ROCK SEVEN
LOCATION TECHNOLOGY

iridium

RockBLOCK can send and receive short messages from anywhere on Earth with a view of the sky.

Compatible with Windows, Mac and Linux computers (including Raspberry PI™) and many other platforms with serial or USB ports.



Features

- Plug and play satellite communication
- Available as a PCB or encapsulated product
- Full 2-way communication system
- Integrated antenna and power conditioning
- Optional external antenna connector (Naked only)
- Truly global operation, using the Iridium satellite network
- Data arrives via e-mail, or directly to your own web-service



Features and Contract Options

RockBLOCK Device Costs		Price
RockBLOCK Naked (w/ either onboard antenna or SMA)		£159.00
RockBLOCK+ (encapsulated with 9-30v regulator)		£189.00
Accounts can have more than one device per account, and pool credits between devices		
Monthly Line Rental		£8.00
There is no minimum contract, simply per month when you need to use the RockBLOCK		
Credits (used for messages transferred, 1 credit per 50 bytes sent/received)		
Bundle	Price Per Credit	Bundle Price
500 Credits	£0.09	£45.00
1000 Credits	£0.08	£80.00
2000 Credits	£0.07	£150.00
5000 Credits	£0.07	£300.00
10,000 Credits	£0.05	£500.00
20,000 Credits	£0.04	£800.00
50,000 Credits	£0.03	£1500.00
50,000+ Credits	Further discounts available...	
Volume discounts available for over 10 units - please ask for details		

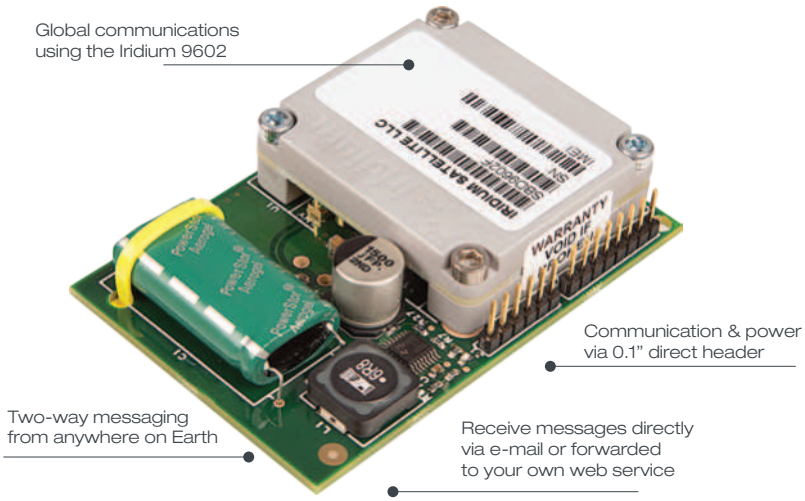
1 credit is used per 50 bytes in a message to/from a RockBLOCK
Credits do not expire unless no monthly fees have been paid for 12 months
All prices subject to VAT and/or any local taxes applicable to your state or country.

Key Functionality

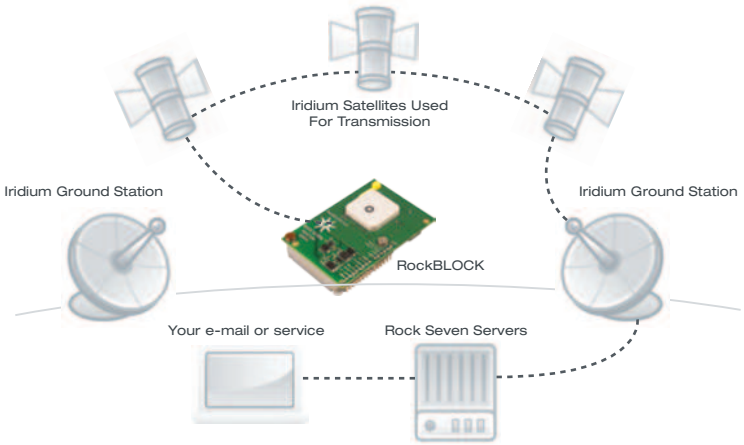
Coupled with our intuitive web-based control panels and your services:

