SFP-4GB-2RX-16DB-AO

MSA and TAA 4.25GBase Dual Rx SFP PIN Receiver (SMF, 1263.5nm to 1617.5nm, LC, DOM, 16dBm)

Features

- LC/UPC Optical Connector
- Supports Serial ID Functionality
- Compliant with SFF-8431, SFF-8432
- Dual Pin-TIA Receiver
- Single +3.3V Power supply
- Digital Diagnostic Monitoring
- RoHS Compliant and Lead-Free
- Hot-Pluggable Interface

Applications

- Digital Return Receive-only
- 4.25GBase Ethernet

Product Description

This MSA compliant multi-rate SFP PIN receiver provides 4.25GBase dual Rx throughput with 16dBm sensitivity. It can operate at temperatures between 0 and 70C. All of our receivers are built to comply with Multi-Source Agreement (MSA) standards and are uniquely serialized and tested for data-traffic and application to ensure seamless network integration. Additional product features include Digital Optical Monitoring (DOM) support which allows access to real-time operating parameters.This receiver 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."

TAA COMPLIANT

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Maximum Supply Voltage	Vcc	-0.5		3.8	V	
Storage Temperature	Tstg	-40		85	℃	
Operating Case Temperature	Tc	0		70	℃	
Relative Humidity		5		95	%	w/o dew
Power Supply Current	Icc			400	mA	@3.3V
Power Supply Noise Tolerance	PSNT			100	mVp-p	1

Notes:

1. From 100Hz to 1MHz.

Electrical Characteristics

Parameter		Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage		Vcc	3.135	3.3	3.465	V	
Receiver							
Damage Threshold		PRDMG	3			dBm	
Data Rate		DR	2.125		4.25	Gbps	
Differential Output Voltage		Vout	370		2000	mV	1
Differential Output Impedance		Zout	90	100	110	Ω	
Rx_LOS (Loss of Signal)	**Output_Low**	Vlos	0		0.8	V	2
	Output_High	ILOSH	2		Vcc+0.3	V	2
	Assert time	tLos-On			100	us	3
	Deassert time	tLos-Off			100	us	4

Notes:

2. AC Couple
3. LVTTL, Low is Normal.
4. High @S.
5. Low@S.

Optical Characteristics

Parameter		Symbol	Min.	Typ.	Max.	Unit	Notes
Receiver							
Center Wavelength		λo	1260		1620	nm	
Optical Overload		OL	-8			dBm	
Optical Sensitivity	**2.125 Gbps**	S			-23	dBm	1
	4.25Gbps				-16		2
Rx_LOS (Loss of Signal)	**Assert**	LOSA	-35			dBm	3
	De-Assert	LOSD			-18	dBm	
	Hysteresis	LOSHys	0.5		5	dB	
RSSI Calibration		RCAL	Internal Calibration				

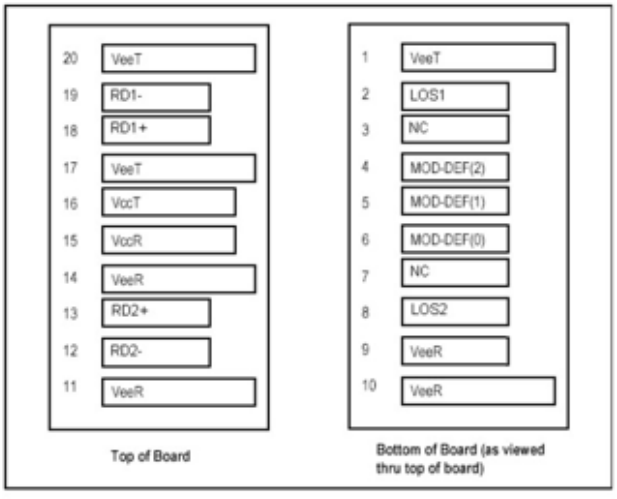
Notes:

