

What is Q.series X?

Q.series X is Gantner's cutting-edge DAQ technology used globally for testing and monitoring applications in the mobility, aerospace, civil engineering, oil & gas, and renewable energy sectors.



Portable System (Combine 1 + 2)



Rail Assembly (Combine 1 + 2 + 3)



19" System, 3 U (Use Part 1)



Engineered Flexibility

Intelligently designed from the inside out, Q.series X DAQ has the adaptability required to solve any modern engineering problem without sacrificing performance or invalidating your investment.

Standalone Operation

Computer-independent measurement, data logging, and control with RT Linux operating system for reliable 24/7 operation of up to 64 connected I/O modules per controller.

Long-term Reliable DAQ

Q.series X is engineered exclusively based on proven industry standards, so you can take full advantage of Gantner Instruments products' best-in-class MTBF of more than 20 years.

Open Connectivity & APIs

Safe and reliable data exchange and interoperability through various read/write interfaces at the edge, desktop, and cloud level and modern APIs for device configuration and data stream access.

Power supply
Input voltage 10 to 30 VDC, overvoltage and overcurrent protection
Power consumption app. 2.5 W during operation, app. 5 W on start-up for a short time.
Input voltage influence <0.001 % / V

Signal Conditioning options
linearization, filtering, average, scaling, min/max, RMS, arithmetic, alarm

Electromagnetic Compatibility
„Electromagnetic compatibility (EMC) according to IEC 61000-4 and EN 55011“

Environmental Specifications
Operating temperature: -20 °C to +60 °C
Storage temperature: -40 °C to +85 °C
Rel. humidity 5 % to 95 % at 50 °C, non-condensing

