sensia
Rockwell Automation + Schlumberger

+ PROCESS AUTOMATION

+ QRATE iXC2

HIGH PERFORMANCE EDGE CONTROLLER

FEATURES AND BENEFITS

- Suitable for applications such as artificial lift control, pump control, and tank level monitoring
- Low-power consumption makes it ideal for solar powered sites
- Electronic flow measurement capability (AGA3, AGA7, AGA8, and AGA9 per API 21.1)
- Flexible connectivity with multiple Ethernet and serial ports
- Easily integrate with third-party equipment and customize for a variety of applications/roles
- Reliable in harsh environments with extreme operating temperatures
- Wireless WMP protocol optionally allows users to add low power long range point to point pressure and temperature devices
- Native support for Secure MQTT allows for simple device provisioning in ConnectedProduction™

MAINTAIN CONTROL IN THE HARSHEST ENVIRONMENTS

The QRATE iXC2 high performance edge controller has been designed to operate in environments where harsh weather and remote locations make continuous operation and visibility of data imperative. As part of a full ConnectedProduction™ system the QRATE iXC2 controller provides the field level intelligence to enable surveillance and control of remote production sites.

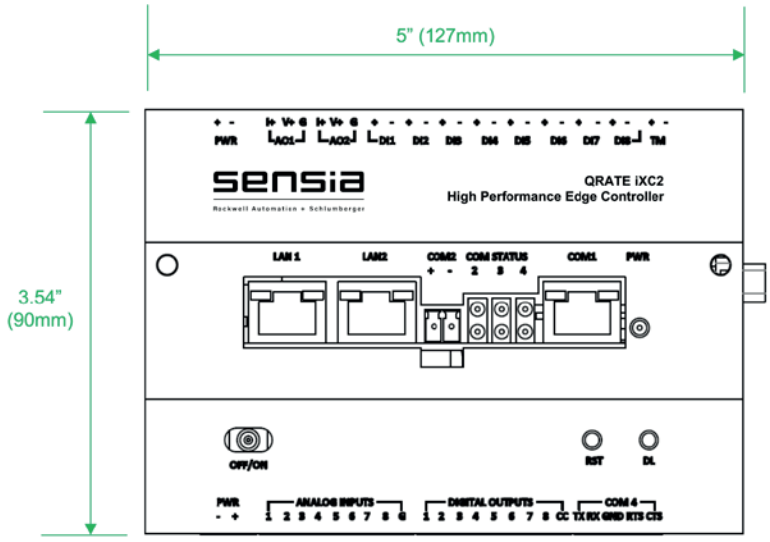
Robust communication ports allow the QRATE iXC2 high performance edge controller to interface with other controllers and devices in the field. Instrumentation for monitoring and control of the production process can be wired directly to the onboard analog and digital signals. Optional wireless gateway functionality can be added to the controller to monitor wireless QRATE iSense pressure and temperature instruments located up to six miles away. All of this data is available via Modbus data tables to communicate to your desired collection point, be that in the cloud or on-premise.

QRATE iXC2 high performance edge controller can be adapted to many types of control architectures from small control systems with a few IO points to systems with hundreds of IO points and networked communications. Integration with Rockwell Automation's ISaGRAF™ workbench software enables IEC 61131-3 programming to provide control based on the aggregated data. Ethernet/IP and Modbus communications allow for simple expansion of IO as required. All of that valuable data can be communicated through Modbus, DNP3 or Secure MQTT connection.

