

## Product Datasheet

### XAOCBL-1M-C

#### Intel® Compatible 1G/10Gb/s SFP+ Active Optical Cable, Active, 1m

##### FEATURES

- Hot pluggable
- Bit rate support from 1G to 11.3Gbps
- Up to 100m by active optical cable with OM2/OM3 fiber
- Pre-terminated fiber cable
- Operating environment temperature 0 ~ 70°C
- Low power consumption
- SFP+ housing with enhanced EMI shielding
- Single 3.3V power supply
- Programmable EEPROM for serial identification

##### APPLICATIONS

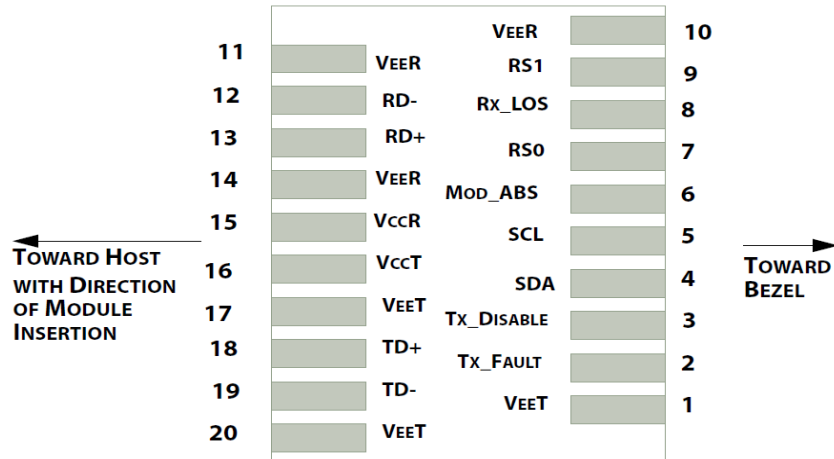
- 10G Ethernet
- Applicable to 1G Ethernet
- 8G Fiber Channel
- Applicable to 4G / 2G / 1G Fiber Channel
- 10G Fiber Channel over Ethernet
- 1X QDR Infiniband
- Applicable to 1X DDR / 1x SDR Infiniband
- High-capacity IO with SFP+ interface
- Data center and in-rack connection
- Compliance
- SFF-8431 SFP+ Electrical MSA
- SFF-8432 SFP+ Mechanical MSA
- RoHS complaint

##### DESCRIPTION

ATGBICS SFP AOC cable assemblies are high-performance, cost effective I/O solutions for 10Gb Ethernet and 10G Fiber Channel applications. SFP+ active optical cables allow hardware manufacturers to achieve high port density, configurability, and utilization at a very low cost and to reduce power budget. The high-speed cable assemblies meet and exceed the performance and reliability requirements stipulated by Gigabit Ethernet and Fiber Channel industry standard.

## Product Datasheet

### Host Board Connector Pin (Top View)



**Note:**

1. For detail information, please refer to SFF-8083 0.8mm Card Edge Connector for 8/10 Gbps Applications

## Product Datasheet

### SFP+ Connector Pin



| Pin | Symbol     | Logic     | Description                         | Note |
|-----|------------|-----------|-------------------------------------|------|
| 1   | VeeT       |           | Module Transmitter Ground           | 1    |
| 2   | Tx_Fault   | LVTTL-O   | Not supported.                      | 3    |
| 3   | Tx_Disable | LVTTL-I   | Not supported.                      | 3    |
| 4   | SDA        | LVTTL-I/O | 2-wire Serial Interface Data Line   | 2    |
| 5   | SCL        | LVTTL-I/O | 2-wire Serial Interface Clock       | 2    |
| 6   | Mod_ABS    |           | Module Absent                       | 2    |
| 7   | RS0        | LVTTL-I   | Not supported.                      | 3    |
| 8   | Rx_LOS     | LVTTL-O   | Not supported.                      | 3    |
| 9   | RS1        | LVTTL-I   | Not supported.                      | 3    |
| 10  | VeeR       |           | Module Receiver Ground              | 1    |
| 11  | VeeR       |           | Module Receiver Ground              | 1    |
| 12  | RD-        | CML-O     | Receiver Inverted Data Output       |      |
| 13  | RD+        | CML-O     | Receiver Non-Inverted Data Output   |      |
| 14  | VeeR       |           | Module Receiver Ground              | 1    |
| 15  | VccR       |           | Module Receiver 3.3 V Supply        | 4    |
| 16  | VccT       |           | Module Transmitter 3.3 V Supply     | 4    |
| 17  | VeeT       |           | Module Transmitter Ground           | 1    |
| 18  | TD+        | CML-I     | Transmitter Non-Inverted Data Input |      |
| 19  | TD-        | CML-I     | Transmitter Inverted Data Input     |      |
| 20  | VeeT       |           | Module Transmitter Ground           | 1    |

