

Q.bloxx XL boost LLP

High Speed Measurement Module

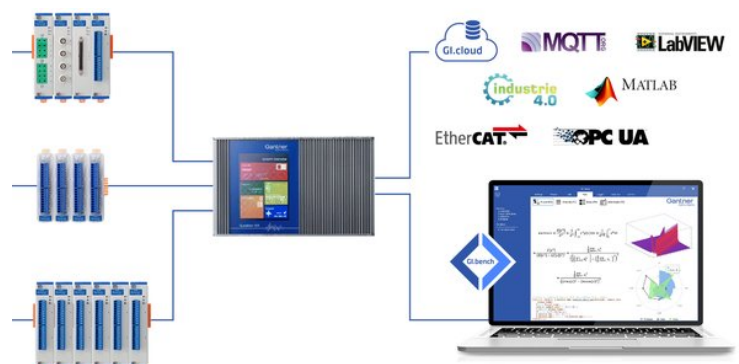
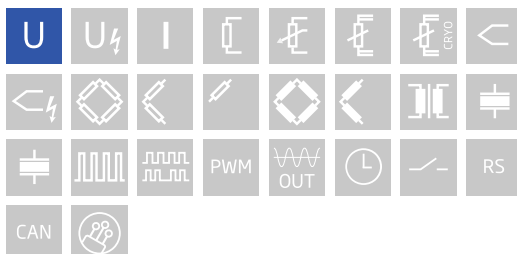
Q.bloxx XL is a new addition to the Q.series product family - the ideal DAQ solution for widely distributed installations that require higher performance and custom sensor terminations. Q.bloxx XL products are packaged in modular, DIN Rail mountable enclosures that easily snap together for system expansion. Flexibility in distribution allows for highly synchronized data that is less prone to noise due to shorter sensor cable runs to the subject.

- RS485 fieldbus interface up to 48 Mbps: LocalBus, up to 115.2 kbps: Modbus-RTU, ASCII
- Connectable to Controller Q.station X
- Electromagnetic Compatibility according to EN61000-4 and EN55011
- Power supply 10 ... 30 VDC
- DIN rail mounting (EN60715)



Key Features

- 4 MHz sample rate per channel with 1.7 MHz Bandwidth
- 2 channels with up to +/- 10 VDC input range
- Extremely high precision: $\pm (0.015\% \text{ Signal} + 0.015\% \text{ Range})$
- 2 digital inputs
- 2000 VDC continuous isolation voltage on input channel
- must be Supplement with Coupling Module Q.bloxx XL boost BC-S
- up to 16 channels on one Coupling Module
- Multiple Coupling Modules connectable to Q.core



Technical Data

Analog Input

Q.boost A102	2-Channel precision data acquisition system with 2 analog inputs: - 4 MHz // 24 Bit ADC per channel - ± 500 mV, ± 10 V AC/DC - Digital-I/O (LVCMOS/LVTTL 0 V to 3.3 V) - 2.5 kV galvanic isolation - Coupling Module necessary for Power Supply, USB3.0 data interface, LinkUp/LinkDown-Sync.-Interface - Sampling rate max. 2MHz per channel with 4 boost modules, max. 1 MHz per channel with 6 boost modules on one coupling module
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Input Characteristics

Quantization	24 bits			
max. sample rate	4 MSamples/s per channel			
max. Bandwidth	DC - 1.7 MHz			
Filter	Analog: 1.7 MHz low-pass filter Digital: a variety of selectable filters			
Inter-Channel-Phase-Difference	< 1 ns			
galvanic isolation	± 2500 V			
input voltage Impedance	1 MΩ_50 pF			
input voltage range	Channel 1 (Top) ± 500 mV and ± 10 V with BNC Channel 2 (Bot) ± 500 mV and ± 10 V with BNC			
Dynamic range	Range	Bandwidth		
		5 kHz	50 kHz	1 MHz
	± 10 V	115 dB	109 dB	98 dB
	± 500 mV	102 dB	94 dB	82 dB
ENOB (THD + noise)	Range	effective bits		dB @ 125 Hz sample rate
effective number of bits	± 10 V	typ 15.6 Bit		- 97 dB
	± 500 mV	typ 14.3 Bit		- 89 dB
Crosstalk	< - 120 dB (DC - 200kHz)			
Input protection	± 17.5 V @ range ± 500 mV, ± 10 V			

Digital Inputs

Channels	2 digital inputs
Mode(s) of operation	status
Input voltage	8 VDC max.
Logic voltage	< 0.8 VDC (Low) > 2 VDC (High)

Operations Conditions

input voltage	12 to 16 VDC in standard temperature range
	10 to 35 VDC in extended temperature range
	5 W typical per channel
Environmental temperature	Standard: $+10$ °C to 30 °C
	Extended: $+10$ to 45 °C (requires air inlet and outlet openings if mounted in a cabinet)

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High Speed Measurement Module

Data Recording

RAM	64 MByte per channel 512 MByte RAM with 8 channels
interface to Host	via couple module
recording media	Q.core or Computer hard disk

Data Transfer Rates

Internal SSD	256 MByte/s *
PC with USB	170 MByte/s (USB 3.0) - 35 MByte/s (USB 2.0)

Technical specifications – Optional specifications marked with *

Number of Channels

max. number-of-devices	Up to 8 Q.boost one one Coupling Module Q.bloxx XL boost BC-S, multiple Coupling Modules on Q.core or Computer
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Mechanical information

Material	Aluminum and ABS
Measurements (W x H x D)	30x 145 x 135mm
Weight	approx. 500 g

Ordering Information

Article number	675228
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Gantner Instruments

Austria | Germany | France | Sweden | India | USA | China | Singapore
Montafonerstraße 4 · A-6780 Schruns · T +43 55 56 · 77 463-0

office@gantner-instruments.com
www.gantner-instruments.com