



## AXM765V2-SKY

Netgear® AXM765V2 Compatible 10GBase-TX SFP+ Transceiver (Copper, 80m, RJ-45)

### Product Description

This Netgear® compatible SFP+ transceiver provides 10GBase-TX throughput up to 80m over a copper connection via a RJ-45 connector. This TX module supports 10GBase and can be configured to fit your needs. It is guaranteed to be 100% compatible with the equivalent Netgear® 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 Netgear®, as well as to comply with MSA (Multi-Source Agreement) standards to ensure seamless network integration. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Skylane's transceivers are RoHS compliant and lead-free.

### Features:

- SFF-8432 and SFF-8431 MSA Compliant
- Copper Media Type
- RJ-45 Connector
- Support Hot Pluggable
- Metal with lower EMI
- Commercial Temperature 0 to 70 Celsius
- RoHS compliant and Lead Free
- Excellent ESD protection



### Applications:

- 10GBase Ethernet
- Access and Enterprise

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*For your product safety, please read the following information carefully before any manipulation of the transceiver:*



#### **ESD**

This transceiver is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 /JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.



#### **LASER SAFETY**

This is a Class1 Laser Product according to IEC 60825-1:2007. This product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated (June 24, 2007).

*The optical ports of the module need to be terminated with an optical connector or with a dust plug in order to avoid contamination.*

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### Absolute Maximum Ratings

| Parameter                  | Symbol | Min. | Typ. | Max.       | Unit | Notes |
|----------------------------|--------|------|------|------------|------|-------|
| Data Rate                  | BR     |      | 10   |            | GB/s | 1     |
| Bit Error Rate             | BER    |      |      | $10^{-12}$ |      |       |
| Storage Temperature        | Tstg   | -40  |      | 85         | °C   | 2     |
| Operating Case Temperature | Tc     | 0    |      | 70         | °C   |       |
| Maximum Voltage            | Vcc    | -0.5 |      | 4          | V    |       |

### Notes:

1. IEEE 802.3ae.
2. Ambient temperature.

### Electrical Characteristics

| Parameter      | Symbol             | Min. | Typ. | Max. | Unit | Notes |
|----------------|--------------------|------|------|------|------|-------|
| Input Voltage  | V <sub>CC</sub>    | 3.14 | 3.3  | 3.46 | V    |       |
| Supply Current | I <sub>CC</sub>    |      | 590  |      | mA   | 1     |
| Surge Current  | I <sub>surge</sub> |      |      | 30   | mA   |       |

