



RockREMOTE UAV is a sealed Iridium satellite terminal designed for drone manufacturers and integrators who need dependable global connectivity for BVLOS, long range, and infrastructure supported UAV operations.

Delivering both IMT messaging and Certus 100 IP in a rugged, flight ready enclosure suitable for airborne and ground installations. The enclosed device removes the need for custom mechanical design, EMC work and environmental qualification. Suitable for medium and large fixed wing or VTOL UAVs or dock based and autonomous ground infrastructure.

Key Features

- Global Iridium LEO coverage, including oceans and polar regions.
- Dual bearer: IMT messaging plus Certus 100 IP.
- Sealed IP66 aluminium enclosure for harsh UAV environments.
- Designed for continuous operation in airborne and docked systems.
- Ethernet, serial and GPIO interfaces compatible with ArduPilot, PX4 and custom stacks.
- Power efficient, low SWaP, for vehicle, dock or solar backed installations.

Physical & Environmental

Device Size (LxWxH)	182.3 x 90.5 x 57 mm
Weight	646g
Form Factor	Aluminum Casing
Operating Temperature	-40°C to + 70°C, <95%RH
EMC Compliance	Aligned with the RockREMOTE Mini standards

Electrical / Power

Input Voltage	10-30V DC
Idle Power	300mW
Sleep Power	<36mW/75mW (12V/24V)
Average Transmit	7.25W
Peak Current Draw	<1.66A @12V; <0.83A @24V

Communications

Iridium Certus 100	22 Kbps up / 88 Kbps down. For expanded command or payload needs.
Iridium Messaging Transport (IMT)	100 KB per message. For low overhead telemetry
GNSS	GPS, Glonass, BeiDou, Galileo, QZSS
Ethernet	10/100 Ethernet
BLE	BLE 5.0 (bench/field configuration)
IMT Control	AT Command for IMT control

Interfaces

Ethernet	Ethernet (10/100)
UART	UART for autopilot telemetry, system status or command channels
GPIO	Digital I/O for payload triggers or safety logic
MMCX	MMCX connector for Certus antenna
U.FL	U.FL connector for GNSS antenna
Connections	30-way pin header: power, serial, Ethernet, GPIO

Controls & Monitoring

Platform	Cloudloop platform for link insight, device health and fleet management
Wireless Configuration	Via BLE during testing, and OTA for remote configuration over IMT
API	Developer APIs and documentation for integrators
Security	Configurable onboard firewall



Compute Module

Processor	ARM Cortex M7, 550 MHz
Memory	564 kB RAM, 1 GB Flash
Operating System	FreeRTOS

The onboard compute module provides data handling for UAV integration.