Q.bloxx X		A101	A102	A106	A107	A116	A121	A136	A142	A146	A156	A192
Type		Universal	Universal	Special	Universal	Special	High Voltage	Special	Special	Special	Special	Universal
Channel count		2	1	2	4	8	2	4	2	16	4	1
Transducer	resistive	quarter	3-wire, 120/350 Ω	3-wire, 120/350 Ω	3-wire, 120/350 Ω	3-wire, 120/350 Ω	3-wire, 120/350 Ω	3-wire, 120/350/1000 Ω	3-wire, 120/350 Ω	3-wire, 120/350 Ω	3-wire, 120/350 Ω	3-wire, 120/350 Ω
		half	3- and 5-wire	3- and 5-wire	3- and 5-wire	3-wire	3- and 5-wire	3- and 5-wire	3- and 5-wire	3- and 5-wire	3-wire (5-wire)	3- and 5-wire
	inductive	full	4- and 6-wire	4- and 6-wire	4- and 6-wire	4-wire	4- and 6-wire	4- and 6-wire	4- and 6-wire	4- and 6-wire	4-wire (6-wire)	4- and 6-wire
		half									3-wire (5-wire)	
		LVDT			4- and 6-wire					4- and 6-wire	4-wire (6-wire)	4-wire (6-wire)
Excitation	DC	2.5 V	1.2, 5, 5 and 10 V	2.5 and 5 V	2.5 V	2 and 4 V	2.5 V	1.2, 5, 5 and 10 V	2.5 and 5 V	2 V		1 V ... 12 V
	CF 4800 Hz CF 600 Hz			2.5 and 5 Vrms 2.5 and 5 Vrms					2.5 and 5 Vrms		2.5 and 5 Vrms	
Sensitivity		± 2.4 ... ± 500 mV/V	± 1 ... ± 1000 mV/V	± 1.25 ... ± 1000 mV/V	± 2.5 ... ± 500 mV/V	± 2.5 ... ± 10 mV/V	± 2.5 ... ± 500 mV/V	± 1 ... ± 100 mV/V	± 1.25 ... ± 2000 mV/V	± 2 and ± 20 mV/V	± 1.25 ... ± 1000 mV/V	± 0.1 ... ± 1000 mV/V
Accuracy		0.05 %	0.05 %	0.05 %	0.05 %	0.05 %	0.05 %	0.05 %	0.05 %	0.05 %	0.05 %	0.05 %
Bandwidth		10 kHz	10 kHz	2 kHz (DC supply)	2 kHz	1 kHz	20 kHz	4 kHz	5 kHz (DC supply)	1 kHz	1 kHz	20 kHz
Sampling Rate		100 kS/s	100 kS/s	20 kS/s	20 kS/s	20 kS/s	100 kS/s	20 kS/s	20 kS/s	20 kS/s	20 kS/s	100 kS/s
Resolution		24-bit	19-bit	24-bit	24-bit	24-bit	24-bit	24-bit	18-bit	24-bit	24-bit	24-bit
Isolation (Channel/Channel)		500 V	500 V	500 V	500 V	-	1200 V	500 V	500 V	-	500 V	500 V
Analog Output			± 10 V, 0-20 mA	± 10 V								± 10 V, 0-20 mA
Digital Output		Alarm, state	Alarm, state	Alarm, state	Alarm, state				State	Alarm, state	Alarm, state	
Digital Input		Null, Tare, Reset	Null, Tare, Reset	Null, Tare, Reset	Null, Tare, Reset			Null, Tare, Reset	State	State	Tare, Reset	
Shunt Resistor		100 kΩ				87.5 kΩ		100 kΩ	100 kΩ	100 kΩ	100 kΩ	
Note			SAR ADC			Internal bridge completion resistor, 120 and 350 Ohm	1200 V Isolation	sensor excitation also available for voltage input	SAR ADC	Internal bridge completion resistor, 120 or 350 Ohm	Carrier Frequency 4800 Hz 5-/6-wire with DB9/15	Sensor Excitation free programmable, Analog output
Accessories		Q.bloxx Terminal B4/120 - A101 Q.bloxx Terminal B4/350 - A101 Q.bloxx Terminal B4/120 & 350 - A101	Q.bloxx Terminal B4/120 - A102 Q.bloxx Terminal B4/350 - A102 Q.bloxx Terminal B4/120 & 350 - A102	Q.bloxx Terminal B4/120 - A106 Q.bloxx Terminal B4/350 - A106 Q.bloxx Terminal B4/120 & 350 - A106	Q.bloxx Terminal B4/120 - A107 Q.bloxx Terminal B4/350 - A107 Q.bloxx Terminal B4/120 & 350 - A107	Connection Terminal CT A116 Cable A116				Connection Terminal CT A146 Cable A146	Q.bloxx Terminal B4/120 - A156 Q.bloxx Terminal B4/350 - A156 Q.bloxx Terminal B4/120 & 350 - A156	Q.bloxx Terminal B4/120 - A192 Q.bloxx Terminal B4/350 - A192 Q.bloxx Terminal B4/120 & 350 - A192
Available Sensor Connectors		2 x 10 pole screw-terminal DB-9 with BNC	2 x 10 pole screw-terminal DB-9 with BNC	2 x 10 pole screw-terminal DB-15 with BNC	2 x 10 pole screw-terminal 4 x Lemo 2B 8-pole	68-pin Harting	2 x Lemo 2P 8-pole	4 x DB-15HD, 4 x Lemo 2B 8-pole	4 x DB-15HD	2 x DB26HD	2 x 10 pole screw-terminal, 4 x DB-9, 4 x DB-15HD	2 x 10 pole screw-terminal
Q.bloxx XL		495026	506524	495329	495430	495834	577027		657531	777635 / 759938 120 Ω	676128	645730
Q.raxx XL		528225	528326	529226	529327	530521	577431	867433 120 / 350 / 780932 1k	657733	778030 / 760122 120 Ω	675935	645932
Q.brixx XL		521319	521521	522522	522724	524120	577229		657632	77837 / 760021 120 Ω	676027	646831
Q.bloxx XE		498837	506625	507323	507424	508425	577128		702118	777534 / 624222 120 Ω	676431	646024
Q.raxx XE		517324	528427	517424	529428	517526	577532	868434 120 / 350 / 781024 1k	702320	777938 / 624626 120 Ω	676229	646226
Q.brixx XE		521420	521622	522623	522825	524221	577330		702219	777736 / 624424 120 Ω	676330	646125

