

SFP-2-5GBASE-T-AO

MSA and TAA Compliant 2.5GBase-TX SFP Transceiver (Copper, 100m, RJ-45)

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

Product Description

This MSA Compliant SFP transceiver provides 2500Base-TX throughput up to 100m over a copper connection via a RJ-45 connector. This TX module supports 2500Base 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.

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."



Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.4
- ESD to the LC Receptacle: compatible with IEC 61000-4-3
- EMI/EMC compatible with FCC Part 15 Subpart B Rules, EN55022:2010
- Laser Eye Safety compatible with FDA 21CFR, EN60950-1& EN (IEC) 60825-1,2
- RoHS compliant with EU RoHS 2.0 directive 2015/863/EU

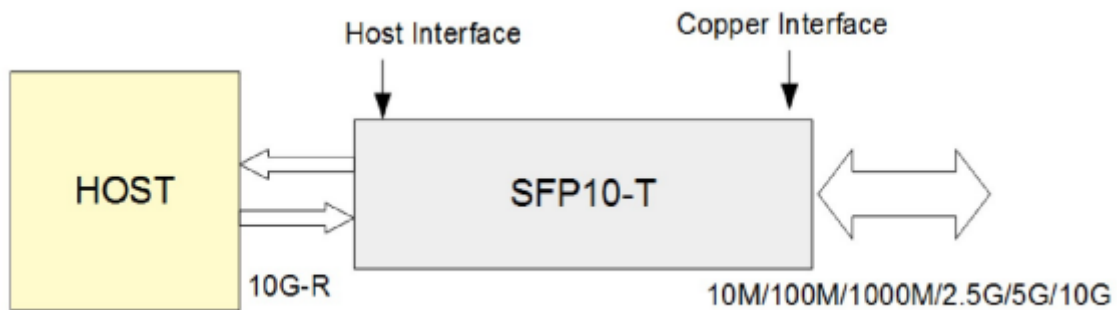
General Specifications

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 ⁻¹²		
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 _{EET}	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 _{EER}	Receiver ground (common with transmitter ground)	1
11	V _{EER}	Receiver ground (common with transmitter ground)	1
12	RD-	Receiver Inverted DATA out. AC coupled	5
13	RD+	Receiver Non-inverted DATA out. AC coupled	5
14	V _{EER}	Receiver ground (common with receiver ground)	1
15	V _{CCR}	Receiver power supply	
16	V _{CCT}	Transmitter power supply	
17	V _{EET}	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	V _{EET}	Transmitter ground (common with receiver ground)	1

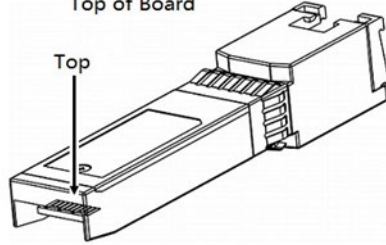
Notes:

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 –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± has squelch function. When the copper interface is connected to the far end through a network cable, RX± is working normally. If the network cable is disconnected, RX± has no signal output.

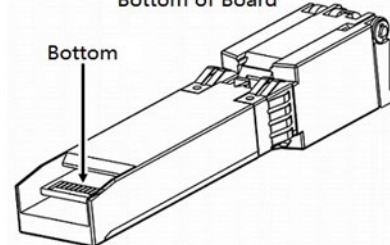
Electrical Pad Layout



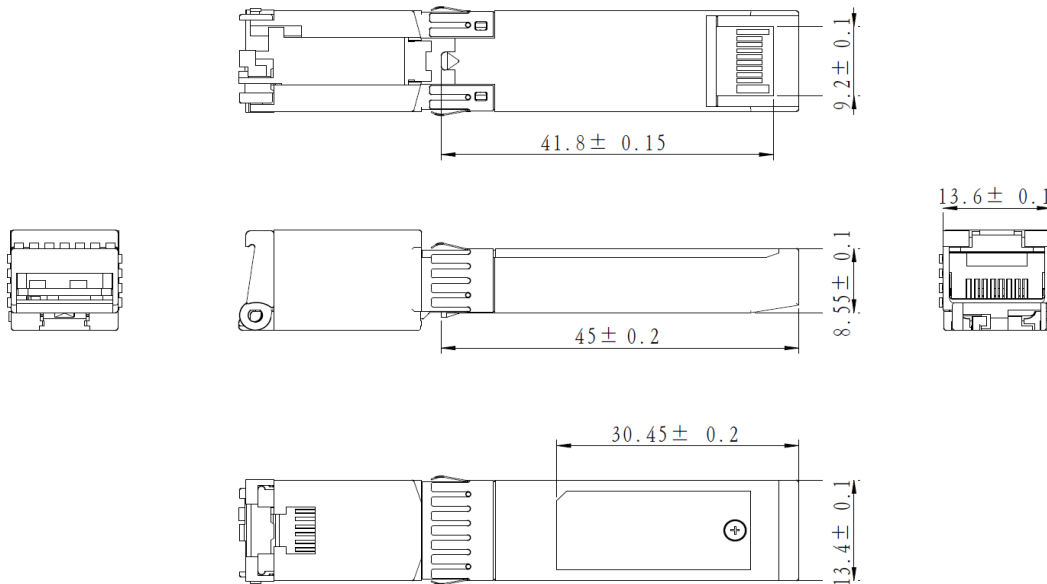
Top of Board



Bottom of Board



Mechanical Specifications



ALL DIMENSIONS ARE ± 0.2 mm UNLESS OTHERWISE SPECIFIED

UNIT: mm

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.

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