

ABCU-5741ARZ-PRO

Avago® ABCU-5741ARZ Compatible TAA Compliant 10/100/1000Base-TX SFP Transceiver (Copper, 100m, -40 to 85C, RJ-45)

Features

- INF-8074 Compliance
- RJ-45 Connector
- Industrial Temperature -40 to 85 Celsius
- Copper Media Type
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



Applications:

- 1000Base Ethernet
- Access and Enterprise

Product Description

This Avago® ABCU-5741ARZ compatible SFP transceiver provides 10/100/1000Base-TX throughput up to 100m over a copper connection via a RJ-45 connector. This TX module supports 10/100/1000Base auto-negotiation and can be configured to fit your needs. It is guaranteed to be 100% compatible with the equivalent Avago® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. It is built to meet or exceed the specifications of Avago®, as well as to comply with MSA (Multi-Source Agreement) standards to ensure seamless network integration. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Proline'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.



Absolute Maximum Ratings

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|-----------------------|--------|------|------|------|--------|-------|
| Data Rate | DR | 10 | | 1000 | Mb/sec | 2 |
| Cable Length | CL | | | 100 | m | 3 |
| Bit Error Rate | BER | | | 10 | | |
| Operating Temperature | TOP | -40 | | 85 | °C | 4 |
| Storage Temperature | TSTO | -40 | | 85 | °C | 5 |
| Supply Current | IS | | 320 | 375 | mA | 6 |
| Input Voltage | VCC | 3.14 | 3.3 | 3.46 | V | 7 |
| Maximum Voltage | VMAX | | | 4 | V | 6 |

Notes:

1. IEEE 802.3 compatible
2. Category 5 UTP
3. Case Temperature
4. Ambient Temperature
5. For electrical power interface
6. Referenced to GND. For electrical power interface

Electrical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes | |
|--|---------------------|-----------------|---------------|------|---------------|-------|---|
| High Speed Electrical Interface Host-SFP | | | | | | | |
| Single ended Input Swing | V _{IN} | 250 | | 1200 | mV | 1 | |
| Single ended output Swing | V _{OUT} | 275 | | 800 | mV | 1 | |
| Rise time (20%-80%) | T _R | | 175 | | ps | | |
| Fall Time (20%-80%) | T _F | | 175 | | ps | | |
| Tx Input Impedance | Z _{IN} | | 50 | | ohm | 1 | |
| Rx Output Impedance | Z _{OUT} | | 50 | | ohm | 1 | |
| High Speed Electrical Interface Transmission Line-SFP | | | | | | | |
| Line Frequency | F _L | | 125 | | MHz | 2 | |
| Tx Output Impedance Differential | Z _{OUT_TX} | | 100 | | Ohm | 3 | |
| Rx Input Impedance Differential | Z _{IN_RX} | | 100 | | Ohm | 3 | |
| Low Speed Electrical Signal | | | | | | | |
| SFP Output | Low | V _{OL} | 0 | | 0.5 | V | 4 |
| | High | V _{OH} | Host_Vcc -0.5 | | Host_Vcc +0.3 | V | 4 |
| SFP Input | Low | V _{IL} | 0 | | 0.8 | V | 4 |
| | High | V _{IH} | 2 | | VCC + 0.3 | V | 4 |

Notes:

1. Single ended
2. 5-level encoding
3. For all frequencies between 1MHz and 125MHz
4. External 4.7-10k ohm pull-up resistor required

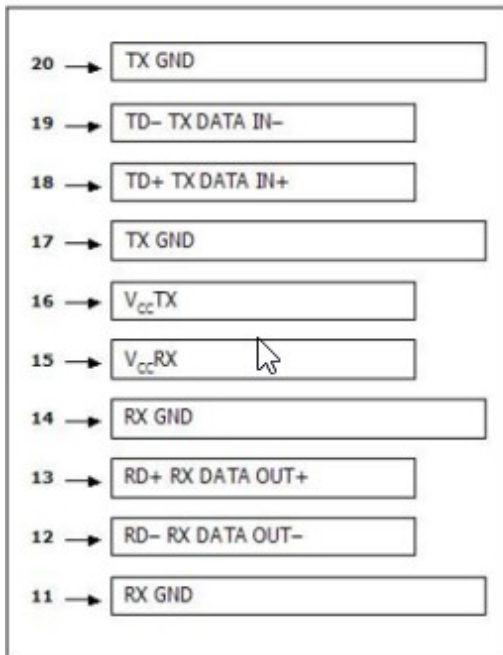
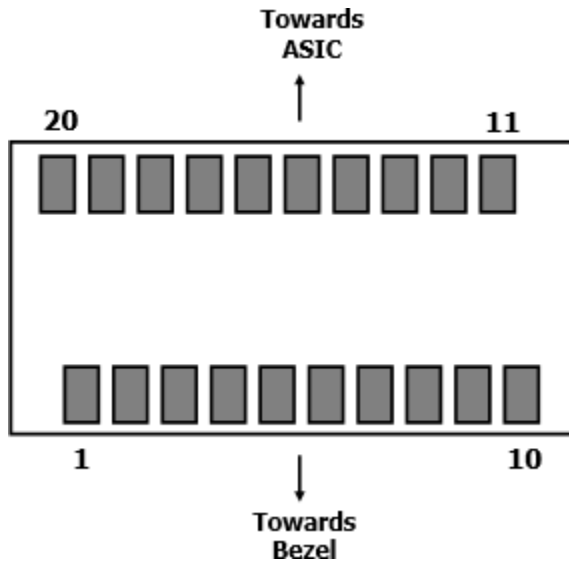
Pin Descriptions