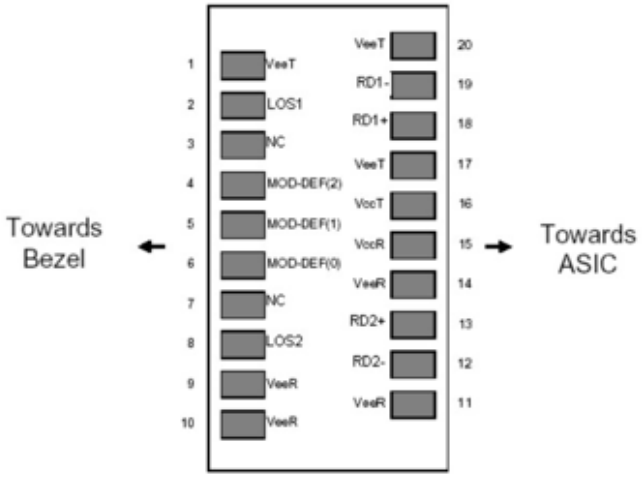
1. 2.125Gbps, PRBS2^{31}-1, source ER 8.2dB, BER $1x10^{-12}$.
2. 4.25Gbps, PRBS2^{31}-1, source ER5.0dB, BER $1x10^{-12}$.
3. RX Squelch activated.

Pin Descriptions

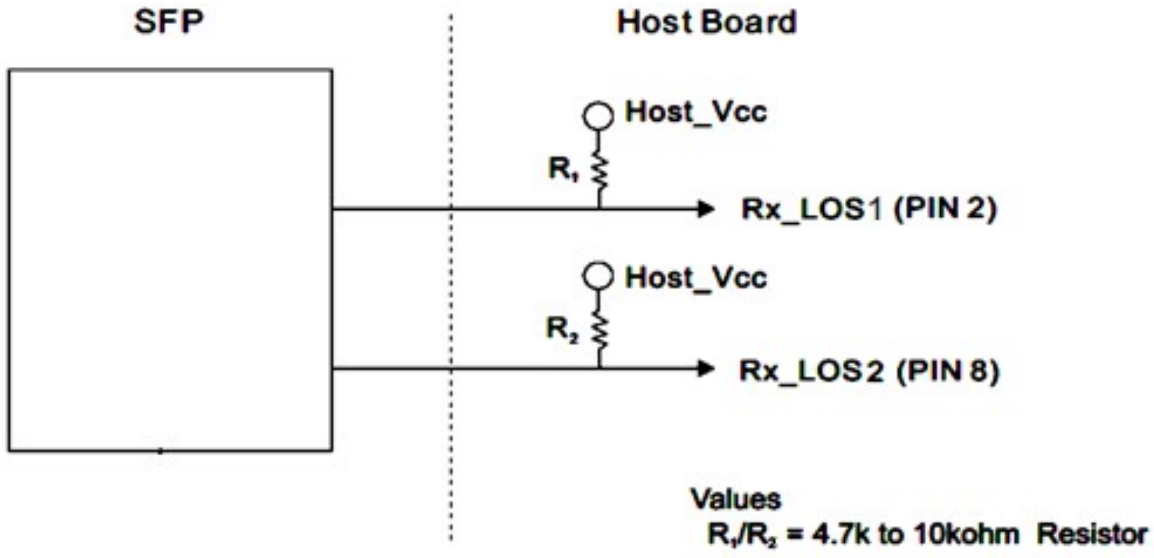
Pin	Symbol	Name/Descriptions	Plug Seq.	Notes
1	VeeT	Receiver 1 Ground.	1	
2	LOS1	Receiver 1 LOS Status Output.	3	
3	NC	Not Connected.	3	
4	MOD_DEF1	Module Definition 2.	3	
5	MOD_DEF1	Module Definition 1.	3	
6	MOD_DEF0	Module Definition 0.	3	
7	NC	Not Connected.	3	
8	LOS2	Receiver2 LOS Status Output.	3	
9	VeeR	Receiver2 Ground.	3	
10	VeeR	Receiver2 Ground.	1	
11	VeeR	Receiver2 Ground.	1	
12	Rx_Data2 bar	Receiver2 Negative Data Output.	3	
13	Rx_Data2	Receiver2 Positive Data Output.	3	
14	VeeR	Receiver2 Ground.	1	
15	VccR	Receiver2 DC Power supply. Typical +3.3V.	2	
16	VccT	Receiver1 DC Power supply. Typical +3.3V.	2	
17	VeeT	Receiver1 Ground.	1	
18	Rx_Data1	Receiver1 Positive Data Input.	3	
19	Rx_Data1 bar	Receiver1 Negative Data Input.	3	
20	VeeT	Receiver1 Ground.	1	