Q.bloxx X		A101	A102	A107	A108	A121	A127 2CV			A127 plus 2CV			A127 4CV			A192	A193 CV		
Type		Universal 2	Universal 1	Universal 4	Universal 8	High Voltage 2	High Voltage 2 + 2			High Voltage 2 + 2			High Voltage 4 + 4			Universal 1	Special 1		
Channel Count							Range	Deviation	Resolution	Range	Deviation	Resolution	Range	Deviation	Resolution		Range	Deviation	Resolution
Channel Count	Range	± 25 mA	± 25 mA	± 25 mA	± 25 mA	± 25 mA	± 200 mA	± 40 µA	50 nA	± 200 mA	± 40 µA	50 nA	± 200 mA	± 40 µA	50 nA	± 25 mA	± 200 mA	± 40 µA	25 nA
	Deviation	± 5 µA	± 5 µA	± 5 µA	± 5 µA	± 5 µA	± 400 mA	± 80 µA	100 nA	± 400 mA	± 80 µA	100 nA	± 400 mA	± 80 µA	100 nA	± 5 µA	± 400 mA	± 80 µA	50 nA
	Resolution	3 nA	3 nA	3 nA	3 nA	3 nA	± 800 mA	± 160 µA	200 nA	± 800 mA	± 160 µA	200 nA	± 800 mA	± 160 µA	200 nA	± 2000 mA	± 2000 mA	± 400 µA	300 nA
Bandwidth		10 kHz	10 kHz	2 kHz	2 kHz	20 kHz	20 kHz			20 kHz			20 kHz			20 kHz	20 kHz		
Sampling Rate		100 kS/s	100 kS/s	20 kS/s	20 kS/s	100 kS/s	100 kS/s			100 kS/s			100 kS/s			100 kS/s	100 kS/s		
Resolution		24-bit	19-bit	24-bit	24-bit	24-bit	24-bit			24-bit			24-bit			24-bit	24-bit		
Isolation (Channel/Channel)		500 V	500 V	500 V	500 V	1200 V	1200 V			1500 V			1200 V			500 V	800 V		
Analog Output			± 10 V, 0-20 mA													± 10 V, 0-20 mA			
Digital Output		Alarm, state	Alarm, state		Alarm, state											Alarm, state			
Digital Input		Null, Tare, Reset	Null, Tare, Reset		Null, Tare, Reset											Null, Tare, Reset			
Note			10 V supply, Analog output, SAR ADC		Q.bloxx Terminal SR		± 15 V Sensor supply			± 15 V Sensor supply			± 15 V Sensor supply				± 15 V Sensor supply		
Sensor Connector		2 x 10 pole screw-terminal, DB-9 with BNC	2 x 10 pole screw-terminal, DB-9 with BNC	2x 10 pole screw-terminal, DB-9, 8-pin Binder, 4x Lemo 2B 8-pole ¹	2 x 10 pole screw-terminal	2 x 6-pin LEMO female	2 x 2 HV banana + 2 x DB-9			2 x 2 HV banana + 2 x DB-9			4 x 2 HV banana + 4 x DB-9			2 x 10 pole screw-terminal	4x 2 pole PushPull + 1x DB-9		
Q.bloxx XL		495026	506524		495331	577027				870730						645730			
Q.raxx XL		528225	528326	529327	529731	577431				871125			slimline			678837	645932		
Q.brixx XL		521319	521521	522522	522724	523119				870932			slimline			696433	646831		
Q.bloxx XE		498837	506625	507424	507727	577228				708326							646024		
Q.raxx XE		517324	528427	529428	512319	577532				756228			slimline			696534	646226		
Q.brixx XE		521420	521622	522825	523220	577330				759130			870831				646125		

Q.bloxx X		A109	A108 HV	A109	D101	D104	D105	D107
Type		Universal	Special	Universal	Universal	Special	Special	Universal
Channel Count		BAI + 2DI + 2DO	BAI + 2DI + 2DO	4AI + 4DI or 4DO	16	16	16	2 to 6
Sampling Rate		100 kS/s	100 kS/s	100 kS/s	100 kS/s	100 kS/s	100 kS/s	100 kS/s
Resolution		24-bit	16-bit	16-bit	16-bit	16-bit	16-bit	16-bit
Isolation ¹		500 V	500 V	500 V	500 V ²	500 V ²	500 V ²	500 V ²
Analog Output		± 10 V, 0-20 mA	State up to 4 Bit-Set	State up to 4 Bit-Set	State up to 8 Bit-Set	State, single- or Bit-Set	State, single- or Bit-Set	State
Digital Output		Alarm, state	Alarm, state	State up to 10 kHz depending on current	Up to 10 kHz depending on current	Up to 10 kHz depending on current	Up to 10 kHz depending on current	Up to 10 kHz depending on current
Frequency		PWM	PWM	Variable frequency and duty cycle	Variable frequency and duty cycle	Variable frequency and duty cycle	Variable frequency and duty cycle	Variable frequency and duty cycle
Digital Input		Null, Tare, Reset of AIN	yes	yes	State up to 8 Bit-Set	State up to 8 Bit-Set	State, single- or Bit-Set	State
Alarm, state		Frequency	Frequency	Frequency	Max 2 channel up to 1 MHz	Max 4 channel up to 1 MHz	Max 4 channel up to 1 MHz	Up to 1 MHz Chronos, recognition of the rotation direction
Frequency		PWM	Frequency	Frequency	Frequency and duty cycle	Frequency and duty cycle	Frequency and duty cycle	Frequency and duty cycle
Counter		Time	Time	Time	forward / reverse quadrature, reference zero, up to 1 MHz	forward / reverse quadrature, reference zero, up to 1 MHz	forward / reverse quadrature, reference zero, up to 1 MHz	forward / reverse quadrature, reference zero, up to 1 MHz
Note					1 μs to 32s	1 μs to 32s		
Sensor Connector		2 x 10 pole screw-terminal 3x DB-9	2 x 10 pole spring-terminal	2 x 10 pole screw-terminal	2 x 10 pole screw-terminal	2 x 10 pole screw-terminal	2 x 10 pole screw-terminal	2 x 10 pole screw-terminal, 2 x Lemo 2B 8-pole ⁴
Q.bloxx XL		495531	507828	495532	495935	520217	520419	495027
Q.raxx XL		529731	529832	530016	532725	532826	533019	533221
Q.brixx XL		523321	523321	523523	526526	526728	526930	527123
Q.bloxx XE		507727	507929	508021	520116	520318	520520	520621
Q.raxx XE		511924	511924	512016	532927	533120	533120	533322
Q.brixx XE		523220	523422	523624	526627	526829	527022	527224

