

IridiTRAK – RST430

Alert / Tracking / Monitoring

The Beam IridiTRAK terminal uses the latest most advanced technology in providing global alert, tracking and monitoring services.



Market Applications

IridiTRAK provides a highly featured solution to support a wide range of vertical market including;

- Transport
- Maritime
- Agriculture
- Oil / gas
- Utilities
- Emergency services
- Government
- Aeronautical

The applications can be as varied as

- Monitoring
- Fleet Management
- Tracking
- Remote Control
- Alert Reporting
- Alarm Management
- 'Man Down' Alerts
- Data Communications

Iridium Satellite System

Iridium is the only provider of truly global satellite voice and data solutions with complete coverage of the earth. Iridium delivers essential communications services to and from remote areas where no other form of communication is available. The IridiTRAK terminal utilises the Iridium 9601 Short Burst Data module in order to communicate anywhere on earth.



Key Features & Benefits

- 100% Global Coverage
- Sensitive GPS engine in-built
- Iridium Satellite in-built
- Short Burst Data Capable
 - Mobile Originated
340Bytes
 - Mobile Terminated
270 Bytes
- Messaging Capable
- 9 – 32VDC input
- Support alert buttons
- Digital IO
- Analogue input
- Multiple alert notifications
- Support simultaneous tracking
- Simple Installation / configuration
- Local & remote configuration
- Remote diagnostics & testing
- Sleep mode – low power usage
- Remote Control
- Small and lightweight
- Remote LED output (Alert)
 - On board LED
 - Signal

Interoperability

The IridiTRAK terminals are fully operational as standalone terminals as they have an inbuilt communications device.

Iridium Short Burst Data

Iridium Short Burst Data (SBD) can be delivered to your desired destination in a variety of ways.

- Direct to your IP Address
- To an Email Address
- To another Iridium device
- Any combination of the above
- Maximum of 5 delivery addresses

TRACKING / MONITORING

Tracking of vehicles, trains, busses, vessels, aircrafts, containers, people and any other fixed or mobile assets can be simply deployed using one of the IridiTRAK terminals.



IridiTRAK terminals provides an intelligent tracking interface that enables the configuration of individual reporting fields such as lat/long/speed/direction/height as well as the status of alarms or digital inputs as configured on the terminal.

Tracking Data

The sending of position and status messages for any asset, vehicle or personnel can be simply and easily reported using one of the various methods available on the selected terminal.

For tracking applications the intelligent IridiTRAK allows the unit to be configured so that position reports can be sent upon various activities taking place.

Tracking / Monitoring Features

- Global coverage
- Iridium Short Burst Data
- Tracking messages sent via:
 - Short Burst Data
- Interface directly to LeoTRAK-online
 - Graphical Information system
- Tracking messages generated by
 - Preset periodic interval
 - Event driven
 - Digital input
 - Alert button pressed
 - Remotely polled
 - Movement
 - System activity
 - Ignition Sense Input

ALERTS / ALARMS

The IridiTRAK is designed to support a standalone alert / alarm management system or it can be used in conjunction with a tracking application. This makes it possible to track any asset or personnel on a regular basis whilst having the peace of mind of an alert system operating in the background at all times.



Alarm / Alert Inputs

The IridiTRAK interface can handle multiple alarm activation points which can be physical buttons or other digital /analog inputs. The use of 3rd party equipment such as 'man down' devices can easily be configured to the IridiTRAK terminals.

Alert Notification

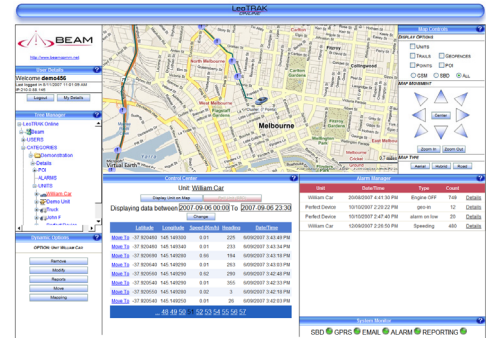
When an alarm is raised this will automatically generate the delivery of an alert notification to the predetermined destination. This delivery destination can be to another Iridium service, another mobile service (Selected Service Providers) or to any email address as specified.

Alert/Alarms Features

- Global coverage
- Terrestrial & Satellite options
- Alert messages sent via:
 - Short Burst Data (Iridium models)
- Interface directly to LeoTRAK-online
 - Graphical Information system
- Alert Security
 - Covert alert notification
 - No physical signs of alert raised
 - Notification to multiple parties
 - Continuous alerting until reset
 - Passcode protected
 - Alert priority over other comm.'s

LeoTRAK Online

The LeoTRAK Graphical location Information System provides for a low cost web based interface to be able to track and or monitor your fleet, vehicles, assets or personnel anywhere on earth.



