

# Q.brixx A128 BNC

High Isolation Module for Dynamic High Voltages

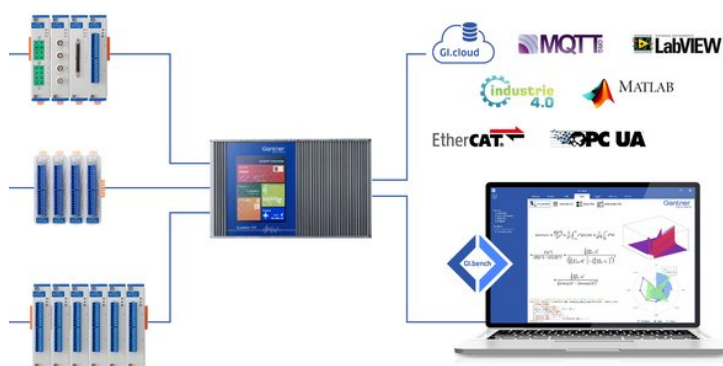
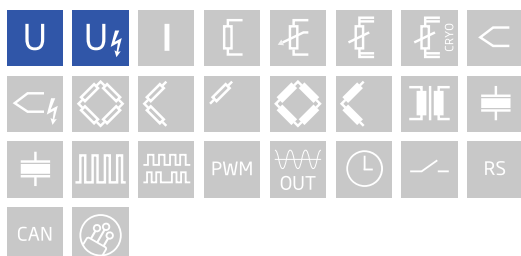
Q.brixx brings the performance and functionality of Q.bloxx into a scalable, portable, and rugged form factor. Q.brixx DAQ systems can consist of up to 16 measurement modules and an integrated, high-performance controller for communication, control, and data logging purposes. With a robust aluminum housing capable of withstanding severe shock and vibration, Q.brixx is ideal for on-the-go applications in potentially harsh environments.

- Electromagnetic compatibility according EN 61000-4 and EN 55011
- Robust and reliable stable and compact aluminum housing, easy to carry
- Power supply 10 ... 30 VDC
- Temperature range -20 up to +60°C
- High density and flexibility up to 16 modules in one system in any constellation



## Key Features

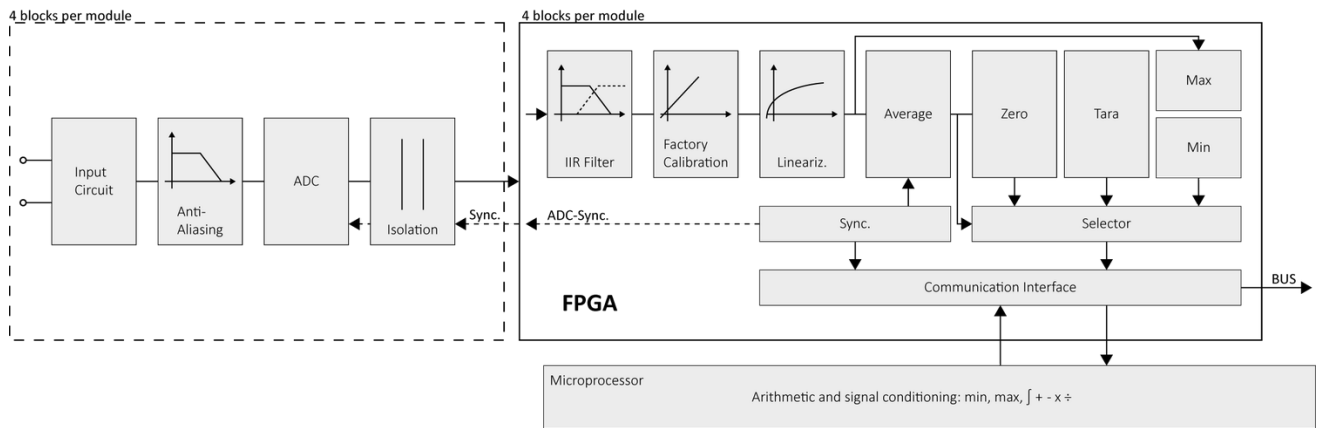
- 4 galvanically isolated input channels  
Voltages, ranges  $\pm 40$  V,  $\pm 120$  V,  $\pm 400$  V,  $\pm 1200$  V
- Signal conditioning  
16 virtual channels, linearization, digital filter, average, scaling, min/max storage, RMS, arithmetic, alarm
- Fast high accuracy digitalization  
24 bit ADC, 100 kHz sample rate per channel
- Galvanic isolation  
channel to channel to power supply and to interface  
isolation voltage 1200 VDC / 848 VACrms  
test voltage 5 kVDC over 1 minute
- Categories  
1000 V CAT II and 600 V CAT III



