

SFP-10GBASE-T-V3-C
10M/100M/1000M/2.5G/5G/10GBASE-TX SFP+
COPPER, 30M/70M/100M
RJ-45 Connector

SFP-10GBASE-T-V3-C

MSA and TAA Compliant 10M/100M/1000M/2.5G/5G/10GBase-TX SFP+ Transceiver (Copper, 30m/70m/100m, RJ-45)

Features

- Supports 10GBase-T Links up to 30m using Cat6a Cable
- Supports 10/100/1000/2.5/5G – up to 100m Using Cat5e or better
- SFF-8431 and SFF-8432 MSA Compliant
- NBase-T Compliant
- Low Power Consumption
 - (1.8W MAX, 30m @ 10G)
 - (1.8W MAX, 100m @ 5G)
 - (1.5W MAX, 100m @ 2.5G)
- Fast Retrain EMI Cancellation Algorithm
- Low EMI Emissions
- I2C 2 Wire Serial Interface for Serial Id and Phy Registers
- Auto-negotiates with other NBase-T PHYs
- MDI/MDIX Crossover
- Multiple Loopback Modes for Testing and Troubleshooting
- Built-in Cable Monitoring and Link Diagnostic Features
 - Cable Length Measurements
 - Opens/Shorts
- Robust Die Cast Housing
- Bail Latch Style ejector mechanism
- Unshielded and Shielded cable support



Product Description

This MSA compliant SFP+ transceiver provides 10M/100M/1000M/2.5G/5G/10GBase-TX SFP+ throughput up to 100m over a copper connection via a RJ-45 connector. This TX module supports 10M/100M/1000M/2.5G/5G/10GBase 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. It is built to meet or exceed the specifications of MSA Compliant, 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.

Prolabs' 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

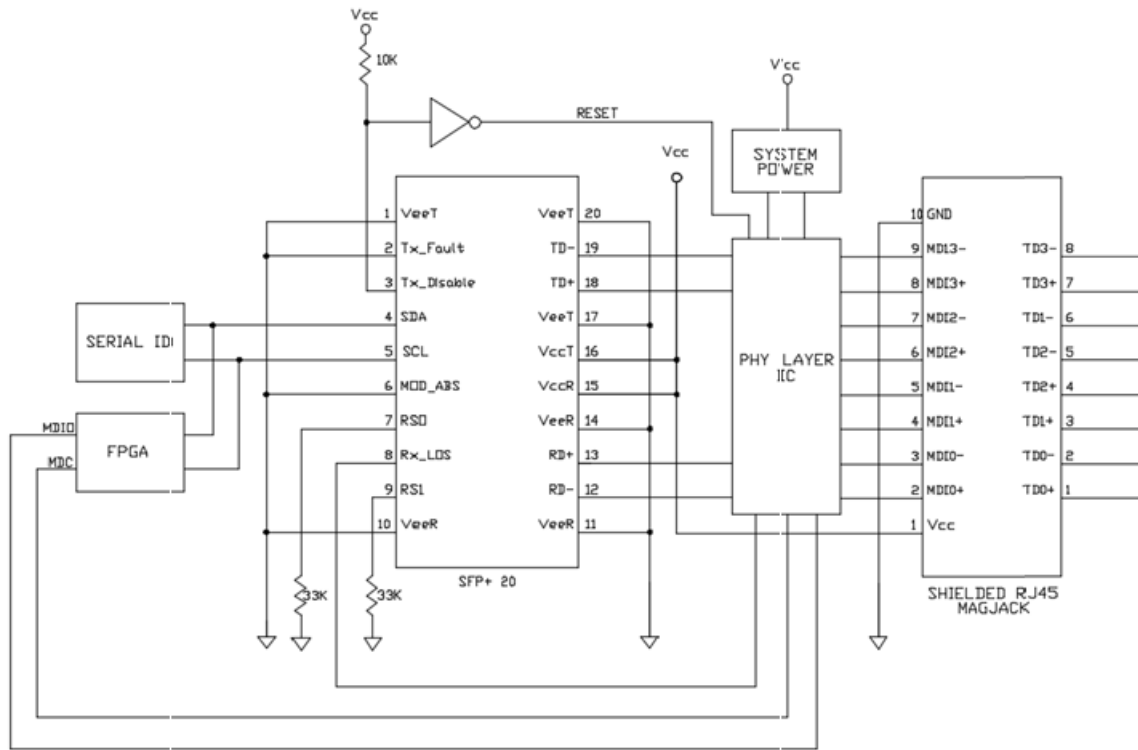
Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Notes
Storage Temperature	Ts	-40	85	°C	
Case Operating Temperature	Tc	-5	85	°C	
Relative Humidity	RH	5	95	%	
Supply Voltage (3.3V)	Vcc		3.6	VDC	
Low Speed Input Voltage		-0.5	Vcc+0.3	V	
Two-Wire Interface Input Voltage		-0.3	Vcc+0.5	V	

