MicroNova
Software and Systems

NovaCarts Resistor Simulation Board

Especially designed to simulate the ohmic behavior of temperature sensors (e.g. PT100, PT1000), the board offers twelve independently controllable channels in real-time.

The high channel density of the board allows users to implement even HiL systems with numerous I/Os, both compactly and inexpensively. Since groups of four channels are galvanically isolated up to a peak voltage value of 1,000 V, the board is ideally suited for the simulation of temperature sensors required for the testing of battery control units.

12 channels

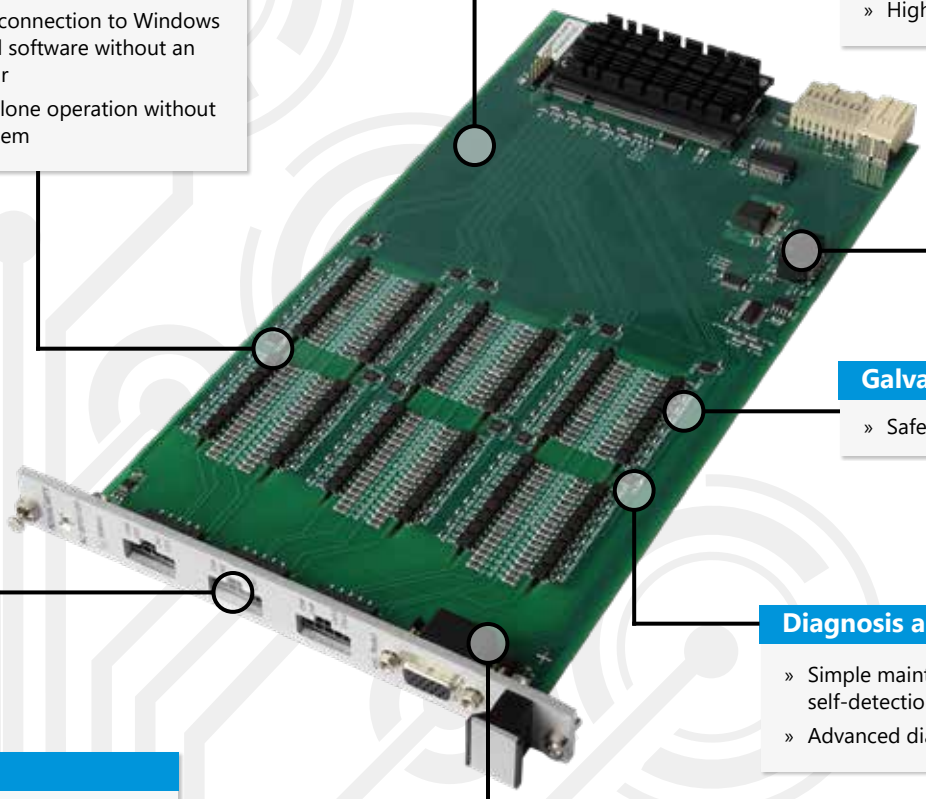
» High simulation density

Output parameters

» Resistance:
31 Ohm – 1 MOhm
» Simulation of temperature sensors (PT100, PT1000, etc.)
» High accuracy

Ethernet interface

» Plug-and-play capability
» Direct connection to Windows control software without an adapter
» Standalone operation without RT system



Galvanic isolation

» Safe applications up to 1 kV

Diagnosis and maintenance

» Simple maintenance through self-detection and configuration
» Advanced diagnostic capability

Connections

» Connection for external module such as shunt simulation

System on chip

» FPGA and dual-core ARM
» NovaCarts Real-Time Software
» 1 ms model platform
» Upgrades of hardware-dependent functions via firmware

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Data Sheet

Module name: **NC-BEB1100**

Data sheet version: **1V9**

Features

Resistance simulation	3 groups with 4 channels
Connection for external module	1
Supply voltage	24 V
Operating temperature	0 to +55 °C
Storage temperature	-20 to +70 °C
Humidity	10 to 90 % (no condensation)
Dimensions	Height: 4U, Width: 4U
Connection to RT system	Ethernet

Specifications

Configurable resistance range	31 Ohm – 1 MOhm
Accuracy: 31 Ohm – 3.9 kOhm 3.9 kOhm – 39 kOhm 39 kOhm – 100 kOhm 100 kOhm – 1 MOhm	 +/- 100 mOhm, +/- 0.2 % * +/- 1 % * +/- 3 % * +/- 30 % * * of the default value
Resolution	16 bit
Max. performance dissipation	250 mW
Galvanic isolation	
Group to group	1,000 V
Channel to system	1,000 V
Channel to channel	200 V