Street Level Mapping

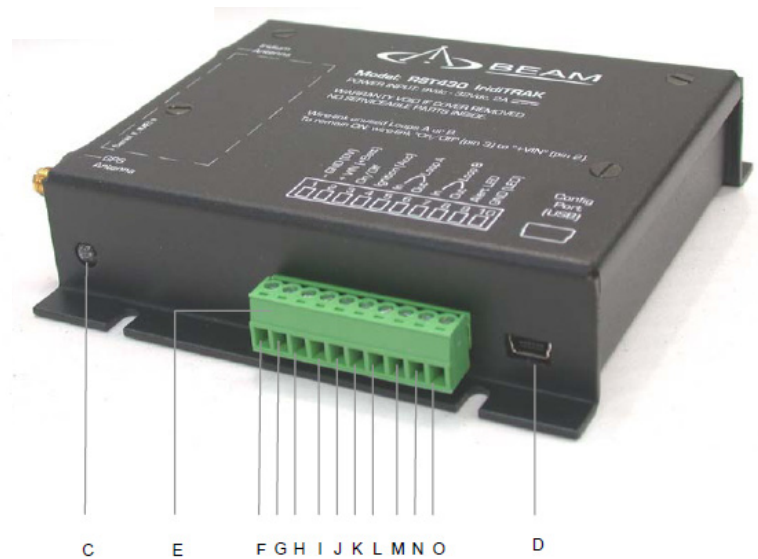
Beam has partnered with Microsoft, one of the world's leading providers of online mapping and location-based services.