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply Voltage (3.3V)	Vcc	3.135	3.3	3.465	VDC	
Power (30m @ 25C ambient, 10Gbps)				1.8	W	Using Cat6a Cable
Power (100m @ 25C ambient, 5Gbps)				1.8	W	Using Cat5e Cable
Power (100m @ 25C ambient, 2.5Gbps)				1.5	W	Using Cat5e Cable

Block Diagram



Pin Descriptions

Pin	Logic	Symbol	Name/Descriptions	Ref.
1		VeeT	Transmitter Ground	1
2	LVTTTL-O	Tx_Fault	Transmitter Fault	
3	LVTTTL-I	Tx_Disable	Transmitter Disable –	
4	LVTTTL-I/O	SDA	2-wire Serial Interface Data Line	
5	LVTTTL-I/O	SCL	2-wire Serial Interface Clock	
6		Mod_ABS	Module Absent, connect to VeeT or VeeR in the module	
7	LVTTTL-I	RS0	Rate Select 0	
8	LVTTTL-O	Rx_LOS	Receiver Loss of Signal Indication	
9	LVTTTL-I	RS1	Rate Select 1	
10		VeeR	Receiver Ground	1
11		VeeR	Receiver Ground	1
12	CML-O	RD-	Receiver Inverted Data Output	
13	CML-O	RD+	Receiver Non-Inverted Data Output	
14		VeeR	Receiver Ground	1
15		VccR	Receiver 3.3V Supply	
16		VccT	Transmitter 3.3V Supply	
17		VeeT	Transmitter Ground	1
18	CML-I	TD+	Receiver Inverted Data Output	
19	CML-I	TD-	Transmitter Invert d Data Input	
20		VeeT	Module Transmitter Ground	1

Notes:

1. The module signal grounds should be isolated from the module case.

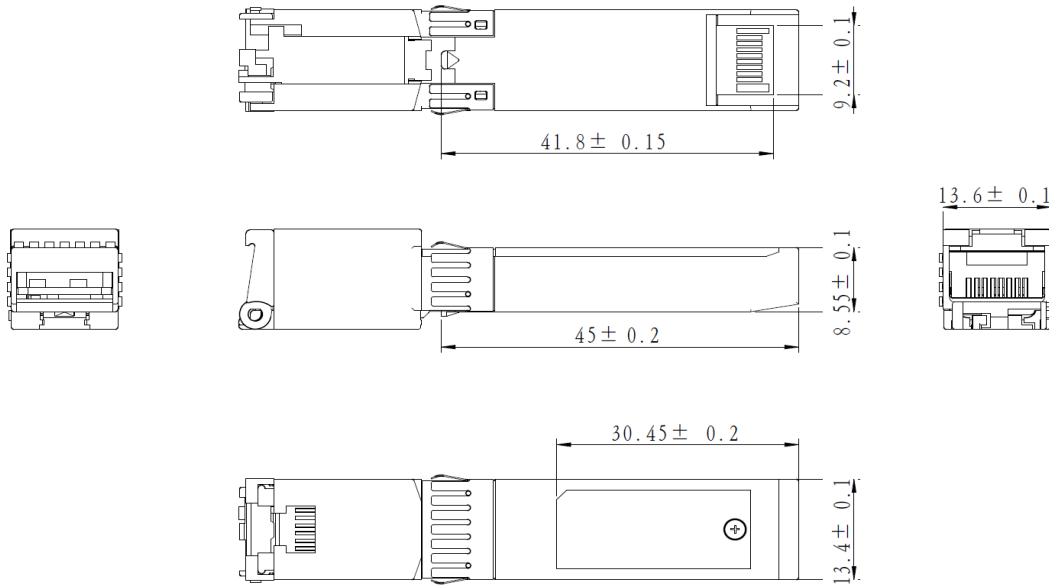
Latch Requirements

Measurement	Minimum	Maximum	Units	Notes
SFP transceiver insertion	N/A	18	Newtons	1
SFP transceiver extraction	N/A	12.5	Newtons	1
SFP transceiver retention	90	170	Newtons	2
Insertion/removal cycles, SFP transceiver	50	N/A	Cycles	3

Notes:

1. Measure without the force from any cage kick out springs. Module to be inserted into nominal cage.
2. No functional damage to module below 90N.
3. No functional damage to module, cage or connector

Mechanical Specifications



ALL DIMENSIONS ARE ± 0.2 mm UNLESS OTHERWISE SPECIFIED

UNIT: mm