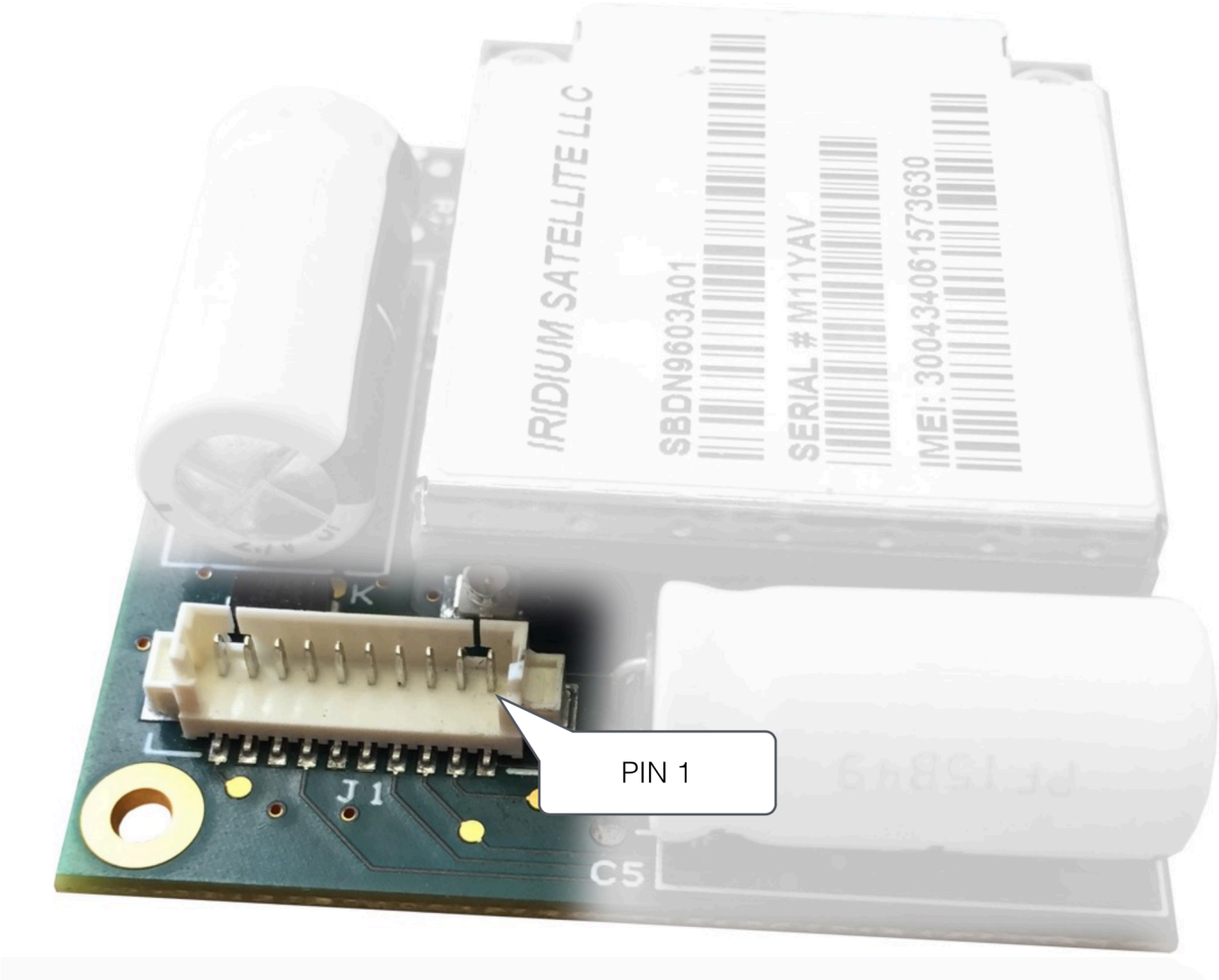
Connectors and Wiring

RockBLOCK 9603

The RockBLOCK 9603's header connector is a Molex PicoBlade 1.25mm pitch. The mating part is Molex part number 51021-1000.



Pin	Label	Description
1	RXD	Iridium 9603N RX *(output from RockBLOCK)*
2	CTS	Iridium 9603N CTS *(output from RockBLOCK)*
3	RTS	Iridium 9603N RTS *(input to RockBLOCK)*
4	NetAv	Network Available signal
5	RI	Ring Indicator signal (active low)
6	TXD	Iridium 9603N TX *(input to RockBLOCK)*
7	OnOff	Sleep control (pull to ground to switch off)
8	5v In	5V power supply (450mA limit)
9	Li-Ion	3.7V power supply (450mA limit)
10	GND	Ground

The RockBLOCK does not have a charging circuit. You'll need to charge your batteries externally.

There are various FTDI USB cables, the model used with the RockBLOCK 9603 is the TTL-232R-3V3 modified with a 10-pin picoblade header connection. It's available to purchase from our shop - here.

> 📘 On/OFF Control for RockBLOCK 9603
>
> Due to supply-chain shortage, some components in RockBLOCK 9603 v3.F have been replaced with alternatives. This does not adversely affect the normal operation of the device.
>
> For further information please view the Power Supply docs.

