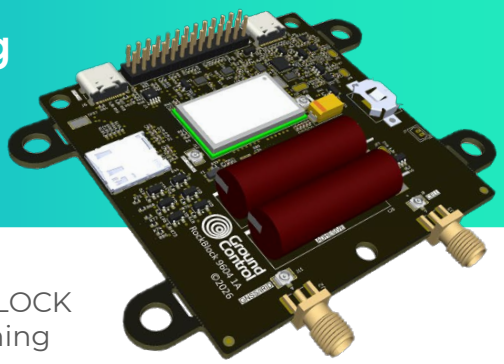
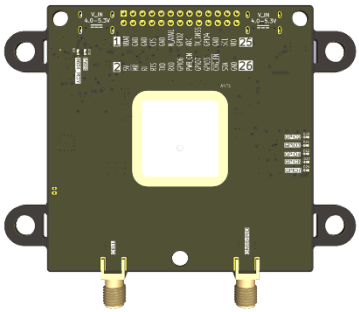
RockBLOCK 9604

Compact, global satellite messaging for your remote application



RockBLOCK 9604 brings Ground Control's proven RockBLOCK simplicity to Iridium's newest hybrid IoT platform, combining satellite, cellular and GNSS connectivity on a single board.



Built around the Iridium 9604 transceiver, RockBLOCK 9604 pairs Iridium Short Burst Data (SBD) satellite messaging with LTE-M cellular and an integrated GNSS receiver. An onboard patch antenna handles Iridium and GNSS by default, and dual SMA connectors let you fit an external satellite or GNSS antenna and a dedicated cellular antenna when your installation needs it.

Power and basic serial access are available through USB-C, while a 26 way 0.1 inch pin header adds full power, serial and GPIO access, giving developers a straightforward path from prototype to deployment.

KEY FEATURES

Hybrid satellite and cellular connectivity

Combines Iridium Short Burst Data with LTE-M cellular on one board, so you can choose the network that suits your coverage and budget for each message.

Integrated GNSS positioning

An onboard GNSS receiver shares the satellite antenna, adding location data without extra hardware or a separate antenna.

Flexible antenna configuration

Use the built-in patch antenna for Iridium and GNSS, or connect external antennas through the two SMA connectors for satellite/GNSS and cellular.

Developer-controlled network selection

Your application decides when to use satellite or cellular, with no forced automatic switching, giving you full control over cost and coverage strategy.

Simple, flexible integration

USB-C provides power and basic serial, while a 26 way pin header adds full power, serial and GPIO, so RockBLOCK 9604 drops into new and existing systems with minimal effort.

Efficient two way satellite messaging

Transmit up to 340 bytes and receive up to 270 bytes using Iridium Short Burst Data, from anywhere on Earth.

Low power design

Sleep current below 0.5 mW and idle consumption of around 200 mW support long deployments on limited power budgets.

TECHNICAL SPECIFICATION *(Subject to change)*

PHYSICAL AND ENVIRONMENTAL

Size	72 x 72 mm (2.83 x 2.83 in)
Weight	<50 g (1.76 oz) including patch antenna
Antenna	Integrated Iridium/GNSS patch antenna, with SMA connections for external satellite/GNSS and cellular antennas
Form Factor	PCB assembly with optional integrated patch antenna
Operating Temperature	-40°C to +85°C (-40°F to +185°F)
Mounting	3 mounting holes inboard, 4 on removable mounting lugs

ELECTRICAL POWER

Power Input	5 V via USB-C, or 3.7 V Li-ion battery input (470 mA limit on each)
Power Consumption, Transmit	1.4 W (peak)
Power Consumption, Idle	Approximately 200 mW
Power Consumption, Sleep	Less than 0.5 mW
Peak Current	Up to 2.8 A on VBAT_IN; otherwise supplied by onboard super capacitors
Inrush Current	470 mA

COMMUNICATIONS

Satellite Service	Iridium Short Burst Data (SBD)
Mobile Originated Message	Up to 340 bytes
Mobile Terminated Message	Up to 270 bytes
Satellite Tx Power	32 dBm at the antenna terminal
Cellular Service	LTE-M (LTE Cat-M1)
Cellular Tx Power	25 dBm at the antenna terminal
Positioning	Integrated GNSS receiver, sharing the Iridium/SBD antenna

INTERFACES

Host Interface	UART dedicated to 9604 AT command exchange, 3.3 V LVTTL, 5 V tolerant
USB	2 x USB-C (power and RXD/TXD only)
GPIO	Via 26 way pin header only: Network Available and Ring Indicator signals, plus dedicated On/Off input (LVTTL, 3.3 V, 5 V tolerant)
I2C	1 port via 0.1 inch pitch header
SIM	Nano SIM (push-push)
Antenna Connectors	SMA (Iridium/GNSS, shared) and SMA (cellular)
Power / Serial / GPIO Connector	USB-C (power, RXD/TXD) or 26 way, 0.1 inch pitch pin header (full power, serial and GPIO)

Ground Control