RockBLOCK RTU

Flexible, satellite enabled micro datalogger

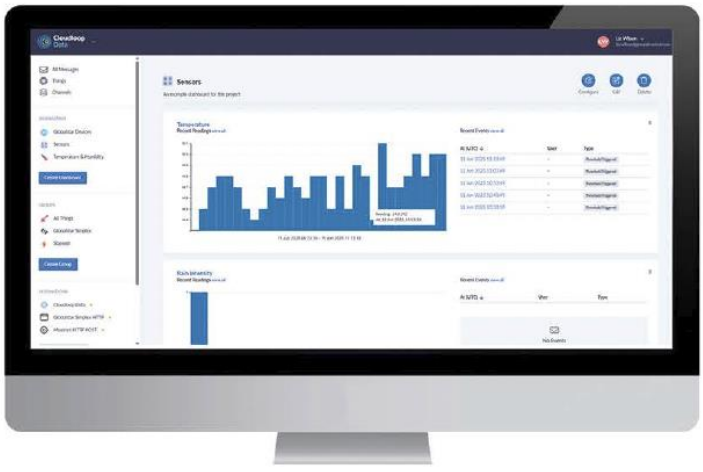
RockBLOCK RTU is a rugged, satellite enabled micro data logger for remote sensor monitoring and control. Designed for harsh, off grid environments, it captures data from connected sensors and transmits, using Iridium Short Burst Data (SBD). It is well suited to long term, remote monitoring where reliable data delivery, low power consumption and reduced routine site visits reduce operational cost.

Supporting applications such as water level logging, soil moisture sensing, pipeline valve state monitoring, environmental compliance data collection, smart agriculture, tank level monitoring and industrial telemetry. Designed for environmental, utility and industrial monitoring.

Our IoT platform and Cloudloop Insights service provide visibility of sensor readings, trends, alerts, and threshold events, helping teams monitor remote assets or conditions without building a full data management workflow from scratch. Use existing data destinations available in the platform or incorporate API into your own system.

KEY FEATURES

- Rugged micro data logger for remote sensor capture in harsh, off-grid environments
- IP67 rated enclosure for exposed outdoor deployments
- Compact, rugged, encased form factor for remote installation
- Supports analog and digital sensor modes
- Configurable 0–10 V / 4–20 mA analog input support
- Dry contact digital input support for switch, alarm and state monitoring
- Runs from 8–32 VDC for battery, solar or external power deployments
- Low-power operation, from 380 mW at hourly reporting intervals, SBD version
- Configurable I/O and reporting intervals from 10 seconds to multi-hour schedules, in the Connect App and Cloudloop platform.



TECHNICAL CHARACTERISTICS

PHYSICAL AND ENVIRONMENTAL

Form Factor	Compact, rugged, encased micro data logger Rugged, sealed enclosure
Dimensions	137 mm diameter x 40 mm depth
Applications	Remote, off grid sensor logging and response, water quality and level monitoring, environmental conditions, agriculture, industrial telemetry and alarm or switch action response
Storage Temperature	-40 to 85°C
Operating Temperature	-30 to 60°C
Operating Environment	< 75% Relative Humidity
Testing: Rugged Unit	Sealed against dust and water ingress to IP67 CE and FCC compliant, adhering to necessary health, safety, and environmental guidelines for distribution within the EU and the US

ELECTRICAL POWER

Power Input	9–32 VDC
Power Options	Battery, solar or external power source
Power Consumption	700mA max at 12V plus very low current sleep mode (<30mA). Consumption depends on interval, sensor configuration and communications profile

ATA LOGGING, FLEXIBLE OPTIONS

I/O Combinations	2 digital inputs, 1 analog input, 1 digital output 2 digital inputs, 2 analog inputs 2 digital inputs, 2 digital outputs Programmable via the Connect App or Cloudloop platform
Digital Input	Dry contact input support or switch, state, tamper or alarm monitoring
Analog Input	Configurable 0-10V / 4-20mA analog channel support
Interfaces	RS-232 / UART serial, GPIO
Local Provisioning	BLE for device configuration and set up

COMMUNICATION

Iridium (LEO) Satellite	Transmission via Short Burst Data (SBD)
Cellular Failover	Within coverage automatically switch to cellular to save on satellite airtime
Buffering and Processing	Store and bundle sensor readings locally, transmitting only when values breach your pre set thresholds, maximizing battery life and satellite airtime efficiency

CLOUDLOOP DATA AND INSIGHTS

Cloudloop Data sits between the Iridium SBD network and your application, removing much of the complexity of working with satellite messages.

It securely receives SBD messages from the RockBLOCK RTU, decodes the payload into structured sensor data, associates each message with the correct device and maintains a searchable message history. Decoded data is then made available to your application through standard integration methods, including REST APIs, webhooks and MQTT.

Cloudloop Insights visualizes incoming sensor data as live dashboards and historical trends while providing configurable threshold monitoring. Developers can configure the RockBLOCK RTU to respond automatically when conditions are met, monitoring minimum and maximum trip levels, traditional or digital alerts, managing cycle switching, or reporting a change of value by exception.

From raising flood or maintenance alerts when sensor thresholds are exceeded to generating security alarms from digital inputs such as door or window contacts. Threshold events can also trigger remote outputs on the same or another RTU, enabling simple distributed monitoring and control without additional application logic.

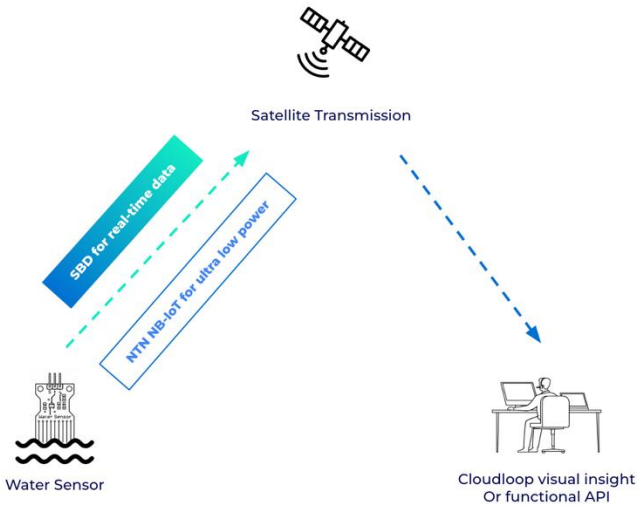
- Real-time connectivity
- Solar/Battery Power
- Cloud Storage
- Sensor Logging
- Actionable Insight

CLOUDLOOP DATA

Automatic Message Decoding	Decodes SBD messages into structured, application-ready data
Pre-Built Integrations	Connect data directly to AWS, Azure, Google Cloud, MQTT brokers and webhooks without developing custom connectors.

CLOUDLOOP INSIGHTS

Live Sensor Visualisation	Display sensor values as real time graphs with configurable time ranges and live updates.
Historical Trend Analysis	Review archived time series data to identify patterns, seasonal changes and long term asset behavior.
Threshold Monitoring	Define trigger levels that automatically detect abnormal operating conditions
Event Notifications	Generate alerts when configured sensor thresholds or digital input events occur



RockBLOCK RTU Developer support: