversible damage to the device. The device is not intended to be operated under the condition of simultaneous Absolute Maximum Ratings, a condition which may cause irreversible damage to the device. RH is a non-condensing condition.

## Electrical Characteristics

| Parameter                             | Symbol | Min. | Typ.  | Max.             | Unit  | Notes |
|---------------------------------------|--------|------|-------|------------------|-------|-------|
| Power Supply Voltage                  | Vcc    | 3.14 | 3.3   | 3.46             | V     |       |
| Single Module Supply Current          | IIN    |      | 1150  | 1350             | mA    |       |
| Signaling Speed Per Channel           | S      |      | 26.56 |                  | GBaud |       |
| <b>Transmitter</b>                    |        |      |       |                  |       |       |
| Tx_Data Differential Input Voltage    | VIN    | 300  |       | 900              | mV    |       |
| Tx_Data Differential Input Impedance  | ZIN    |      | 100   |                  | Ω     |       |
| <b>Receiver</b>                       |        |      |       |                  |       |       |
| Rx_Data Differential Output Voltage   | VOUT   |      |       | 900              | mV    |       |
| Rx_Data Differential Output Impedance | ZOUT   | 90   | 100   | 110              | Ω     |       |
| Link BER                              | BER    |      |       | 5E <sup>-5</sup> |       | 1     |

### Notes:

1. @26.56GBaud PRBS31Q.

## Cable Specifications

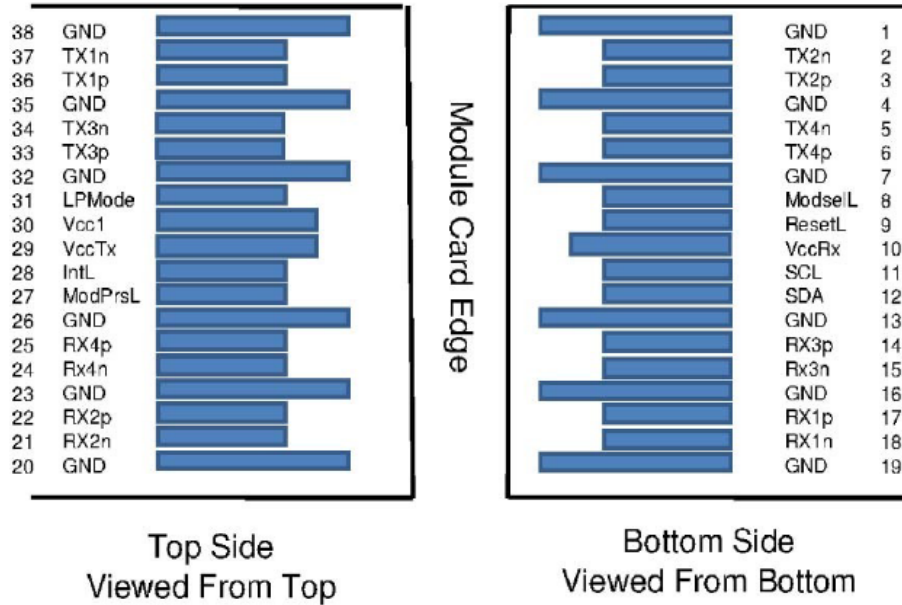
| Parameter                | Value      |
|--------------------------|------------|
| Minimum Bend Radius (mm) | 30         |
| Cable Diameter (mm)      | 3.0 ± 0.15 |
| Cable Tolerance          | +0.2/-0    |

