



Leveraging the Iridium Certus 100 satellite airtime service, RockREMOTE Mini OEM provides a lightweight subassembly for easy integration into a new product or IoT system. Add a Certus antenna, power and an Ethernet/IO interface, and the kit has everything needed to apply satellite data connectivity to a remote IoT LAN/WAN project.

The OEM uses identical firmware to the RockREMOTE Mini with the same functionality and support. The PCB assembly provides multiple sensor and actuator connectivity via ethernet, serial, I/O options. With ease of integration into small spaces, it is compact, and optimized for low power consumption. Its tri-color LED indicates various operating modes and its design supports easy installation using just four screw mounts. Add the kit to your inventory for manufacturing resale, or utilize in your own OEM solution.

Key Features

- **Satellite Connectivity**

A key component for secure, reliable data transfer. Iridium Certus 100 provides global, low latency, high speed connectivity, from anywhere with a clear view of the sky.

- **Low Power**

A primary design consideration for the Mini and Mini OEM. Power consumption in idle 0.25W, and 7.25W average transmit.

- **Versatile**

Various IO options can be enabled with add on daughters cards ranging from 4 channels digital I/O to 4 channels universal I/O

- **Full Developer Support**

We provide guidance with design recommendations to support successful integration into your project. All functionality, integrated data destinations, and dashboards visible in Cloudloop, Ground Control's IoT platform, are accessible via developer API, documentation and example coding. Providing essential steps to support your data transfer and insight.

Physical & Environmental

Device Size (LxWxH)	175 x 60 x 37.1 mm
Weight	310g
Form Factor	No casing, PCB assembly with mounting chassis
Vibration Rating	Mechanical Vibration and Shock to SAE J1455 when mounted as instructed
Operating Temperature	-40C to +70C, <95% RH
EMC Compliance	Tested as part of RockREMOTE Mini
Power Cabling	Design guidelines available
Iridium Antenna	Cabling to be supplied by OEM customer
Iridium Antenna Cable	MMCX
GNSS Antenna Connection	Design guidelines available
	U.FL (PCB position TBC)

Communications

Iridium Certus 100	TCP/IP: 22Kbps up/88Kbps down
Iridium Messaging	Data transfer packet size flexible
Transport (IMT)	from 1 to 100,000 bytes
GNSS	GPS, Glonass, Bei-dou, Galileo, QZSS
LAN	10/100 Ethernet PoE capability
WAN	Iridium Certus 100 / IMT
Bluetooth	BLE 5.0
Serial	AT Command set for IMT message exchange

Controls & Monitoring

Cloudloop IoT Platform	Provides account, subscription, device and data management tools to ensure your IoT system delivers
Integrator/Developer Support	API available for all functions within the Cloudloop Platform. Utilize pre-integrated data destinations, developer documentation and coding examples
RockREMOTE Dashboard	Wireless configuration using a smart phone app via BLE
	Remote configuration via Cloudloop Device Manager
Security	Configurable firewall

Electrical / Power

Voltage Required	10-30V DC
Power Consumption	<10mW/30mW (12V/24V) (sleep), <250mW (<20.8mA@12V, <10.4mA@24V) (Idle - Rx mode)
Peak Current Draw	<1.66A@12V, 833mA@24V, 10% duty cycle during Iridium transit

Interfaces

Ethernet	Available on pin out. Customer needs to provide magnetics
Serial	RS232 or RS484
Digital - General Purpose I/O	GPIO port 2 inputs, 2 outputs. Available on multiway header
UART	Logic level UART accessible on the PCB (2nd header - PCB position TBD)
U.FL Connector To External Antenna	Position on the PCBA for connection of a GNSS antenna
MMCX Connector To External Antenna	For connection of recommend ed Certus 100 antenna
30 Way Pin Header	Power, serial, ethernet, GPIO
SIM Card Slot	Standard (2FF) x 1 Satellite

Compute Module

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