FLEX RTU

Advanced Data Acquisition & Control for MQTT Applications

Reliable, scalable data control for real-time insights and enhanced efficiency.

Introducing FlexRTU™

Introducing the FlexRTU, a versatile and powerful solution for industrial automation and control. Built around the reliable and abundant Raspberry Pi and the lightweight and efficient MQTT Sparkplug B protocol. The FlexRTU integrates seamlessly with multiple port options and a high-quality LCD screen. This combination provides extensive input/output capabilities and a clear, user-friendly interface for near-real-time monitoring and control.

For enhanced connectivity, the FlexRTU offers options for a LoRaWAN radio, enabling long-range, low-power wireless communication ideal for IoT applications. Additionally, it can be equipped with a four-port serial expansion, allowing for robust serial communication with multiple devices simultaneously.

Multiple Power Options

- Ranging from 5V up to 24V DC
- Depends on feature selections
- Compatible with various industrial environments

MQTT Protocol Translater

- Protocol translater for MQTT Sparkplug B
- Seamless integration with modern IoT systems
- Enables efficient data exchange

Monitor, Control and Interface

- Multi-IO Hat
- LCD Screen
- LoRaWAN Radio
- Four-Port Serial Expansion

FLEXRTU

Electrical Specifications

- **Power Supply:** 24 V DC, 5A
- **Power Consumption: 120W**

Environmental Specifications

- **Operating Temperature Range:**
  0°C to +50°C

Physical Dimensions

- **Height:** 6"
- **Width:** 6"
- **Depth:** 3"
- **Weight:** 2 lbs.
- **Mounting Options:** DIN rail or panel mount
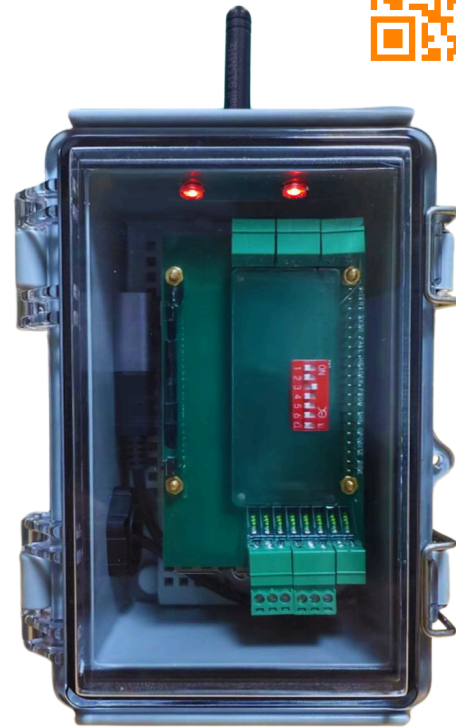
Input and Connectivity Options

- **Analog Inputs:** Two 4-20 mA loops for precise industrial sensor readings
- **Serial Ports:** Supports flexible connectivity to multiple devices
- **Communication Port:** One RS232 port

Technical Specifications

- **Processor:** Quad Core Cortex-A72 (ARM v8) 64-bit SoC @ 1.8GHz
- **Memory:** 8GB LPDDR4-3200 SDRAM
- **Wireless Connectivity:** 2.4 GHz and 5.0 GHz IEEE 802.11ac
- **Bluetooth:** Bluetooth 5.0, BLE
- **Network Interface:** Gigabit Ethernet
- **Peripheral Ports:**
  - 2 USB 3.0 ports
  - 2 USB 2.0 ports
  - Micro-SD card slot

Software Configuration

- **Web-Based Interface:** User-friendly, with options for local and remote configuration
- **MQTT Compatibility:** Integrated with MQTT Sparkplug B for seamless data flow to MQTT Brokers

Why Choose FlexRTU?

Designed with power efficiency, ease of use, and visibility at its core, the FlexRTU is the perfect solution for industrial applications. MQTT and TLS encryption allow for secure and reliable data handling. The user-friendly interface, coupled with a high-quality LCD screen, provides clear and immediate visibility into operations, allowing for quick and informed decision-making.

Its integration with FlexMQ ensures smooth data transfers and minimizes network usage, even in high-latency or unreliable networks. Whether monitoring sensors or controlling actuators, the FlexRTU delivers reliable performance with minimal effort.