## Product Datasheet

### Notes:

1. Module circuit ground pins are isolated from the module chassis ground
2. Pull up to VccHost with 4.7k – 10k
3. No connection required
4. Power supply filtering circuit required

### Absolute Maximum Ratings

| Parameter                  | Symbol | Min  | Max | Unit |
|----------------------------|--------|------|-----|------|
| Storage Temperature        | Ts     | -40  | +85 | °C   |
| Operating Case Temperature | Tc     | -40  | +85 | °C   |
| Operating Humidity         | RH     |      | 85  | %    |
| Supply Voltage             | Vcc    | -0.5 | 3.6 | V    |

### Note:

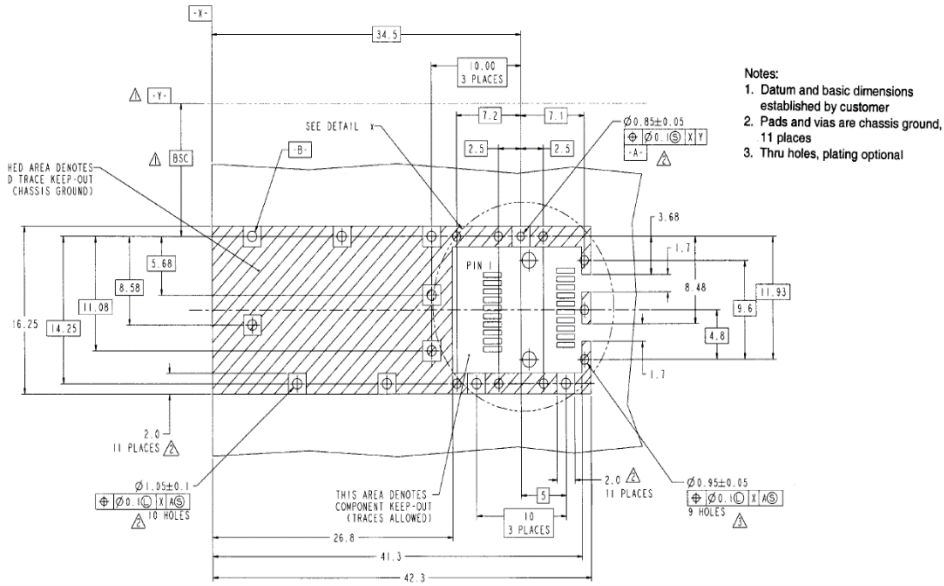
Damage may occur if the transceiver is subjected to conditions beyond the limits.

### Recommended Operating Conditions

| Parameter                  | Symbol | Min | Max  | Unit |
|----------------------------|--------|-----|------|------|
| Operating Case Temperature | Tc     | 0   | +70  | °C   |
| Supply Voltage             | Vcc    | 3.1 | 3.5  | V    |
| Bit Rate                   | BR     | 1   | 11.3 | GB   |

## Product Datasheet

### Host PCB Layout



## Product Datasheet

### Recommended Power Supply Filter



### References:

1. SFF-8431 “Specifications for Enhanced Small Form Factor Pluggable Module SFP+”
2. SFF-8432 “Specification for Improved Pluggable Form factor”
3. SFF-8472 “Specification for Diagnostic Monitoring Interface for Optical Transceivers”

### Mechanical Drawing