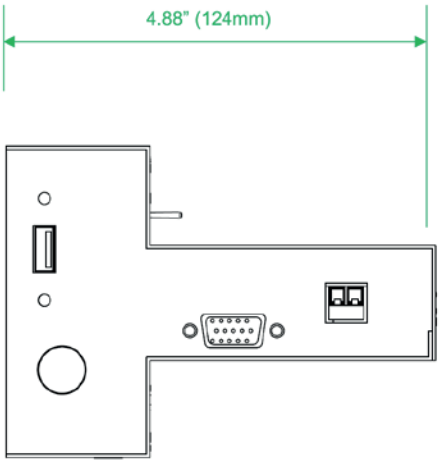
QRATE iXC2 HIGH PERFORMANCE EDGE CONTROLLER TECHNICAL SPECIFICATIONS

System hardware	
Input/output	+ **8 Analog Input Channels** Single ended, 24-bit resolution, 0-5V DC or 4-20 mA, transient protection diodes, overvoltage protection up to 24Vdc, overcurrent protection up to 25 mA, 250Ω Impedance in mA mode, 0.25% FS calibrated accuracy + **9 Digital Input Channels** 9 Channels, optically-Isolated up to 5 kV-rms, overvoltage protection up to 24Vdc, maximum 400 Hz input rate, 1 kΩ input impedance, 4Vdc minimum high level threshold + **8 Digital Output Channels** Single ended, open-collector type, maximum. Sinking 350 mA per channel, clamp terminals for inductive loads + **2 Analog Output Channels** 12-bit resolution, 0-5Vdc or 4-20mA,sourcing type, maximum load 400 Ω in mA mode, maximum load 500 kΩ in voltage mode, overvoltage protection up to 15Vdc, current output limited to 25 mA, 10 Ω output impedance in mA mode, 0.5% FS calibrated accuracy + **Board Temperature Sensor** Independent analog input sensor (Channel 9), ±2°C accuracy over temperature, ±0.5°C linearity,-40°C to +125°C operating temp + **Onboard Humidity Sensor** Independent Analog Input sensor (Channel 10) ±3% RH accuracy, 0% to 100% RH operating range
Processor and memory	+ 800 MHz CPU, x86 Architecture + 512 MB on board System Memory + Solid-state Embedded Flash disk (2 GB) Standard, (4 GB and 8 GB) optional
Ethernet communications ports	+ Two (2) Integrated 10/100 Ethernet ports with TX/RX LED
Serial communications ports	+ COM1 RJ45-F type connection with LED (Opto-Isolated) + RS-232 (Default) / RS-485 (Optional – software selectable via BIOS) + COM2 RS-485 with LED + COM4 RS-485 (Optional) / RS-232 (Default - switch selectable) (Disabled if Wireless Module Option is installed) + 2 USB 2.0
Timer/clock	+ Onboard battery-backed RTC + NTP synchronization available + Watchdog timers- 1 Hardware and 1 Software
Wireless communications	Optional Wireless Kit supporting proprietary Sensia WMP protocol (900MHz and 2.4 GHz)
Power requirements	+ Supply Voltage: +24V DC Nominal (+12V DC to 28V DC Range), Class 2 + Power Consumption: 4 Watts
Software specifications	
Operating system	Open Source LINUX
Environmental specifications	
Operating temperature	(IEC 60068-2-14 Na): -30°C to +70°C (-22 °F to + 158°F)
Storage temperature	-40°C to +85°C (-40°F to + 185°F)
Humidity range	5-85% noncondensing
Emissions	CISPR 11: Group 1, Class A
ESD Immunity (IEC 61000-4-2)	+ 6 kV Contact, 8 kV Air + Radiated RF Immunity (IEC 61000-4-3): ▪ 10V/m with 1 kHz sine-wave 80% AM from 80... 2000 MHz ▪ 3V/m with 1kHz sine-wave 80% AM from 1400...2000 MHz ▪ 1V/m with 1kHz sine-wave 80% AM from 2000...2700 MHz
EFT/B Immunity (IEC 61000-4-4)	+ ±2 kV on signal ports + ±2 kV on Power ports + ±1 kV on communication ports
Surge Transient Immunity (IEC 61000-4-5)	+ ±1 kV line-earth (CM) on signal ports + ±1 kV line-earth (CM) on communication ports
Conducted RF Immunity (IEC61000-4-6):	+ 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz on all ports

Mechanical specifications	
General dimensions (W x H x D)	127 mm x 123.96 mm x 90 mm (5.00" x 4.88" x 3.54")
Weight	900 grams. (2 lbs.)
Mount style	DIN Rail (EN 50022 - 35 x 7.5)
Enclosure type rating	Metal Enclosure meets IP20



Front Dimensions



Side Dimensions