

## 6GK5992-1AM00-8AA0-AO

Siemens® 6GK5992-1AM00-8AA0 Compatible TAA 1000Base-LX SFP Transceiver (SMF, 1310nm, 10km, LC, DOM, Rugged)

### Features

- INF-8074 and SFF-8472 Compliance
- Duplex LC Connector
- Industrial Temperature -40 to 85 Celsius
- Single-mode Fiber
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



### Applications

- 1x Fibre Channel
- 1000Base-LX Ethernet
- Access and Enterprise

### Product Description

This Siemens Nixdorf® 6GK5992-1AM00-8AA0 compatible SFP transceiver provides 1000Base-LX throughput up to 10km over single-mode fiber (SMF) using a wavelength of 1310nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent Siemens Nixdorf® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. 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."



### Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Maximum Supply Voltage	V <sub>CC</sub>	-0.5	4.0	V
Storage Temperature	T <sub>S</sub>	-40	85	°C
Operating Case Temperature	T <sub>C</sub>	-40	85	°C
Operating Humidity	RH	5	85	%
Receiver Power	R <sub>MAX</sub>		0	dBm
Maximum Bitrate	B <sub>max</sub>		1.25	Gbps

### Electrical Characteristics (TOP=25°C, V<sub>CC</sub>=3.3Volts)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	V <sub>CC</sub>	3.15	3.30	3.43	V	
Power Supply Current	I <sub>CC</sub>			303	mA	
Power Consumption	P <sub>DISS</sub>			1	W	
Transmitter						
Differential data input swing	V <sub>IN,pp</sub>	120		850	mV	
Input differential impedance	Z <sub>IN</sub>	80	100	120	Ω	
Receiver						
Differential data output swing	V <sub>OUT,pp</sub>	300		850	mV	
Output differential impedance	Z <sub>IN</sub>	80	100	120	Ω	

### Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Optical Power (average)	P <sub>AVE</sub>	-9.5		-3	dBm	1
Optical Extinction Ratio	ER	9			dB	
Optical Wavelength	T <sub>λ</sub>	1270	1310	1355	nm	
Insertion Loss	IL		0.6			
Receiver						
Receiver Sensitivity (average)	R <sub>AVE</sub>			-24	dBm	3
Receiver Overload	P <sub>max</sub>	0			dBm	4
Optical Return Loss	ORL	12			dB	
Receiver Wavelength	R <sub>λ</sub>	1260		1565	nm	

### Notes:

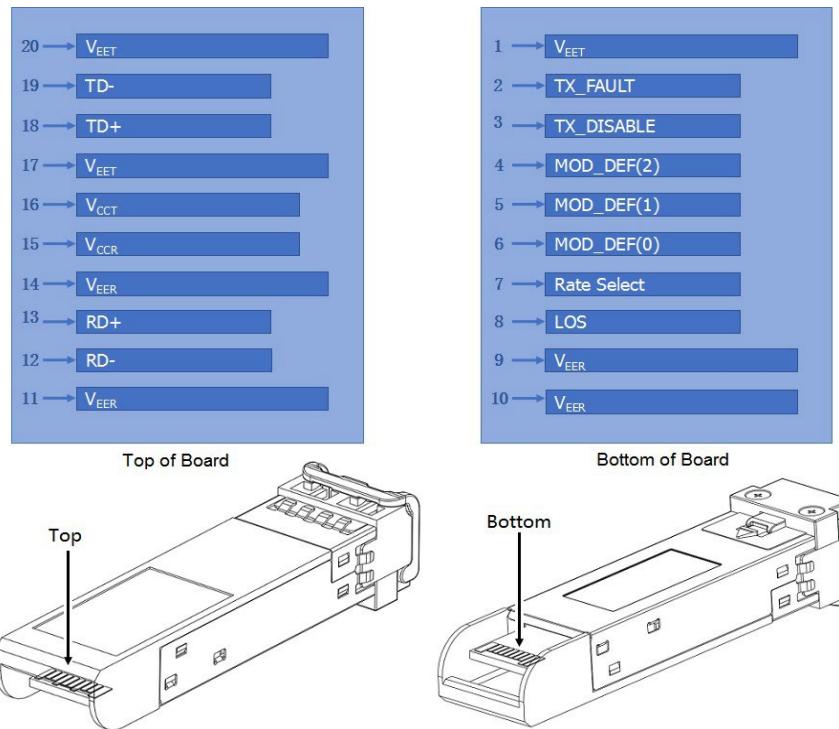
1. Coupled into a Single-mode fibre
2. Per IEEE 802.3ah specification
3. Average power, back-to-back, @1.25Gbps, BER 1E-12, PRBS 2<sup>31</sup>-1.
4. Exceeding the Receiver overload can physically damage the module. Please use appropriate attenuation.