| Pin | Symbol | Name/Descriptions | Ref. |
|-----|-------------|---|------|
| 1 | VEET | Transmitter ground (common with receiver ground) | 1 |
| 2 | TX_FAULT | Transmitter Fault. Not supported | |
| 3 | TX_DISABLE | Transmitter Disable. PHY disabled on high or open | 2 |
| 4 | MOD_DEF (2) | Module Definition 2. Data line for serial ID | 3 |
| 5 | MOD_DEF (1) | Module Definition 1. Clock line for serial ID | 3 |
| 6 | MOD_DEF (0) | Module Definition 0. Grounded within the module | 3 |
| 7 | Rate Select | No connection required | |
| 8 | RX_LOS | Loss of Signal | |
| 9 | VEER | Receiver ground (common with transmitter ground) | 1 |
| 10 | VEER | Receiver ground (common with transmitter ground) | 1 |
| 11 | VEER | Receiver ground (common with transmitter ground) | 1 |
| 12 | RD- | Receiver Inverted DATA out. AC coupled | |
| 13 | RD+ | Receiver Non-inverted DATA out. AC coupled | |
| 14 | VEER | Receiver ground (common with transmitter ground) | 1 |
| 15 | VCCR | Receiver power supply | |
| 16 | VCCT | Transmitter power supply | |
| 17 | VEET | Transmitter ground (common with receiver ground) | 1 |
| 18 | TD+ | Transmitter Non-Inverted DATA in. AC coupled | |
| 19 | TD- | Transmitter Inverted DATA in. AC coupled | |
| 20 | VEET | Transmitter ground (common with receiver ground) | 1 |

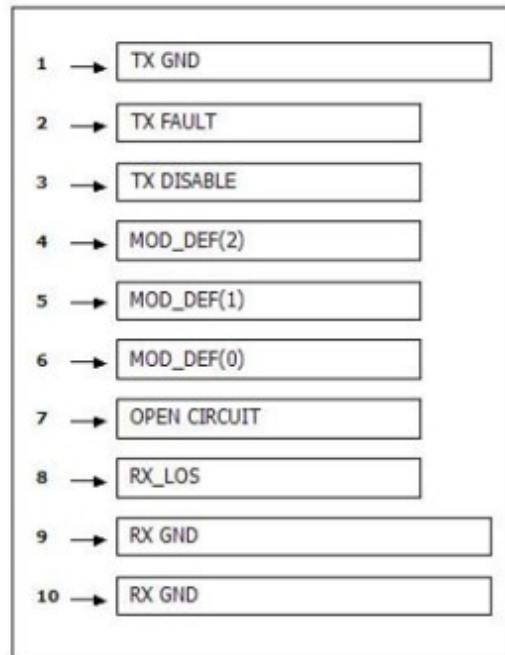
Notes:

1. Circuit ground is connected to chassis ground
2. Disabled: TX_DISABLE > 2V or open, Enabled: TX_DISABLE < 0.8V
3. Should be pulled up with 4.7k-10k ohm on host board to a voltage between 2V and 3.6V

Electrical Pad Layout

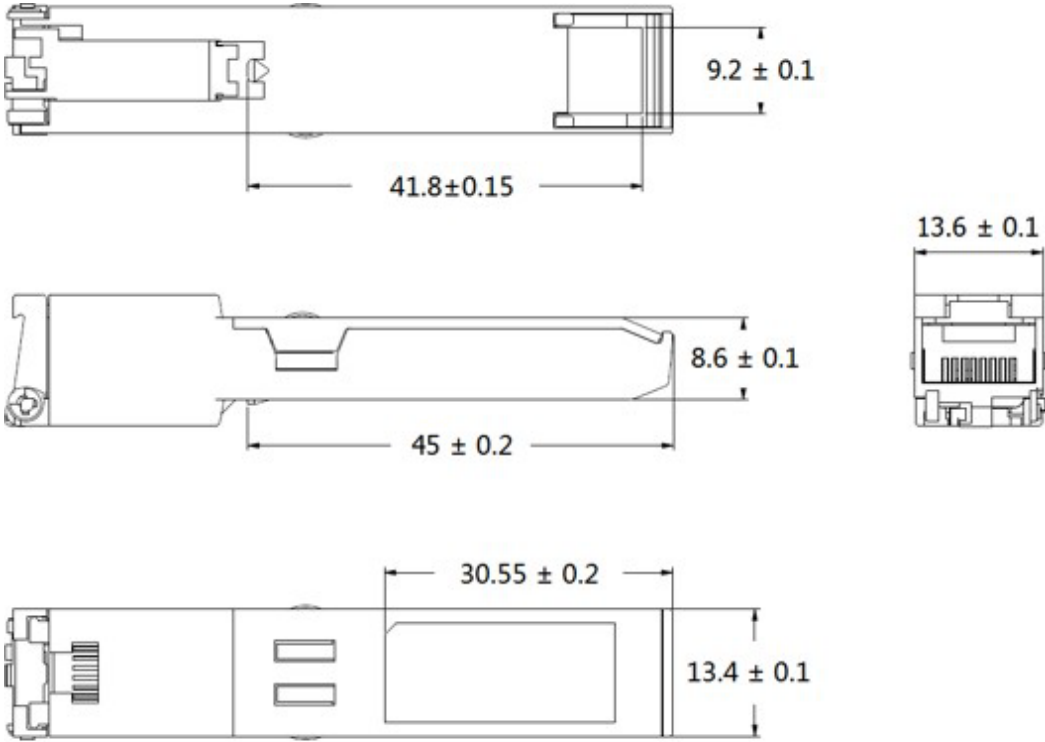


Top of Board



Bottom of Board

Mechanical Specifications



UNIT: mm

About Us:

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.



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