Electrical Pin-Out Details

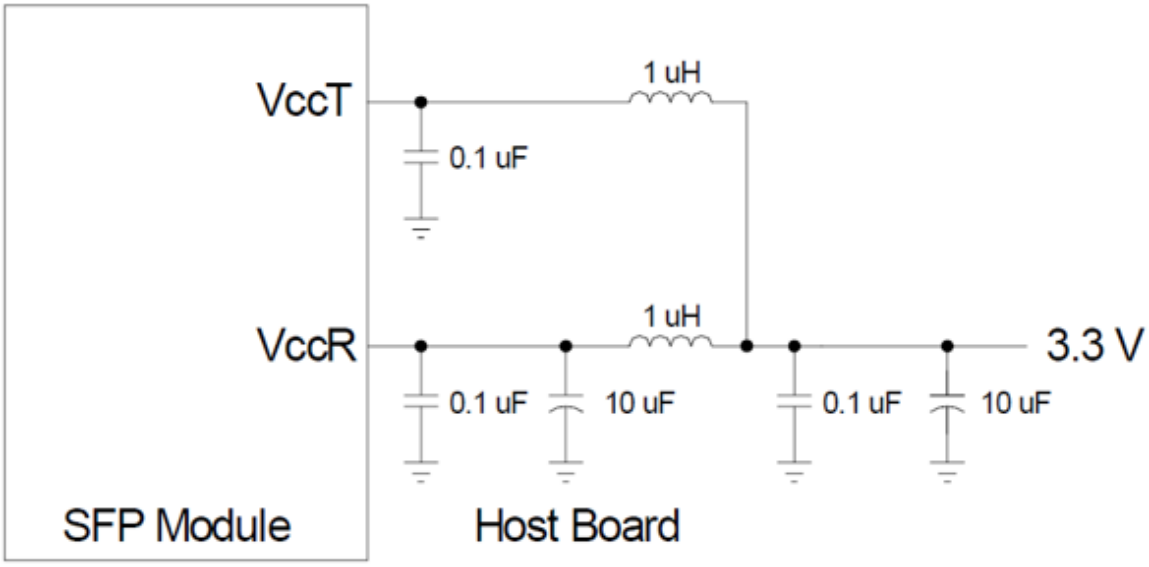




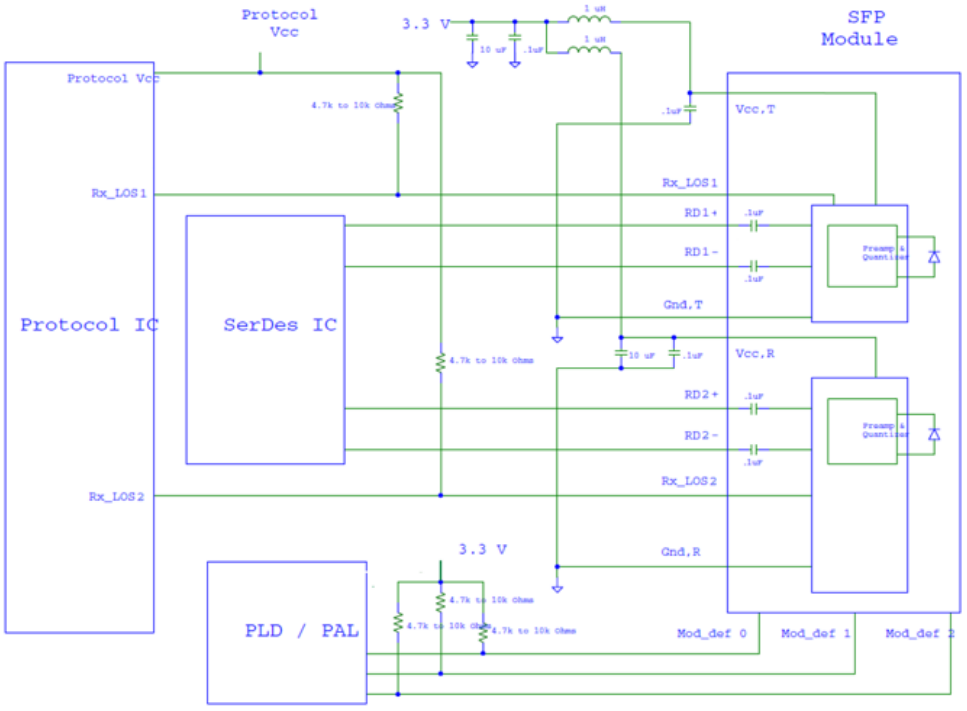
SFP Host Board



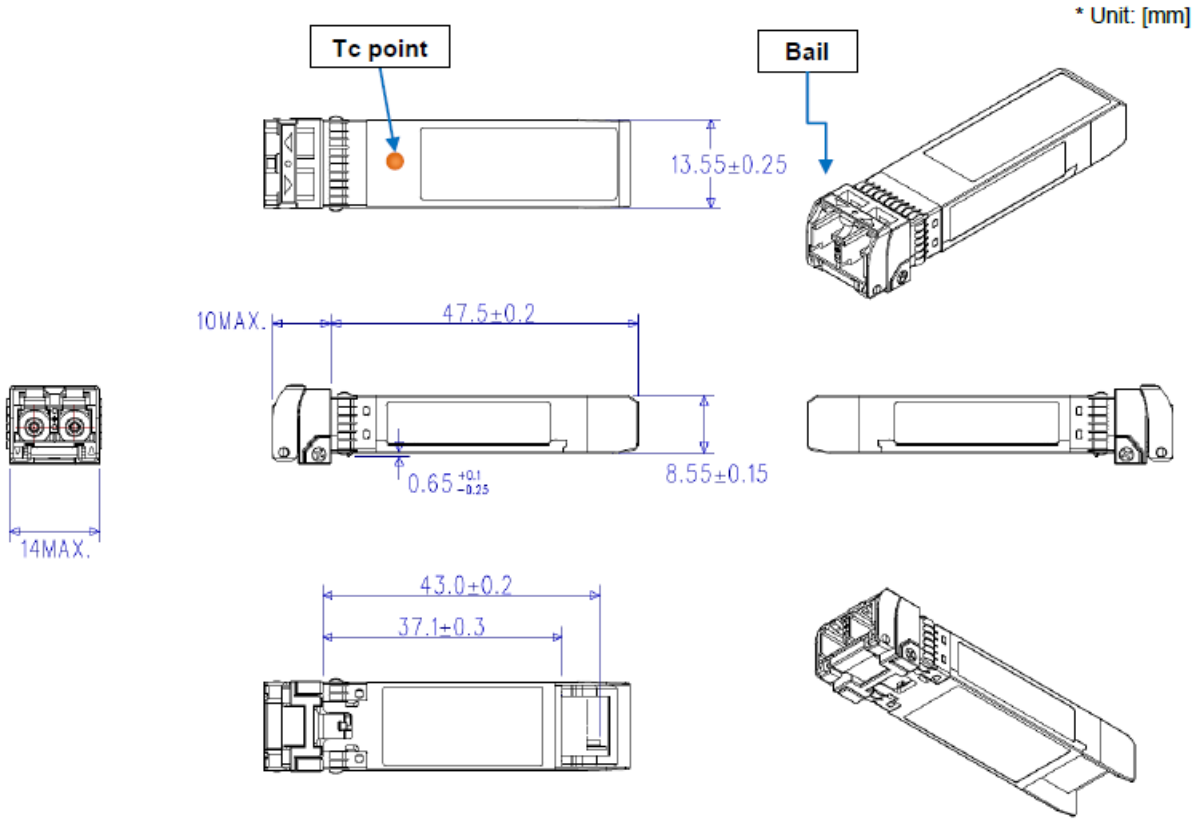
Recommended Power Supply Filter



Recommended Interface Circuit



Mechanical Specifications



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 in 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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