



# GLOBAL SATELLITE ENGINEERING

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## Features

- Iridium 9602 SBD Transceiver controller with built-in GPS
- Built-in accelerometer to monitor events and/or tilt
- Highly configurable to meet a wide range of applications
- Ultra-low power consumption (< 5uA)
- Serial interface for customer equipment or text messaging
- 8 Configurable I/O's can be remotely monitored or controlled
- 2 Dedicated 12-bit analogue-to-digital (ADC) inputs
- Optionally configure IO as panic switch
- Miniature size (World's smallest form factor!)

## Applications

- Search and Rescue, Personnel/Animal/Asset tracking, Adventure activities, Vehicle/Aircraft/Equipment monitoring and control, Pilot/Driver communication, Construction, Forestry, Government, Maritime, Mining, Military, Oil & Gas

## Description

The Iridium 9602 SBD transceiver allows SMS-like messaging from any location on the surface of the earth, thanks to 66 low-earth-orbiting satellites. The Voyager was developed to control the 9602 SBD transceiver, and incorporates several peripherals and interfaces to meet a wide range of applications. These include an industry-leading GPS, a 3-axis accelerometer, analogue-to-digital inputs, GPIO, a serial interface and on-board storage memory, all controlled by an ultra-low power microprocessor. Voyager is highly configurable and therefore meets a wide range of application requirements, the simplest being a GPS tracking device (no "black spots"), which allows track data to be viewed on a web-based mapping platform (see [www.gsatrack.com](http://www.gsatrack.com)). Custom applications may be also be developed with relatively low overhead and cost by re-using our core software modules. Please contact us for more information.

The ultra-low power technology allows battery operation which was previously unfeasible for satellite communication devices, where several years of usage is required. This is now possible using small low cost batteries. For example, a tracking application using 2 lithium 5.8Ah C cells in series (battery pack: 7.2V, 5,8Ah), where 2-hour GPS fix intervals are required, with a transmission occurring once per day (containing 12 fixes for the day), will operate for approximately 5 years.

For basic tracking applications, the controller may be used with only a power supply (eg. battery pack) and GPS + SBD antennas (uses active GPS antenna). For more advanced functionality, the controller may be interfaced via its I/O and/or serial interface to customer equipment. Please contact us for custom protocol interface requirements.

The easy-to-use serial interface allows for device configuration, system information retrieval (time, current GPS position, time of transmission, etc), and the ability to send and receive text messages. The I/O interface allows remote port manipulation and port monitoring. Optionally, one I/O may be configured as a dedicated panic switch which when closed will increase the GPS reporting rate as required, while indicating a "panic state" in the message contents.

The Voyager is suitable for OEM use.

Online mapping platform: <http://www.gsatrack.com>

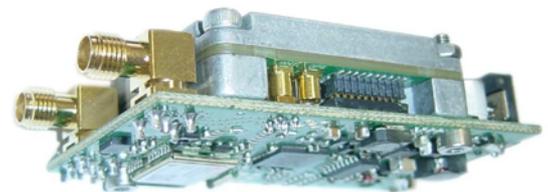
## Specifications

	Value	Unit
Weight (without SBD)	28	g
Dimensions (L x W x H)	81 x 41 x 16	mm
Current consumption (task manager running)	5	µA
Input voltage range	5.5 to 16	VDC
Operating temperature	-40 to 85	°C

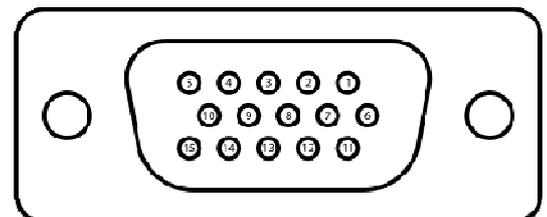
## Voyager Product Information



Voyager (With Enclosure)



Voyager Bottom View



Pin	Description
1	Input/Output 6
2	Input/Output 1
3	Input/Output 4
4	DTE RS232 Transmit
5	Ground
6	Analogue-to-digital 1
7	Input/Output 7
8	Input/Output 2
9	Input/Output 5
10	DTE RS232 Receive
11	Analogue-to-digital 2
12	Input/Output 8
13	Input/Output 3
14	Ground
15	Positive Supply Voltage (Vin)