## Pin Descriptions

Pin	Symbol	Descriptions	Notes
1	VEET	Transmitter ground (common with receiver ground)	1
2	TX_FAULT	Transmitter Fault. Not supported	
3	TX_DISABLE	Transmitter Disable. Laser output 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. Logic 0 indicates normal operation	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

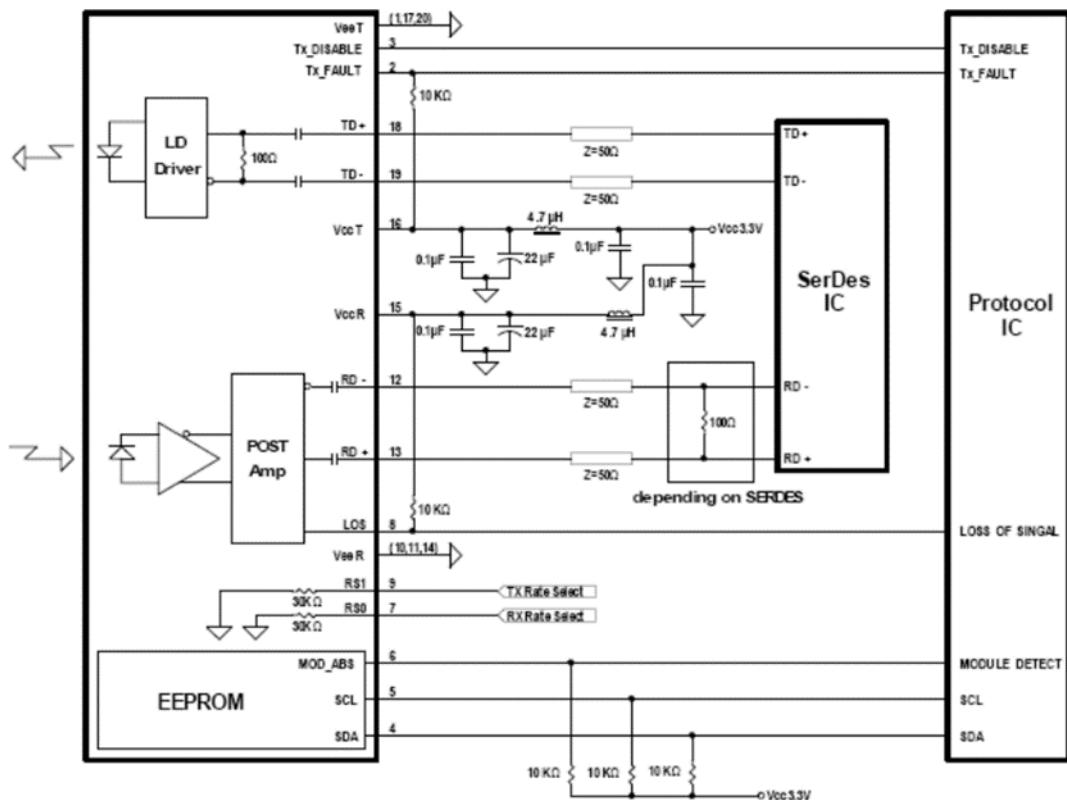
### Notes:

1. Circuit ground is isolated from 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. LOS is open collector output.



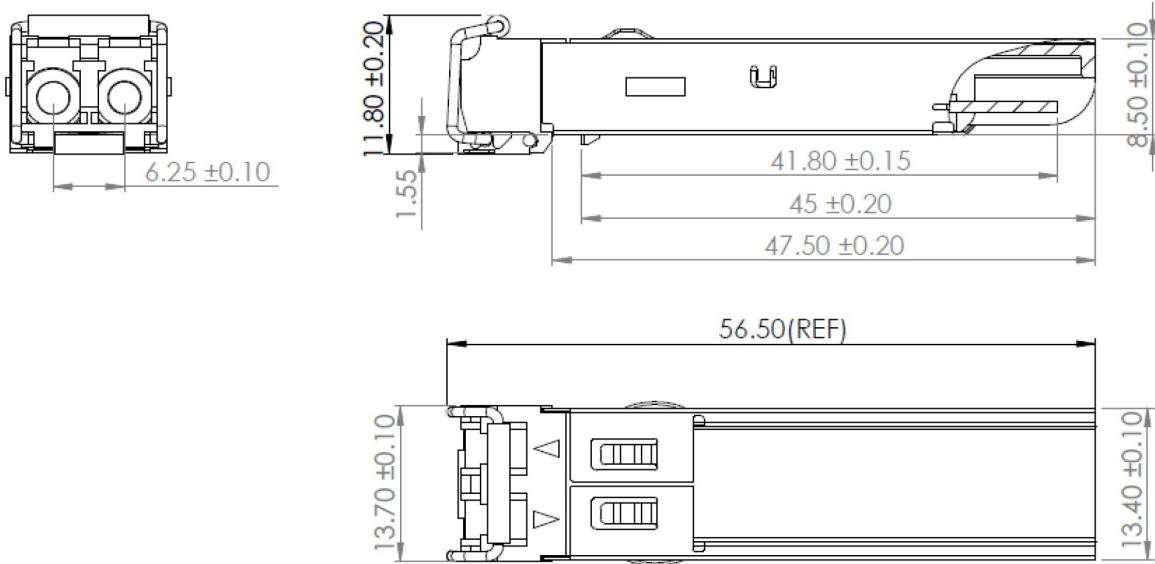
Pin-out of connector Block on Host board

### Recommended Circuit Schematic



## Mechanical Specifications

Small Form Factor Pluggable (SFP) transceivers are compatible with the dimensions defined by the SFP Multi-Sourcing Agreement (MSA).



## EEPROM Information

EEPROM memory map specific data field description is as below:

2 wire address 1010000X (A0h)		2 wire address 1010001X (A2h)	
0	Serial ID Defined by SFP MSA (96 bytes)	0	Alarm and Warning Thresholds (56 bytes)
95		55	Cal Constants (40 bytes)
127	Vendor Specific (32 bytes)	95	Real Time Diagnostic Interface (24 bytes)
		119	Vendor Specific (8 bytes)
	Reserved, SFF8079 (128 bytes)	127	
255		247	User Writable EEPROM (120 bytes)
		255	Vendor Specific (8 bytes)

## 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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