



## SPT00M30MR00000

MSA and TAA Compliant 100/1000/10000NBase SFP+ Transceiver (Copper, 100/30m, RJ-45) v2

### Product Description

This MSA Compliant SFP+ transceiver provides 100/1000/10000NBase-TX throughput up to 100m over a copper connection via a connector. This TX module supports 100/1000/10000NBase auto-negotiation and can be configured to fit your needs. It is built to MSA standards and is uniquely serialized and data-traffic and application tested to ensure that they will integrate into your network seamlessly. This transceiver is Trade Agreements Act (TAA) compliant. 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 Compliance
- RJ-45 Connector
- Commercial Temperature 0 to 70 Celsius
- Copper Media Type
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



### Applications:

- 10GBase Ethernet
- Access and Enterprise

---

*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.*

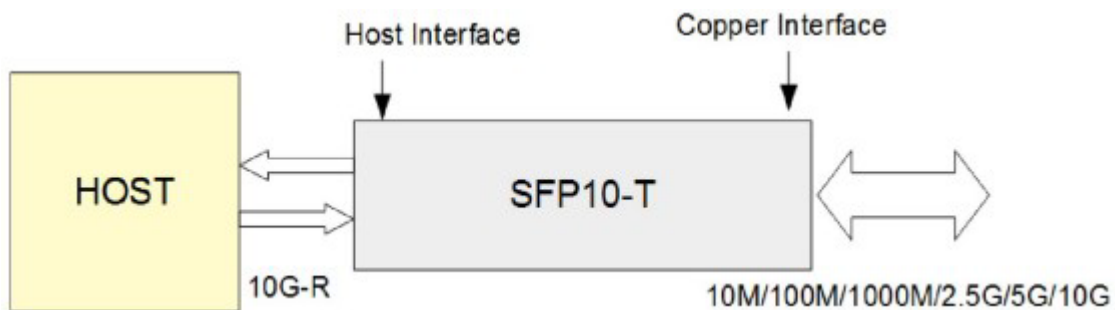
## General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Maximum Supply Voltage	Vmax	-0.5		4	V	
Storage Temperature	TS	-40		85	°C	1
Operating Case Temperature	Tc	0		70	°C	1
Operating Humidity	RH	5		95	%	
Data Rate	DR		10		Gbps	3
Bit Error Rate	BER			10 <sup>-12</sup>		
Supply Current	Icc		700	750	mA	4
Input Voltage	Vcc	3.14	3.3	3.46	V	

### Notes:

1. Ambient temperature
2. Case temperature
3. IEEE 802.3ae
4. Test at 10Gbps rate using 30m CAT 6A cable

### Compatible with Multiple Rates



1. Host Interface: Compatible with 10G rate, only be used on 10G switch port.
2. Copper Interface: Compatible with 10/100/1000M/2.5G/5G/10G, auto-negotiates with remote module rate.
3. Supports 10GBase-T up to 30m using Cat 6A/7 cable.
4. Supports 5GBase-T up to 70m using Cat 5E cable.
5. Supports 2.5GBase-T up to 100m using Cat 5E cable.
6. Supports 10/100/1000Base-T up to 100m using Cat 5E cable.

## Pin Descriptions

Pin	Symbol	Name/Descriptions	Ref.
1	V <sub>EET</sub>	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 Line	3
5	SCL	2-wire Serial Interface Clock Line	3
6	MOD_ABS	Module Absent. Grounded within the module	3
7	RS0	No Connection Required	
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation.	4
9	RS1	No Connection Required	
10	V <sub>EER</sub>	Receiver ground (common with transmitter ground)	1
11	V <sub>EER</sub>	Receiver ground (common with transmitter ground)	1
12	RD <sup>-</sup>	Receiver Inverted DATA out. AC coupled	5
13	RD <sup>+</sup>	Receiver Non-inverted DATA out. AC coupled	5
14	V <sub>EER</sub>	Receiver ground (common with receiver ground)	1
15	V <sub>CCR</sub>	Receiver power supply	
16	V <sub>CCT</sub>	Transmitter power supply	
17	V <sub>EET</sub>	Transmitter ground (common with receiver ground)	1
18	TD <sup>+</sup>	Transmitter Non-Inverted DATA in. AC coupled	
19	TD <sup>-</sup>	Transmitter Inverted DATA in. AC coupled	
20	V <sub>EET</sub>	Transmitter ground (common with receiver ground)	1