RockBLOCK 9602

RockBLOCK 9602 has a 0.1" header, split into 2 sections. PIN **ID** 1-6 (in the 6 pin header) are designed to be compatible with the FTDI TTL-232R-3V3 cable for USB hosts. If you're not using this cable, you do not need to connect these pins. The RockBLOCK board is 5V tolerant, so connecting the RockBLOCK directly to the Arduino, or similar, will not cause any issues. The logic levels of the UART connection are 3V3, but again, connecting the RockBLOCK to 5V is absolutely fine.
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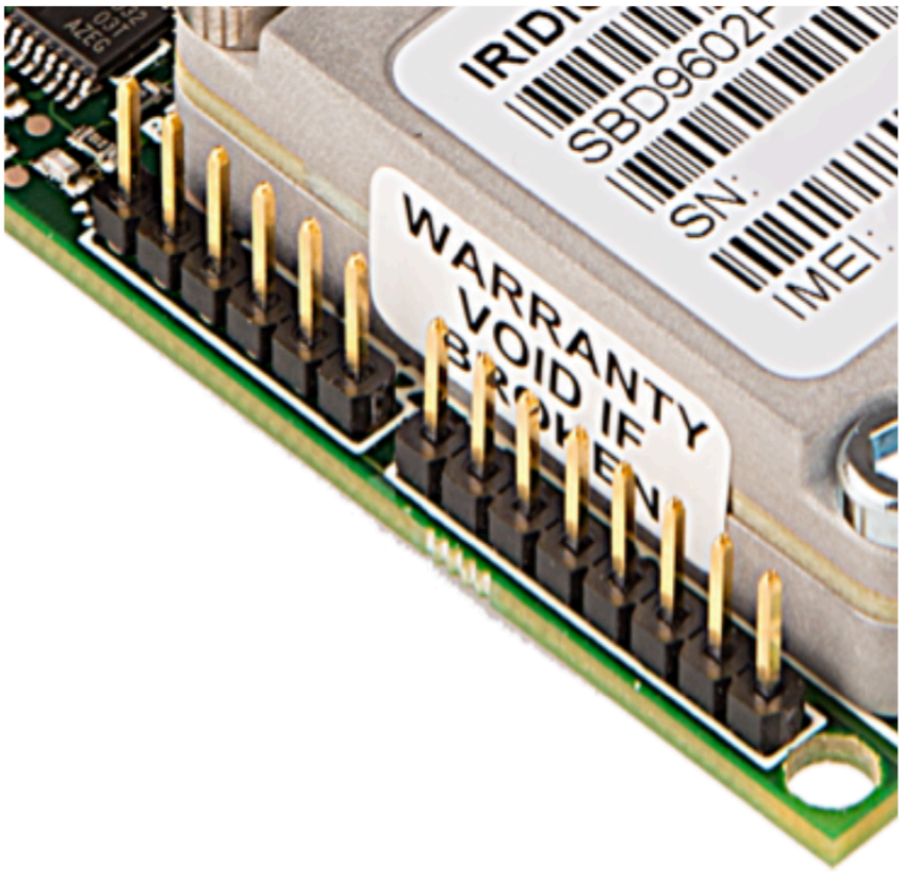

Pin	ID	Description	Description
6	1	RTS	Iridium 9602 RTS
5	2	RXD	Iridium 9602 RX (output from RockBLOCK)
4	3	TXD	Iridium 9602 TX (input to RockBLOCK)
3	4	Vcc	5V Power supply (450mA limit)

Pin	ID	Description	Description
2	5	CTS	Iridium 9602 CTS
1 (indicated by triangle on silkscreen)	6	GND	Ground
1 (indicated by triangle on silkscreen)	7	GND	Ground
2	8	5v In	5V Power supply (450mA limit)
3	9	5v Out	5V regulated output, (eg, for powering external Arduino host)
4	10	RI	Ring Indicator
5	11	NetAv	Network Available Signal
6	12	On/Off	Sleep Control
7	13	LiIon	3.7V Li-Ion power supply
8	14	GND	Ground

On the RockBLOCK 9602, it is possible to remove the supercapacitor. You would need to ensure that your 3.7V Li-Ion power supply could deliver a peak current of 2A for a short burst of approx 100ms.

> 🚧 Note
>
> You can't remove the supercapacitors on the 9603

RockBLOCK Plus

RockBLOCK Plus is supplied with a moulded cable, which is stripped and tinned as follows:

Colour	Description
Red	9v-30v DC
Black	Ground
Blue	RS-232 TX (input to RockBLOCK+)
Yellow	RS-232 RX (output from RockBLOCK+)
Pink	Iridium 9602 on/off control
Green	Iridium Ring Alert signal
White	Iridium Network Availability signal

> 🚧 NOTE
>
> The Iridium On/Off, Ring Alert and Network Availability lines (Pink, Green and White) all run at RS-232 signal levels and will sit at logic-high when not in use.

DE-9 wiring

Many customers find it helpful to connect a DE-9 connector for initial setup or debug purposes.

DE-9 Pin	Colour	Signal
2	Yellow	RX
3	Blue	TX
5	Grey	GND

*Last updated on **Sep 9, 2024***