## Pin Descriptions

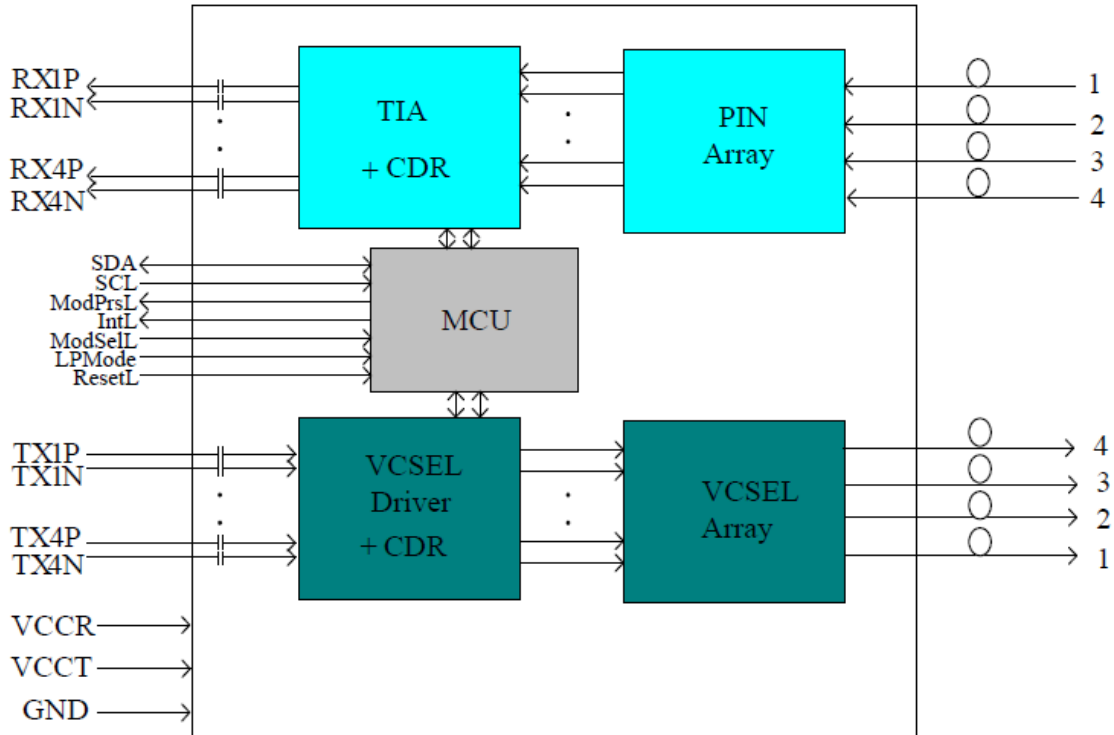
| Pin | Symbol  | Name/Description                           | Notes |
|-----|---------|--|-------|
| 1   | GND     | Module Ground.                             |       |
| 2   | Tx2-    | Transmitter Inverted Data Input.           |       |
| 3   | Tx2+    | Transmitter Non-Inverted Data Input.       |       |
| 4   | GND     | Module Ground.                             |       |
| 5   | Tx4-    | Transmitter Inverted Data Input.           |       |
| 6   | Tx4+    | Transmitter Non-Inverted Data Input.       |       |
| 7   | GND     | Module Ground.                             |       |
| 8   | ModselL | Module Select.                             |       |
| 9   | ResetL  | Module Reset.                              |       |
| 10  | VccRx   | Receiver +3.3V DC Power Supply.            |       |
| 11  | SCL     | I2C Serial Clock.                          |       |
| 12  | SDA     | I2C Serial Data.                           |       |
| 13  | GND     | Module Ground.                             |       |
| 14  | Rx3+    | Receiver Non-Inverted Differential Output. |       |
| 15  | Rx3-    | Receiver Inverted Differential Output.     |       |
| 16  | GND     | Module Ground.                             |       |
| 17  | Rx1+    | Receiver Non-Inverted Differential Output  |       |
| 18  | Rx1-    | Receiver Inverted Differential Output      |       |
| 19  | GND     | Module Ground.                             |       |
| 20  | GND     | Module Ground.                             |       |
| 21  | Rx2-    | Receiver Inverted Differential Output.     |       |
| 22  | Rx2+    | Receiver Non-Inverted Differential Output. |       |
| 23  | GND     | Module Ground.                             |       |
| 24  | Rx4-    | Receiver Inverted Differential Output.     |       |
| 25  | Rx4+    | Receiver Non-Inverted Differential Output. |       |
| 26  | GND     | Module Ground.                             |       |
| 27  | ModPrsL | Module Present.                            |       |
| 28  | IntL    | Interrupt.                                 |       |
| 29  | VccTx   | Transmitter +3.3V DC Power Supply.         |       |
| 30  | Vcc1    | +3.3V DC Power Supply.                     |       |
| 31  | LPMode  | Low-Power Mode.                            |       |
| 32  | GND     | Module Ground.                             |       |
| 33  | Tx3+    | Transmitter Non-Inverted Data Input.       |       |
| 34  | Tx3-    | Transmitter Inverted Data Input.           |       |
| 35  | GND     | Module Ground.                             |       |

|    |      |                                      |  |
|----|------|--------------------------------------|--|
| 36 | Tx1+ | Transmitter Non-Inverted Data Input. |  |
| 37 | Tx1- | Transmitter Inverted Data Input.     |  |
| 38 | GND  | Module Ground.                       |  |