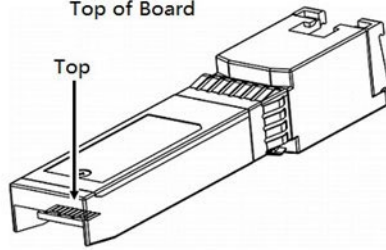
### Notes:

1. Circuit ground is connected to chassis ground
2. Disabled: T<sub>DIS</sub>>2V or open, Enabled: T<sub>DIS</sub><0.8V
3. Should Be pulled up with 4.7k–10k ohm on host board to a voltage between 2V and 3.6V
4. The LOS pin can indicate the connection status of the copper interface. When the copper interface is connected to the far end through the network cable, the LOS is low. Otherwise, when the network cable is disconnected, the LOS is high.
5. RD<sup>±</sup> has squelch function. When the copper interface is connected to the far end through a network cable, RX<sup>±</sup> is working normally. If the network cable is disconnected, RX<sup>±</sup> has no signal output.

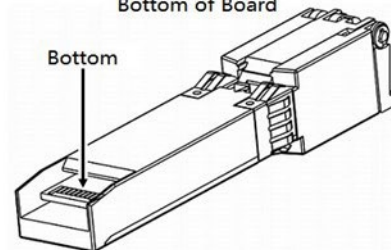
## Electrical Pad Layout



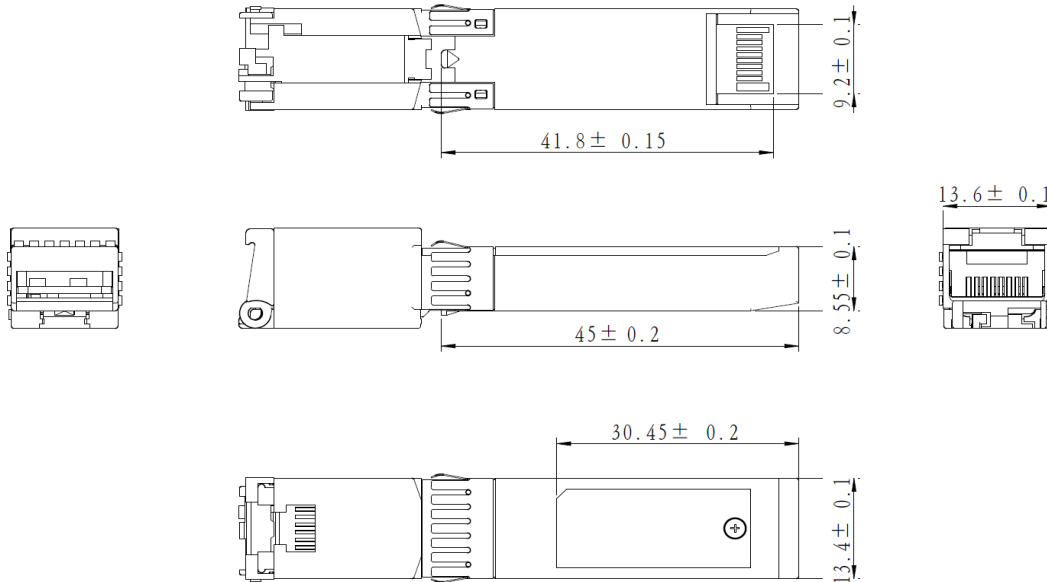
Top of Board



Bottom of Board



## Mechanical Specifications



ALL DIMENSIONS ARE ±0.2mm UNLESS OTHERWISE SPECIFIED

UNIT: mm

# 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.

