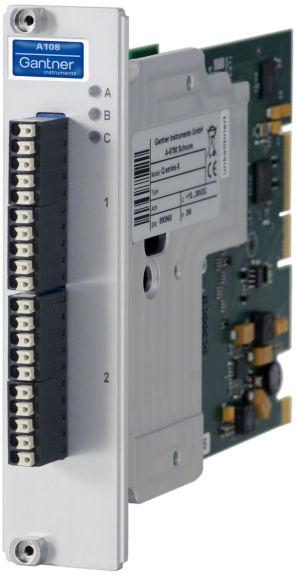
Q.raxx XE A108-60V

Multichannel Module for Voltages

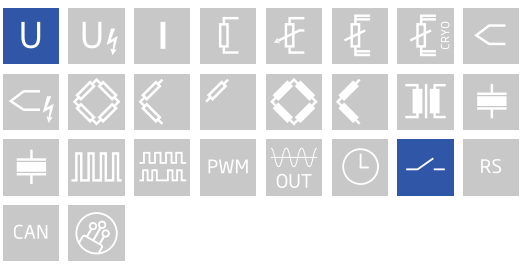
Q.raxx XE is an new addition to the Q.series product family - the ideal 19" rackmount EtherCAT DAQ solution for applications that require high channel density and custom sensor terminations. Q.raxx XE DAQ systems can consist of an integrated EtherCAT bus coupler for communication and 10 measurement modules capable of up to 100 kHz sampling per channel with short cycle times and low jitter for accurate synchronization

- According 19 "-standard IEC
- Electromagnetic Compatibility according to EN61000-4 and EN55011
- High density and flexibility with13 modules in one system in any constellation
- FoE (file access over EtherCAT, ETG.1000.5) and CoE (CAN over EtherCAT, ETG.50001.1)



Key Features

- **8 galvanic isolated input channels**
  differential voltage ±60 V, isolation voltage 500 VDC
- **High accuracy digitalization**
  24 bit ADC, 20 kHz sample rate per channel
- **2 digital in and 2 digital outputs**
  input: state, tare, memory reset, output: state, Alarm, threshold
- **Signal conditioning**
  linearization, digital filter, average, scaling, min/max storage, RMS, arithmetic, alarm
- **Galvanic isolation**
  channel to channel, power supply and interface, isolation voltage 500 VDC



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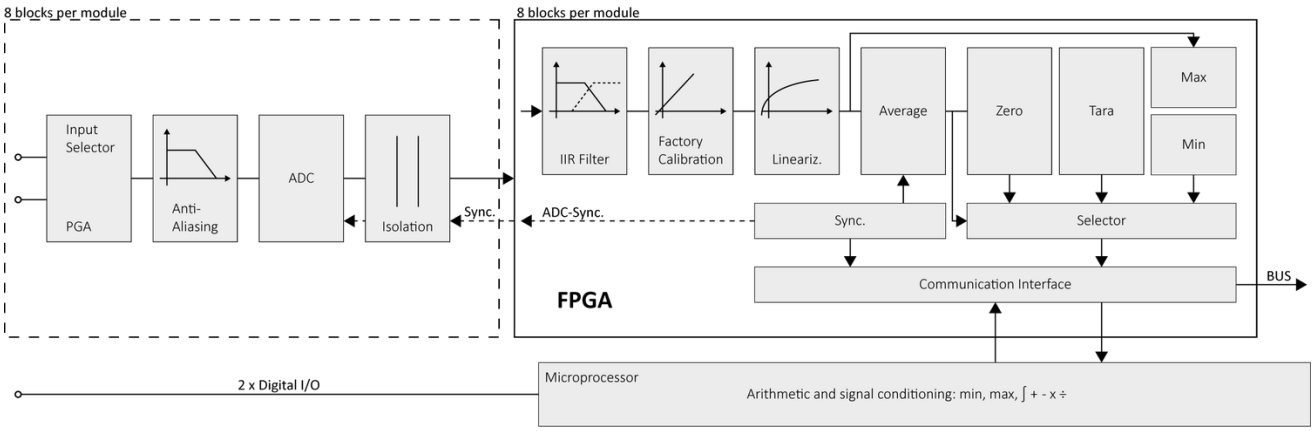
Block diagram



Technical Data

Analog Inputs

Channels	8
Accuracy	0.01 % typical 0.025 % in controlled environment[1] 0.05 % in industrial area[2]
Input range	±60 V
Max. error	±25 mV
Resolution	12 µV
Linearity error	0.01 % typical of final value
Repeatability	0.003 % typical (within 24 h)
Isolation voltage	500 VDC channel to channel to input voltage to interface[3]

[1] according to EN 61326 2006: appendix B
[2] according to EN 61326 2006: appendix A
[3] noise pulses up to 1000 VDC, continuous up to 250 VDC

Measurement Mode Voltage

Error	range	max. error	resolution
	±60 V	±25 mV	12 µV
Input impedance	>1 MΩ		
Long-term drift	<500 µV / 24 h	<2000 µV / 8000 h	
Temperature influence	Offset drift	Gain drift	
	<500 µV / 10 K	<0.02 % / 10 K	
Signal-to-noise ratio	>100 dB at 100 Hz	>120 dB at 1 Hz	
Overvoltage protection	± 200 V		

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Digital In/Outputs

Channels	4, 2 digital inputs, 2 digital outputs
Input	status, tare, reset
Input voltage / input current	max. 30 VDC / max. 0.5 mA
Lower / Upper threshold	<2.0 V (low) / >10 V (high)
Output	status, alarm
Contact	open drain p-channel MOSFET
Load capacity	30 VDC/100 mA (ohmic load)

Analog/Digital-Conversion

Resolution	24-bit
Update rate	10 kHz per channel
Modulation method	Sigma-Delta
Anti-aliasing filter	2 kHz, 3rd order
Digital filters	IIR, low-pass, high-pass, band-pass, 4th order, 1 Hz up to 1 kHz in steps 1, 2, 5
Averaging	configurable or automated according the selected data rate

Kommunikationsschnittstelle

Electrical standard	RS-485, 2-wire
Protocols	EtherCAT (LVDS)

Power Supply

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

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

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

Mechanical information

Material	Aluminum
Measurements (W x H x D)	30x 128 x 120mm
Weight	approx. 200 g

Ordering Information

Article number	652324

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