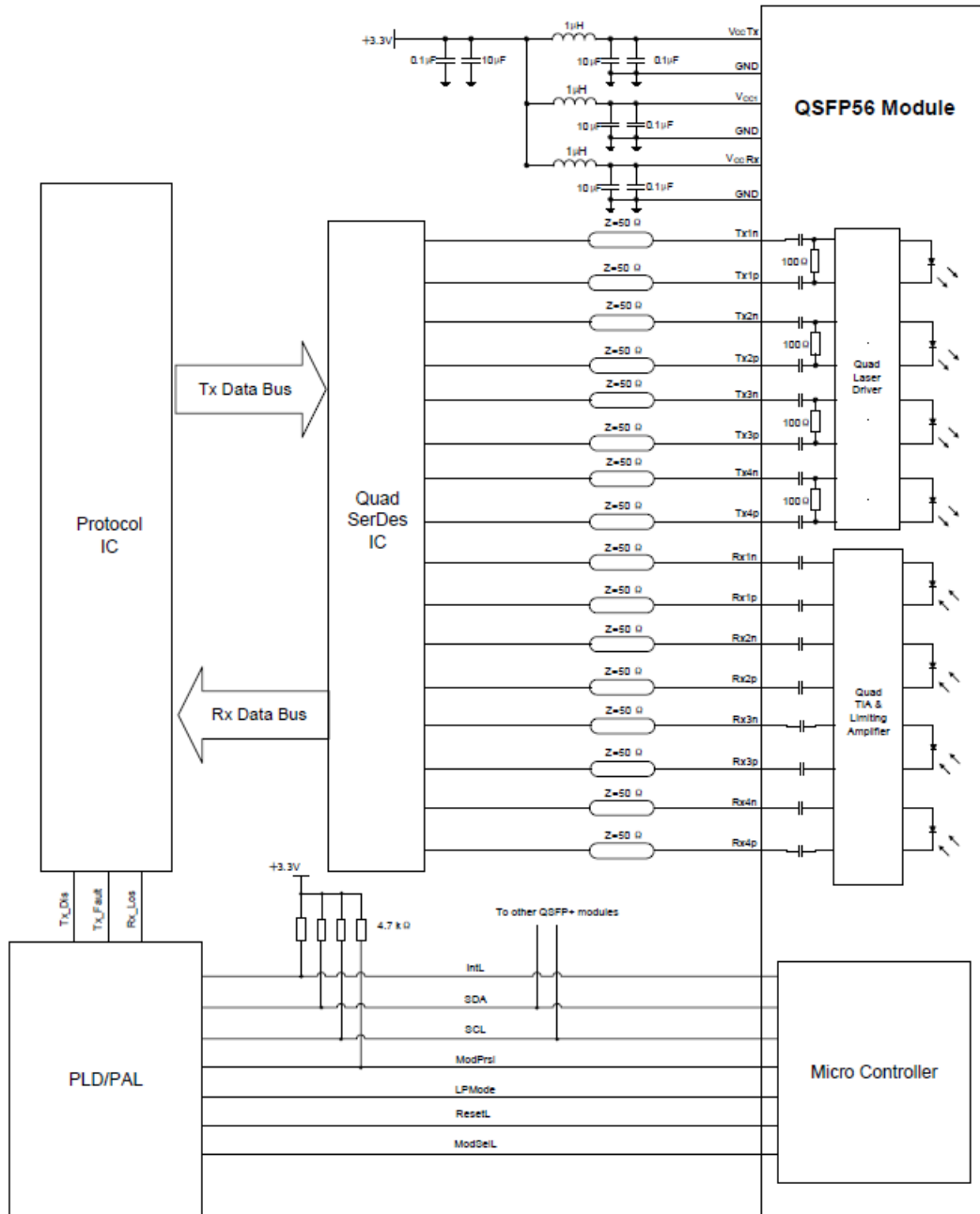
### Pin Assignment



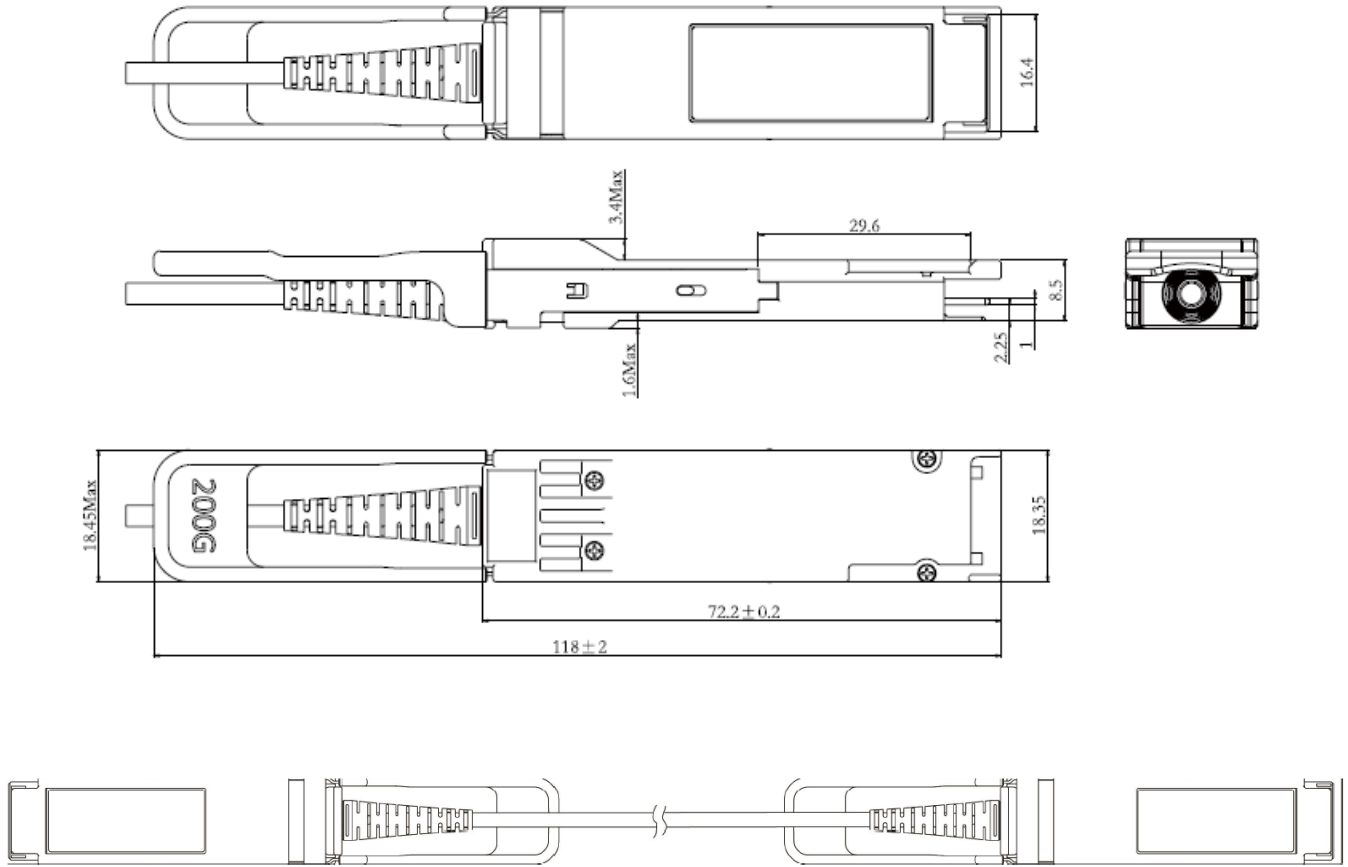
### Block Diagram



# Electrical Interface



## Mechanical Specifications



### Notes:

1. Tolerance  $\pm 0.1\text{mm}$ .
2. Others according with SFF-8661 MSA or Customer Spec.

## About AddOn Networks

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is engrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.



## U.S. Headquarters

Email: [sales@addonnetworks.com](mailto:sales@addonnetworks.com)

Telephone: +1 877.292.1701

Fax: 949.266.9273

## Europe Headquarters

Email: [salesupportemea@addonnetworks.com](mailto:salesupportemea@addonnetworks.com)

Telephone: +44 1285 842070