F5-UPG-SFPC-R-OPC

F5 Networks® F5-UPG-SFPC-R Compatible TAA 10/100/1000Base-TX SFP Transceiver (Copper, 100m, RJ-45)

Features

- INF-8074 Compliance
- RJ-45 Connector
- Copper Media Type
- Commercial Temperature 0 to 70 Celsius
- Hot Pluggable
- Metal with Lower EMI
- Excellent ESD Protection
- RoHS Compliant and Lead Free

Applications:

- 1000Base Ethernet
- Access and Enterprise

Product Description

This F5 Networks® F5-UPG-SFPC-R compatible SFP transceiver provides 10/100/1000Base-TX throughput up to 100m over a copper connection via a RJ-45 connector. It can operate at temperatures between 0 and 70C. This TX module supports 10/100/1000Base auto-negotiation and can be configured to fit your needs. Our transceiver is built to meet or exceed OEM specifications and is guaranteed to be 100% compatible with F5 Networks®. It has been programmed, uniquely serialized, and tested for data-traffic and application to ensure that it will initialize and perform identically. All of our transceivers comply with Multi-Source Agreement (MSA) standards to provide 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.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Storage Temperature	Ts	-40		85	°C	
Operating Temperature	Top	0		+70	°C	
Maximum Supply Voltage	Vmax	-0.5		4.0	V	
Operating Relative Humidity	RH			85	%	
Data Rate			10/100		Mbps	
Distance				100	m	

Electrical Specifications +3.3 Volt Electrical Power Interface

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	Vcc	3.13	3.3	3.47	V	
Supply Current	Icc		300	350	mA	
Surge Current	Isurge		30		A	
Low-Speed Signals, Electronic Characteristics						
SFP Output LOW	VOL	0		0.5	V	1
SFP Output HIGH	VOH	host_Vcc-0.5		host_Vcc+0.3	V	1
SFP Input LOW	VIL	0		0.8	V	2
SFP Input HIGH	VIH	2		Vcc + 0.3	V	2
High-Speed Electrical Interface, Transmission Line-SFP						
Line Baud Rates	fL		125		MHz	3
TX Output Impedance	Zout, TX		100		Ohm	4
RX Input Impedance	Zin, RX		100		Ohm	4
High-Speed Electrical Interface, Host-SFP						
Single ended data input swing	Vin	250		1200	mV	5
Single ended data output swing	Vout	300		800	mV	5
Rise/Fall Time	Tr, Tf		175		Nsec	6
TX Input Impedance	Zin		50		Ohm	5
RX Output Impedance	Zin		50		Ohm	5

Notes:

1. 4.7k to 10k pull-up to host_Vcc, measured at host side of connector
2. 4.7k to 10k pull-up to Vcc, measured at SFP side of connector
3. 5 level encoding per IEEE802.3
4. Differential, for all frequencies between 1MHz and 125MHz
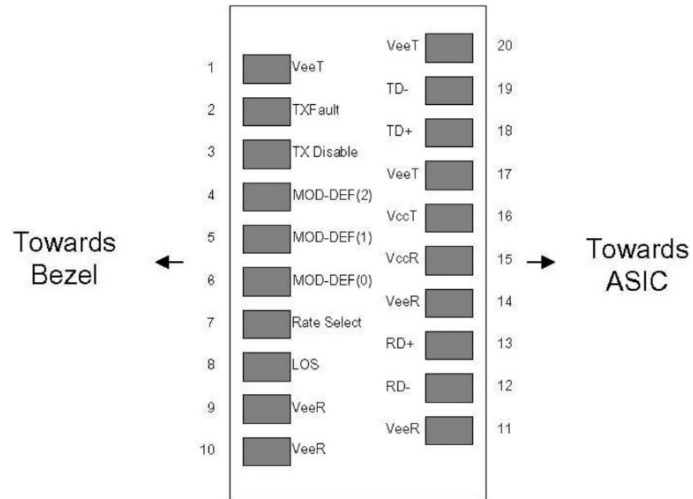5. Single ended
6. 20%-80%

Pin Descriptions

Pin	Symbol	Name/Descriptions	Ref.
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	TX Fault	Transmitter Fault. Not Supported	
3	TDIS	Transmitter Disabled. 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	LOS	Loss of Signal indication.	4
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. PHY disabled on TDIS > 2.0V or open, enabled on TDIS <0.8V
3. Should be pulled up with 4.7k-10k Ohms on host board to a voltage between 2.0V and 3.6V.MOD_DEF

(0) pulls line low to indicate module is plugged in.

4. LVTTL compatible with a maximum voltage of 2.5V. Not supported on GE-GB-P

1	VeeT		VeeT	20	
2	TXFault		TD-	19	
3	TX Disable		TD+	18	
4	MOD-DEF(2)		VeeT	17	
5	MOD-DEF(1)		VccT	16	
6	MOD-DEF(0)		VccR	15	
7	Rate Select		VeeR	14	
8	LOS		RD+	13	
9	VeeR		RD-	12	
10	VeeR		VeeR	11	

Towards Bezel ←   → Towards ASIC

Pin-out of connector Block on Host board

Mechanical Specifications