- Power Requirements – RockBLOCK Naked PCB requires 5v DC. The encapsulated RockBLOCK+ product has a built-in regulator, and takes 12/24v DC. Both need a minimum of 100mA for operation, but can be put to 'sleep' to save power.
- Message Sizes – You can send 340 bytes from a RockBLOCK and 270 bytes to a RockBLOCK per message.
- Data Interface – The RockBLOCK Naked has a UART interface, exposed on the header connector. The RockBLOCK+ has an RS-232 interface exposed on a 3m cable. An optional FTDI/USB cable can be purchased to allow you to access the RockBLOCK via a USB port.
- How to Integrate – The RockBLOCK appears as a serial interface, and you can control it using a simple set of AT commands. It is expected that you'll be able to integrate it into your own software with minimal effort
- Message Delivery – Messages sent from RockBLOCK can either be delivered to your chosen email address, or sent to your own web service as a simple HTTP POST.
- Sending Data – You can make a simple HTTP POST to our web service. The message is queued on the satellite network almost instantly, ready for RockBLOCK to download (on your command)
- Costs and Contracts – Please see the table to the left for costs. There is a monthly cost, plus the system uses 'credits' to send and receive messages. There are no annual contracts, you simply pay-as-you-go.

ROCK SEVEN
LOCATION TECHNOLOGY



How does the RockBLOCK work?



The RockBLOCK allows you to send and receive short messages from anywhere on Earth with a clear view of the sky. It works far beyond the reach of WiFi and GSM networks.

Maybe you want to transmit weather information from mid-ocean? Or use it to control your robot in the middle of the desert? Perhaps you need to communicate in an emergency, when other networks might not be available? RockBLOCK can help you.

RockBLOCK takes its power via the header connector, or alternatively via the optional FTDI/USB cable. If you're using the RockBLOCK Naked then, your host needs to supply a minimum of 100mA @ 5v DC. RockBLOCK+ has a built-in regulator, and can accept 9-30v DC.

At the heart of RockBLOCK is an Iridium 9602 modem. The RockBLOCK hosts the 9602 and provides it with an antenna, and its power supply requirements. It exposes the modem's serial interface via a 0.1" pitch connector (or via labelled wires on the RockBLOCK+)

Iridium is the only satellite network that allows transmission of information from any point on Earth – other networks have no coverage in the polar regions, and have intermittent or no coverage in other marine and land areas.

Iridium has 66 satellites in orbit around the Earth, allowing coverage anywhere on Earth 24 hours a day, 7 days a week. No other satellite network has truly global coverage. Messages sent via Iridium take just seconds to reach you, via e-mail or directly to your web-service.

Physical Properties

RockBLOCK Naked	76.0 x 51.5 x 19.0mm
RockBLOCK+	130mm diameter, 40mm high
Cable (RockBLOCK+)	3m moulded to unit

Environmental Properties

Storage Temperature	-40 to 85 deg C
Operating Temperature	-30 to 60 deg C
Operating Environment	< 75% Relative Humidity
Testing	RockBLOCK+ Unit – IP68 Sealed against dust and water ingression to immersion of 3m for 30 mins

Power

RockBLOCK Naked	5v DC, 100mA minimum
RockBLOCK+	9-30v DC regulated
Power Consumption	max 450mA (100mA required)
Power & I/O	Direct Header or FTDI/USB

Communication

Iridium Modem	9602 short burst transceiver
Iridium Antenna	1621Mhz tuned patch antenna

Product Options

RockBLOCK Naked - PCB with on-board antenna
RockBLOCK Naked - PCB version with SMA connector
RockBLOCK+ - Enclosed IP68 version, with regulator

	Naked Std	Naked w/SMA	RB Plus
Built in Iridium antenna	✓	✗	✓
SMA port for external antenna	✗	✓	✗
Power requirements	5v	5v	9-30v
Waterproof Enclosure (IP68)	✗	✗	✓
Sleep Mode for low power use	✓	✓	✓
Message notification signal line	✓	✓	✓
UART serial connection	✓	✓	✗
RS-232 serial connection	✗	✗	✓
External Mounting Options	✗	✗	✓
	£159 + tax	£159 + tax	£189 + tax

For more information, technical product details and PDF downloads please visit our website at:
http://www.rock7.com

Disclaimers:

The Iridium logo and word, Arduino word, and Raspberry Pi word are registered trademarks of their respective owners.