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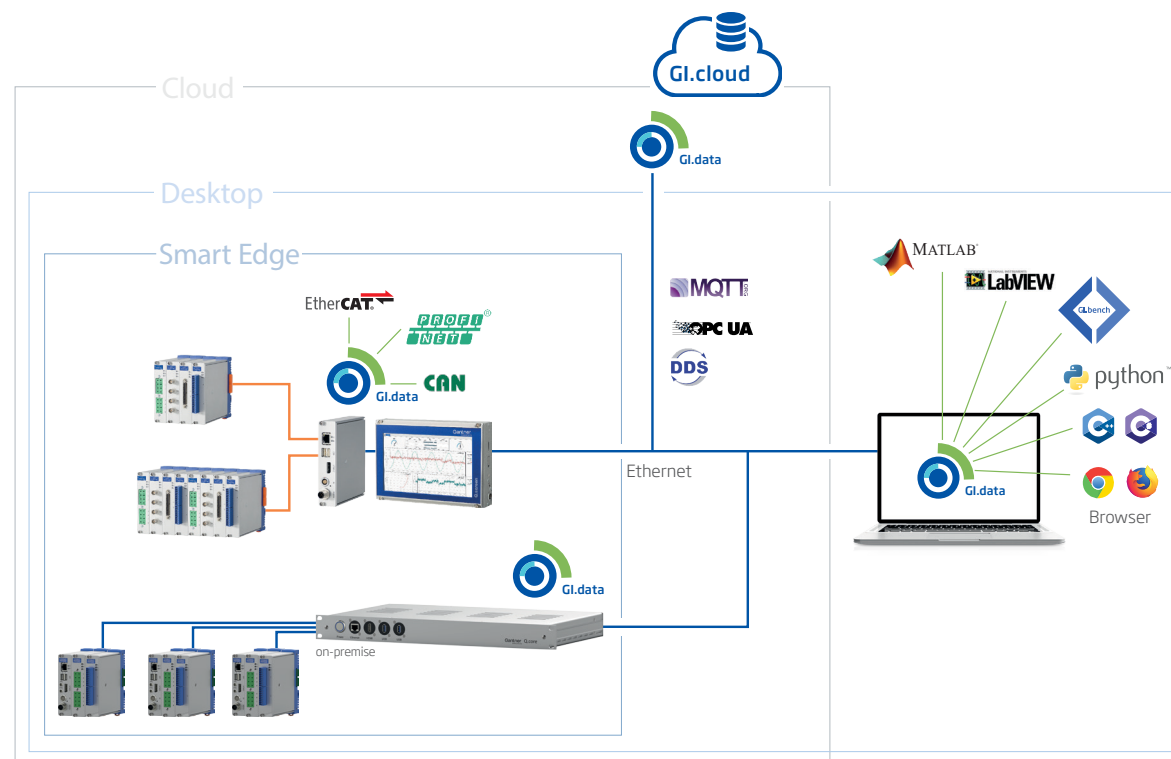


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Gantner
instruments

Product Overview

Gi.domains



¹ between Channel, Supply, and Interface/Interference voltages up to 1000 VDC, permanent up to 250 VDC
² between Group, Supply, and Interface
³ with software selectable sensor excitation
⁴ with software selectable sensor excitation

[illegible][illegible]

A193 Special		A193 CV	
4+1		4	
Max. Deviation	Resolution	Max. Deviation	Resolution
±30 mV	±50 µV	±150 mV	±50 µV
±0.5 mV	0.6 µV	±5 V	±0.5 mV
24-bit	24-bit	24-bit	24-bit
800 V	800 V	100 kS/s	100 kS/s
20 kHz	20 kHz	20 kHz	20 kHz
5x 2 pole PushPull	4x 2 pole PushPull + 1x DB-9		
815830	831525		
815931	831020		

INTERFACES

CONNECTOR OPTIONS

ACCESSORIES