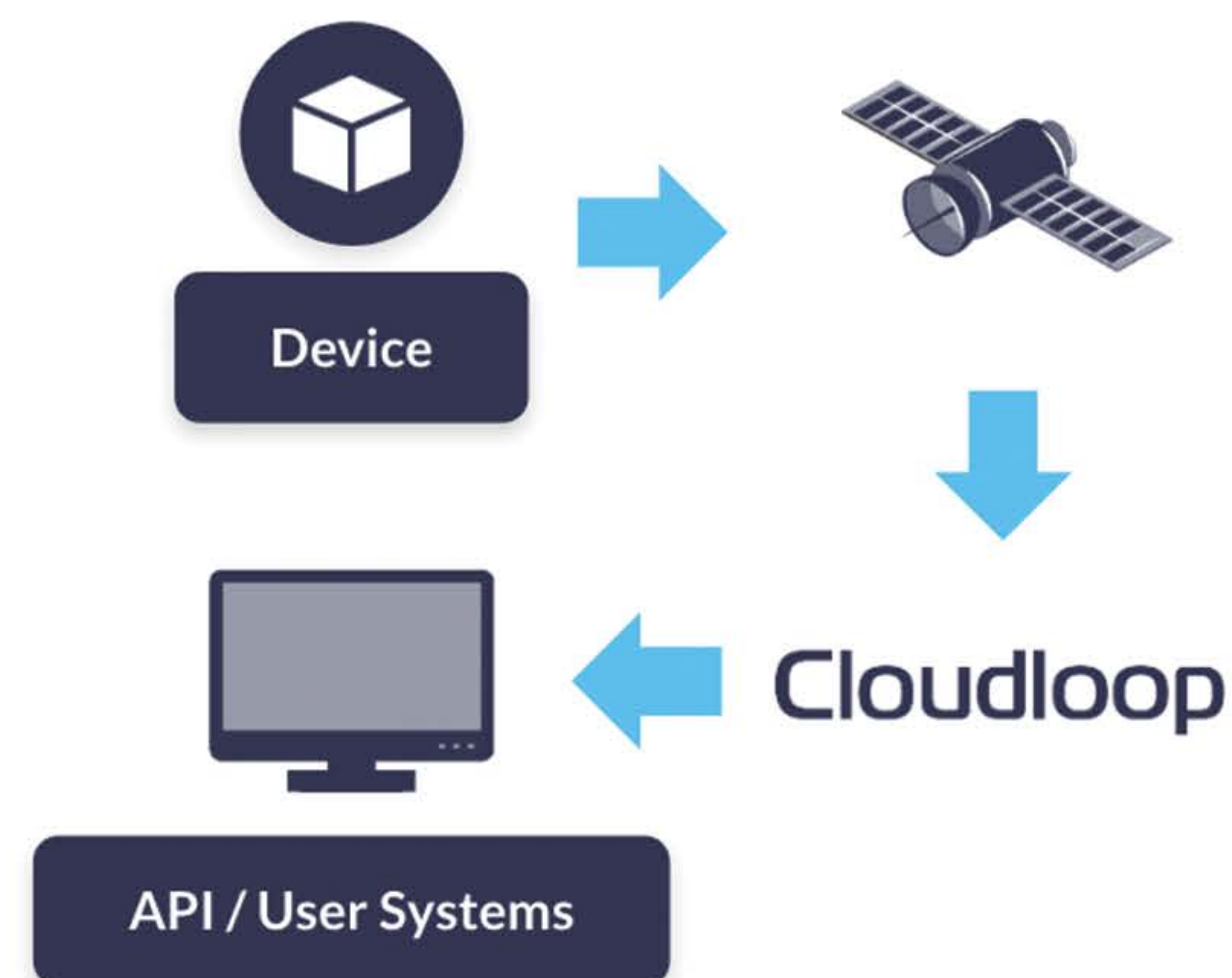
- Running all RockREMOTE firmware managing satellite link, IMT, IP, GNSS and hardware interfaces.
- Handling deterministic real time tasks under FreeRTOS.
- Providing GPIO logic for actions such as payload triggers, airframe safety lines and state inputs/outputs.
- Performing lightweight telemetry or status data processing before transmission.
- Providing configuration, diagnostics and link quality feedback that could be used by the autopilot or companion computer.

Cloudloop Platform & APIs

Operate and scale BVLOS fleets with confidence

Key capabilities:

- Fleet wide device and airtime management
- Monitoring of signal quality, message flow and device health
- Secure configuration and firmware management
- Data routing via REST APIs, webhooks and MQTT
- Support for IMT, IP and SBD across mixed fleets
- Cloudloop allows UAV manufacturers to treat satellite connectivity as a controlled, repeatable part of their system architecture.



Recommended Alternatives



RockREMOTE UAV OEM

- Embedded option for tight SWaP airframes
- IMT plus optional Certus 100 IP
- Best where custom integration is required



RockBLOCK 9603

- Ultra lean SBD messaging
- Smallest footprint and lowest power
- Ideal for basic safety C2 and health monitoring



RockBLOCK 9704

- IMT only messaging up to 100 KB
- Lower power and cost where IP is not required

Choosing Between RockREMOTE UAV, OEM and RockBLOCK Modules

- Choose **RockREMOTE UAV** when you need a flight ready, enclosed satellite terminal with global IMT and Certus 100 IP for BVLOS UAVs and docked systems.
- Choose **RockREMOTE UAV OEM** when you need embedded IMT and Certus 100 capability in a low SWaP module designed into the UAV avionics.
- Choose **RockBLOCK 9704** when you need cost efficient IMT messaging for richer telemetry and logs without full IP.
- Choose **RockBLOCK 9603** when the smallest size, lowest power and ultra lean satellite C2 link are the priority.