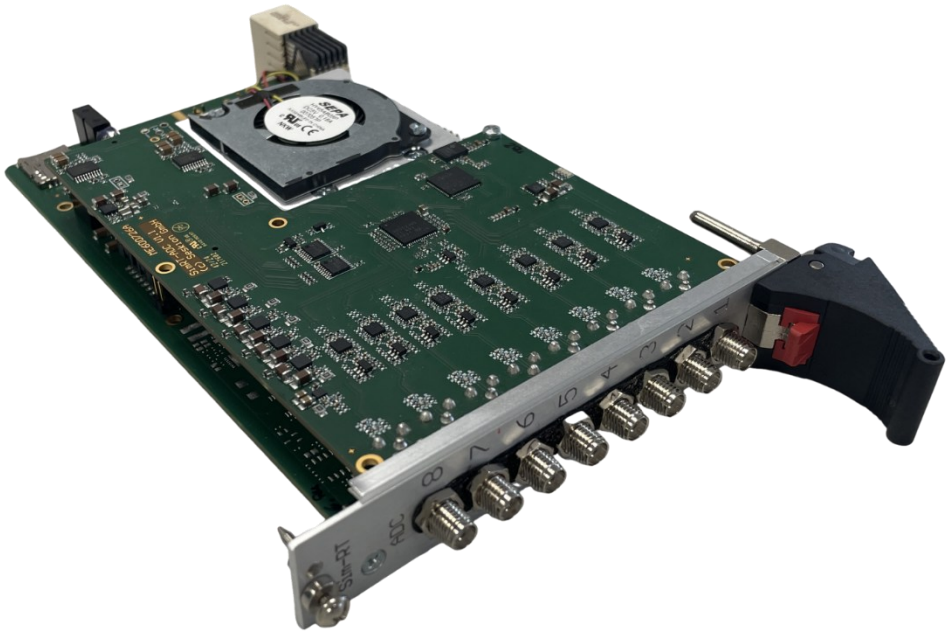
Simulyzer-RT ADC-Card



Hardware version	V1.0
Documentation version:	1.0
Created:	(1.0) 11.12.2025
Order no.:	20.5006

Safety instructions

To avoid damages to persons and devices the following safety instructions have to be noticed!

- Only qualified personnel are allowed to handle this device!
- Before any handling within the device the current supply has to be switched off!
- During operation the device have to be positioned, that enough air condition is supplied and no small parts can get into the ventilation slots.
- In case of any trouble the system has to be switched de-energized!
- The declared environmental conditions and max. voltage ranges have to be observed!
- To warranty the device remove all dust and dirt in periodically intervals.
- Make sure that the ventilation slots are unobstructed!

Intended use:

The Simulyzer-RT ADC card is designed exclusively for measuring and analyzing voltages in a Simulyzer RT test system. The ADC card's range of tasks extends to analog recording within the test system (see Areas of Application).

- The device is only permitted to use for the intended use.
  Any other use results the deletion of the guarantee!

For questions and repair cases contact SesKion GmbH
Tel.: +49 (0)711/990 58 14
Fax: +49 (0)711/990 58 27
Email: info@seskion.de
Internet: www.seskion.de

