Q.brixx X station B

Controller

Q.station X is a high-performance edge controller for data acquisition, which provides accurate synchronization of measurement data, high-speed redundant data logging, and parallel communication over TCP/IP, CAN, ProfiNET, Modbus, and EtherCAT. The Q.station X comes with an optional full-featured programmable application controller designed for complex control and automation tasks.

- High density and flexibility with16 modules in one system in any constellation
- Connectable to Controller Q.station
- Electromagnetic Compatibility according to EN61000-4 and EN55011
- Power supply 10 ... 30 VDC



Key Features

- **Very high data rates up to 100 kHz each channel**
  100 kHz at 16 channels (4 each UART line), 10 kHz at 128 channels
- **64 Q.bloxx modules connectable**
- **Ethernet interface for configuration and data output**
  1 Gig-E, TCP/IP, UDP, up to 16 MB/s Modbus TCP/IP, ASCII, High Speed Port
  Web server, web client and e-mail
- **Synchronization and time stamp of measurement values**
  IRIG 2 based master-slave principle on RS485 standard system synchronization ±1 µs applicable
- **Data buffer memory dyn. 500 MByte, stat. 4 GByte**
  expandable over USB (up to 1,000,000 measurements/s) and SD card
- **6 digital inputs**
  direct connection of encoder for angular position,
  PWM, counter and status signals.



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Technical Data

Micro Controller

Typ	Intel Atom E3851 Single-Core 1.46 GHz
RAM	1 GByte, 500 MByte available for data storage
Flash	4 GByte
Real Time Clock (RTC)	Battery buffered
Watchdog	Programmable
OS	Real-time Linux

Ethernet Interface

Number of channels	2048 Byte Data (512 variables read and 512 variables write)
Baud rate	1 Gigabit / s (1 Gig-E)
Data rate	Online and block transfer up to 16 MByte/s (32 variables at 100 kHz)
Protocols	TCP / IP, UDP, Modbus TCP (Master and Slave), ASCII, High Speed Port, IEEE-1588 PTP Client
Isolation voltage	500 V

Module Slave Interface (UART)

Channels	4
Baud rate	9,6 kbps to 48 Mbps (100,000 measurements/s)
Connectable devices	max. 16 modules at one UART
Isolation voltage	500 V

CAN-Interface

Channels	1
Electrical standard	CAN2.0
Baud rate	1 Mbps
Configuration	CAN DBC files
CAN FD	Optional (via USB-Adapter)

USB Interface

Channels	2
Version	USB 2.0
Data rate	To 4 MByte / s (to 1,000,000 measurements/s)

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Digital Inputs

Channels	6

Function	configurable counter, PWM- and status, encoder input for measurement synchronization
Input voltage	max. 30 VDC
Input current	max. 1.5 mA

Logic levels	
TTL:	< 1 V (Low)
	> 3.5 V (High)
HTL:	3 V to5 V (Low)
	11 V to 30 V (High)

Synchronization of a Multi Controller System

Interface	RS485 Electrical standard
Mode	Master-slave principle, IRIG 2 Electrical standard
	Synch. Master and Slave
Accuracy	System synchronization ± 1 µs

Electromagnetic Compatibility

According to	EN 61000-4 and EN 55011

Power Supply

Input voltage	10 to 30 VDC. overvoltage and overcurrent protection
Power consumption	approx.. 12 W

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

Mechanical information

Material	Aluminium
Measurements (W x H x D)	30 x 137 x 135mm
Weight	approx. 500 g
Protection class	IP40

Ordering Information

Article number	527325
Accessories	GI.bench, article number -
	GI.cloud, article number -

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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