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## Block diagram



## Technical Data

### Analog Inputs

Channels	4
Accuracy	0.01 % typical
	0.025 % in controlled environment <sup>1</sup>
	0.05 % in industrial area <sup>2</sup>
Linearity error	0.01 % typical full-scale
Repeatability	0.003 % typical (within 24 h)
Isolation voltage	1200 VDC continuous, channel to channel to power supply channel to bus <sup>3</sup>

<sup>1</sup> according to EN 61326 2006: appendix B

<sup>2</sup> according to EN 61326 2006: appendix A

<sup>3</sup> High voltage lifetime (TDD B Model). Time to fail approx.. 4 years at 1200 VDC and 60 °C continuous

### Measurement Mode Voltage

Range	± 1200 V	± 400 V	± 120 V	± 40 V
Accuracy	± 300 mV	± 100 mV	± 30 mV	± 10 mV
Resolution	6 mV	2 mV	600 µV	200 µV
Long-term offset stability	30 mV / 24 h	10 mV / 24 h	3 mV / 24 h	1 mV / 24 h
	100 mV / 8000 h	30 mV / 8000 h	10 mV / 8000 h	3 mV / 8000 h
Offset temperature influence	100 mV / 10k	30 mV / 10 k	10 mV / 10 k	3 mV / 10
temperature influence	0.025 % / 10K			

### Analog/Digital-Conversion

Resolution	24-bit
Update rate	100 kHz
Modulation method	Sigma-Delta
Anti-aliasing filter	20 kHz, 3rd order
Digital filters	Infinite impulse response (IIR), low-pass, high-pass, band-pass, Butterworth or Bessel (2nd, 4th, 6th or 8th order), frequency range 0.1 Hz to 10 kHz (adjustable via software)
Averaging	configurable or automatic according to the selected data rate

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## Environmental

Operating temperature	-20°C to +60°C
Storage temperature	-40°C to +85°C
Relative humidity	5 % to 95 % at 50°C, non-condensing

## Communication Interface

Protocols	proprietary Localbus (115200 bps to 24 Mbps, latency <100 ns) ASCII (19200 bps to 115200 bps) Modbus RTU Profibus-DP (19200 bps to 12 Mbps) (special Firmware required)
Data format	8E1
Electrical standard	ANSI/TIA/EIA-485-A, 2-wire

## Power Supply

Input voltage	10 to 30 VDC, overvoltage and overcurrent protection
Power consumption	approx.. 2 W
Input voltage influence	<0.001 %/V

## Remarks

Warm-up time	Validity of all listed specifications are subject to a warm-up period of at least 45 minutes
	Specifications subject to change without notice

## High Voltage Warnings



- Attention High voltage device, Danger for life and health in case of non regular use.
- Only special and sufficient educated persons are permitted to handle this device only.
- all metal housing parts must be safely and continuous connected to protected earth (PE)
- Only contact protection plugs and cables may be used. All parts must be approved for voltages up to 1200 VDC.
- During installation, the whole system must be without voltage and safely be disconnected from the mains.
- All relevant safety regulations must be considered.

Base is the european standard EN61010-1

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## Mechanical information

Material	Aluminum
Measurements (W x H x D)	30 x 125 x 155 mm
Weight	approx. 200 g

## Ordering Information

Article number	801627
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