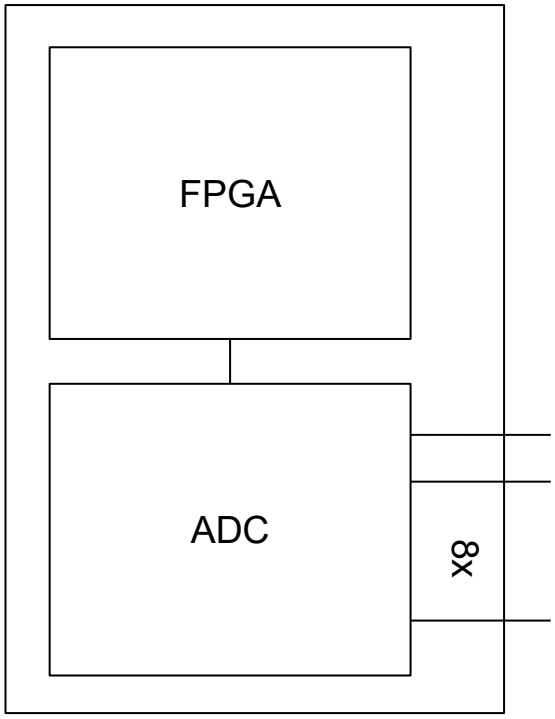
Table of Contents

1. Technical Data

- Current consumption: 12V / 0,8 A (without external consumers)
- Operating temperature: 0°C … 40°C
- Rel. Humidity: Max. 85% not condensed
- Weight: 190g
- Dimensions: Single Eurocard, 4 U

Test conditions: Environmental temperature 20°C to 26°C						
Num	**Evaluation**	**Symbol**	**typ.**	**min.**	**max.**	**description**
1	Permitted voltage range	U_{supp}	12V	11.4V	12.6V	
2	Current consumption	I_{supp}	650mA	-	800mA	Without sensor supply

2. Block Diagram



3. Connectors:

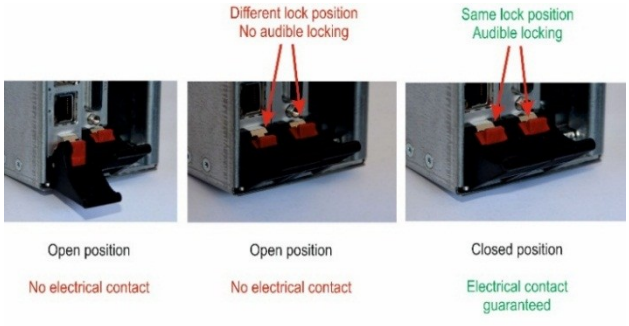
- For SPI, FAST-SO
- Connectors to bus: 1 PCIe Lane to CPU-1
  Power supply I2C
  Parallel to all cards for synchronization
- Connectors frontside: SMA female coaxial connector

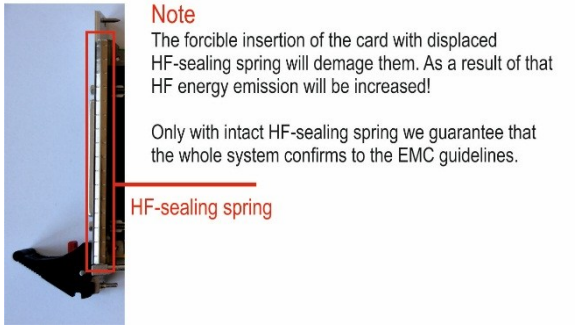
4. Interfaces and FPGA:

- Xilinx® Zynq® UltraScale+ MPSoC Module ARM® dual-/quad-core Cortex™-A53 (64 bit, up to 1500 MHz)
- 8 x SMA female coaxial connector Voltage range -10V … +10V (16bit with 120 Msps)

5. Handling Card/Chassis

Pay attention that the ejection lever of the plug-in card is arrested correctly.
Only the correct position guarantees a justly connection of the bus system and the power supply!





6. Measurement Accuracy

6.1. Time base

Test conditions: Environmental temperature 20°C to 26°C						
Num	**Evaluation**	**Symbol**	**Type**	**Max**	**Unit**	**Comment**
1	Accuracy time base	$\Delta f/f$	±30	±50	ppm	-
2	Aging of time base	$\Delta f/f_A$	±5		ppm/year	-
3	Temperature drift of time base	$\Delta f/f_T$	±0.3	±0.7	ppm/°C	-

6.2. Measurement of the supply voltage

Test conditions: Environmental temperature 20°C to 26°C						
Num	**Evaluation**	**Symbol**	**Type**	**Max**	**Unit**	**Comment**
4	Accuracy of the measured voltage	U_{mea}	±0.1	±0.1	% of scfin. 20V	Range -10V … 10V
5	Aging of the measured voltage	$U_{A\text{-}mea}$		±0.1	%/year	Range -10V … 10V
6	Resolution of the measured voltages		16		Bit	0.. 65535
			0.335698		mV/LSB	