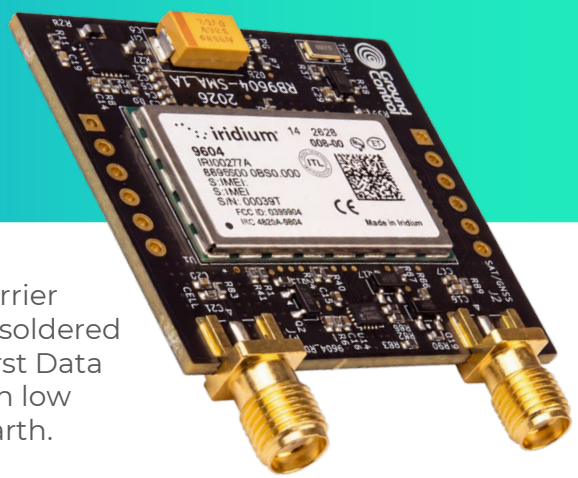
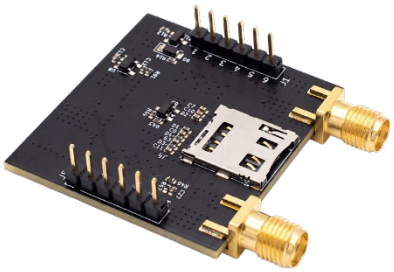
RockBLOCK 9604 Mini

Hybrid satellite messaging, built for direct PCB integration



RockBLOCK 9604 Mini is a 35 x 37 mm (1.38 x 1.46 in) carrier board for the Iridium 9604 transceiver, designed to be soldered directly onto a host PCB. It combines Iridium Short Burst Data (SBD), LTE-M cellular and GNSS in a single module, with low latency satellite messaging that works anywhere on Earth.

The board adds an e-fuse protected power input, a nano SIM slot, status LEDs and two SMA connectors, one for Iridium/GNSS (shared) and one for LTE-M. External antennas are required.



Power, serial and control signals are on two 6 way 0.1 inch pin headers. Your host communicates with the 9604 over a 3.3 V UART using AT commands, and GNSS data is output as NMEA on a separate pin.

KEY FEATURES

Hybrid satellite and cellular connectivity

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

Simpler Iridium certification

Certifying your own Iridium product usually only makes sense for large deployments. Our integration guidelines make it easy to carry the Mini's Iridium certification into your own product, so smaller production runs become viable too.

Integrated GNSS positioning

An onboard GNSS receiver shares the satellite antenna and outputs NMEA data on a dedicated pin, adding location data without extra hardware.

Built for direct integration

Two 6 way 0.1 inch pin headers carry power and serial, so the Mini can be hand soldered straight onto your own PCB assembly.

Onboard protection and status

An onboard e-fuse with power good indication, plus input power and modem ready LEDs, makes bring-up and troubleshooting simple.

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.

Very low power standby

Idles at 10 mW, with a 4 mW sleep mode your application controls; transmit peaks of up to 3.8 A come from your supply.

TECHNICAL SPECIFICATION *(Subject to change)*

PHYSICAL AND ENVIRONMENTAL

SKU	FP-RB-9604-MINI
Size	35 x 37 x 15 mm (1.38 x 1.46 x 0.59 in), excluding SMA connectors
Weight	<30 g (1.06 oz)
Antenna	External antennas required (not included)
Form Factor	PCB assembly with 2 x 6 way 0.1 inch pitch pin headers
Operating Temperature	-40°C to +70°C (-40°F to +158°F), <95% RH non-condensing
Mounting	Hand solderable to host PCB via pin headers

ELECTRICAL POWER

Power Input	3.3 - 4.5 V DC
Power Consumption, Transmit	~17 W (peak)
Power Consumption, Idle	10 mW
Power Consumption, Sleep	4 mW
Peak Current	3.8 A
Inrush Current	120 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 for 9604 AT commands, 3.3 V LVTTL
Control / Status	Ring Indicator, Network Available, power on/off, reset (nMR)
GNSS Output	NMEA via TXD_GNSS pin
SIM	Nano SIM (push-push)
Antenna Connectors	2 x board-mounted SMA: Iridium/GNSS (shared) and cellular
Power / Serial Connector	2 x 6 way 0.1 inch pitch pin header
Status LEDs	VIN (input power), PG (power good), 9604_RDY (modem ready)
USB / GPIO / I2C	None

Ground Control