### Notes:

1. Test at 10Gbps rate using 80m CAT 6A cable.

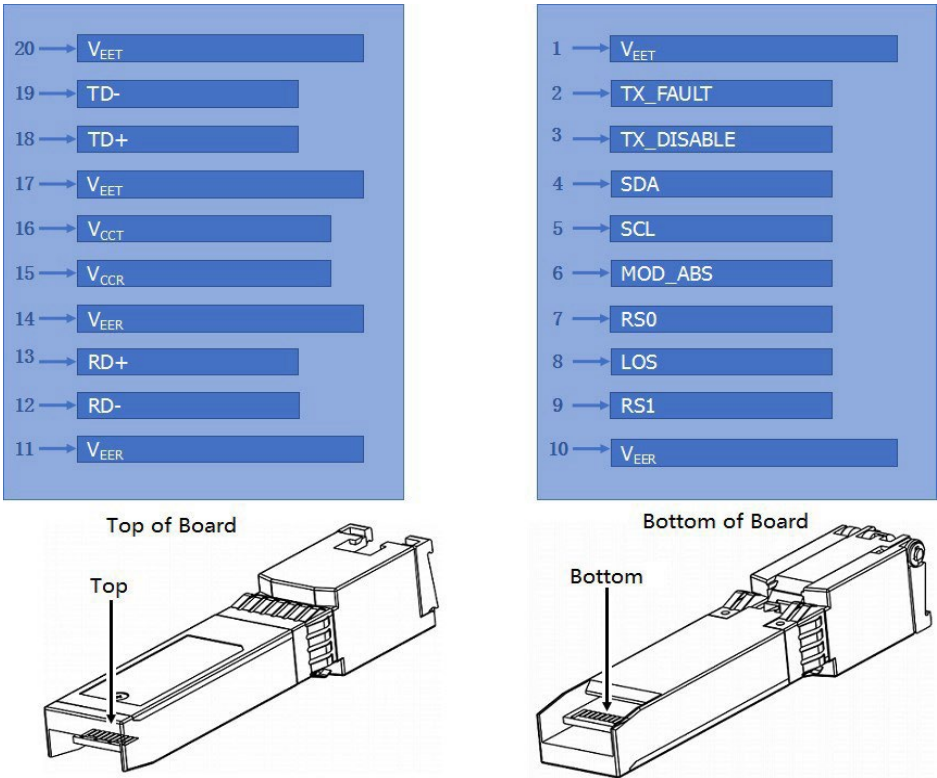
## Pin Descriptions

| Pin | Symbol     | Description                                                    | 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   | SDA        | 2-Wire Serial Interface Data.                                  | 3    |
| 5   | SCL        | 2-Wire Serial Interface Clock.                                 | 3    |
| 6   | MOD_ABS    | Module Absent. Grounded within the module.                     | 3    |
| 7   | RS0        | No Connection Required.                                        |      |
| 8   | LOS        | Loss of Signal Indication, Logic 0 indicated normal operation. |      |
| 9   | RS1        | No Connection Required.                                        |      |
| 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 Receiver 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    |

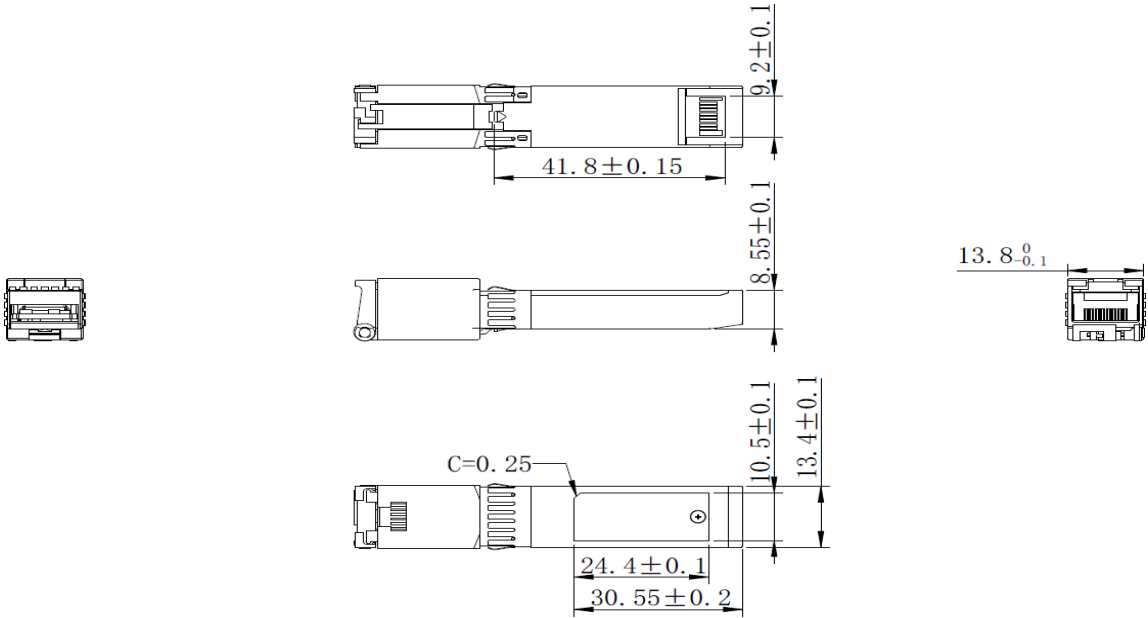
### Notes:

1. Circuit ground is connected to chassis ground.
2. Disabled  $T_{DIS} > 2V$  or open, Enabled  $T_{DIS} < 0.8V$
3. Should be pulled up with 4.7K $\Omega$ -10K $\Omega$  on host board to a voltage between 2V and 3.6V

Electrical Pad Layout



Mechanical Specifications



# About Skylane Optics

Skylane is a leading provider of transceivers for optical communication.

We offer an extensive portfolio for the enterprise, access, datacenter and metropolitan fiber optical market as well as for smart home applications and home networks.

We cover the European, South American and North American market with a strong partner network and have offices in Belgium, Brazil, Sweden and USA.

Our offerings are characterized by high quality and performance. In combination with our strong technical support, we enable our customers to build cost optimized network solutions.

We offer an extensive range of high-quality products including transceivers (Optical and copper), Active Optical Cable (AOC), Direct Attach Cable (DAC), Mux/Demux, Coding Box.