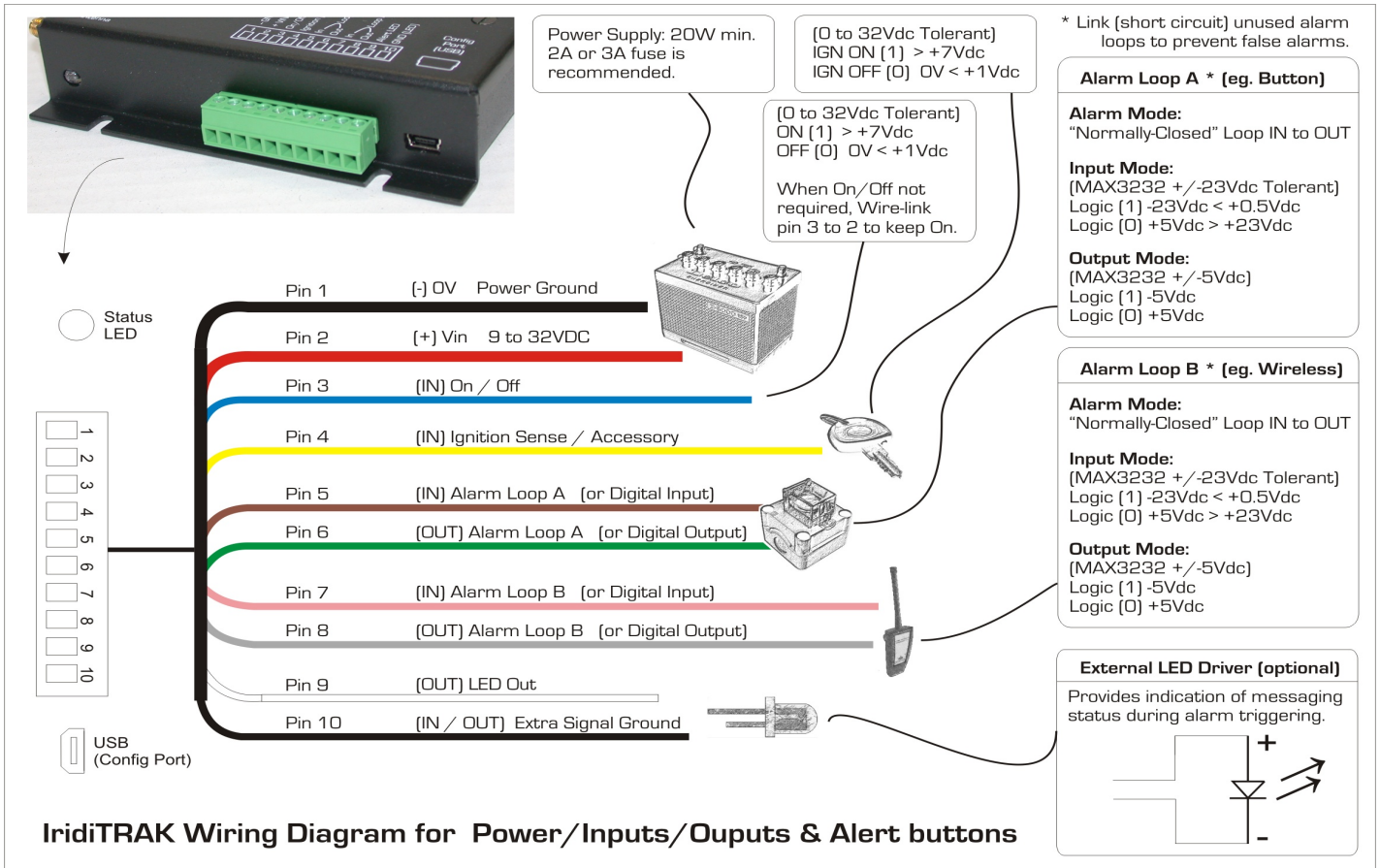
LeoTRAK Online Features

- Global coverage
- Direct interface to IridiTRAK terminals
- Alert / Alarm identification
 - Flashing Duress
 - Pinpoint geo-location
 - Street level reference
- Fleet Management
 - View multiple assets
 - Create & manage groups
 - User and supervisor access
- Geofencing
 - Set boundaries online
 - Inclusion / exclusion boundaries
- Position reporting
 - Up to 1 year stored for reporting
 - Alerts displayed until cleared

IridiTRAK - Specification



ITEM	CONNECTOR	DESCRIPTION		
A	Iridium Antenna	SMA	Antenna connector for Iridium 9601 SBD module (Internal Transceiver Module)	
B	GPS Antenna	SMA	Antenna connector for super-sense GPS module	
C	Status LED	Dual Colour	Network Registration / GPS / Status LED	
D	Config port	USB	Programming & configuration port	
E	I/O Connector	10 Pins	10 pins - Input & Output pluggable connector	
F	Pin 1	Screw Terminal	Power V- (GND)	
G	Pin 2	Screw Terminal	Power V+ (+Vin)	
H	Pin 3	Screw Terminal	Master On/Off Input If not using, Wire-link to +Vin to remain ON	
I	Pin 4	Screw Terminal	Ignition Sense Input Use to determine when to Sleep. If not using, Wire-link to +Vin to remain awake.	
J	Pin 5	Screw Terminal	Loop A In	NORMALLY CLOSED, connect to an alert button / pendant system relay contacts.
K	Pin 6	Screw Terminal	Loop A Out	If not using, it MUST be wire-linked CLOSED to avoid false emergency
L	Pin 7	Screw Terminal	Loop B In	NORMALLY CLOSED, connect to an alert button / pendant system relay contacts.
M	Pin 8	Screw Terminal	Loop B Out	If not using, it MUST be wire-linked CLOSED to avoid false emergency
N	Pin 9	Screw Terminal	Alert LED Out	
O	Pin 10	Screw Terminal	Spare GND (normally used for Alert LED)	
P	Mounting Holes	4mm	Mounting holes for securing terminal	



Technical Specifications

Iridium Module	
9601 L-Band transceiver frequency	1616 - 1625 MHz
SBD Message Size - Bytes	MO – 340 MT – 270
Average Power	7W during a transmit slot (max)
Average Power	0.6W during a frame (typical)
Receiver Sensitivity	-118.5db at 50W (typical)
Duplexing method	TDD (Time Domain Duplex)
Antenna Connector	SMA Female Socket

I/O Specification	
2 x Alarm Loops (2 inputs and 2 outputs)	Alarm Mode: "Normally Closed" Loop IN to OUT Up to 500m cable run / multi buttons
Ignition / Accessory Sense	(0 to 32Vdc Tolerant)
and ON / OFF inputs	High (1) > +7Vdc Low (1) 0V < +1Vdc

Power Specifications	
Input Voltage DC	9 - 32VDC, 2A
Plug Pack (Not Included)	90 – 250VAC, 50/60Hz input
Power Consumption	
Idle (registered) Mode	1.5 W
Transmit Mode	1.8 W
Sleep Mode	20mA Current (0.02A)

Kit Contents	
Main RST430 – IridiTRAK unit	
Main Power Loom	
USB Configuration Cable	
Installation & User Manual	
Quick Start Guide	
CDROM - User Manual, IridiTRAK Management Configuration Software	

Additional Interface	
USB Config Port	5 – pin Mini-B Female socket

GPS Module	
Receiver Type	16 Channel – antaris4 positioning L1
Max Navigation Update Rate	4 Hz (default 1Hz)
Accuracy	Position 2.5mCEP ² 5.0mSEP ³
Acquisition	Cold <41s / Warm <33s / Hot <3.5s
Antenna Supply	3.3Vdc
Antenna Connector	SMA Female socket – 50 ohms
Operational Limits	Altitude 18,000m Velocity 515m/s

Environment Specifications		
Temperature	Degrees °C	Degrees °F
Operating Range -	-30 to +70	-22 to +158
Storage	-35 to +85	-31 to +185
Humidity	85% non condensing	
Atmospheric Protection	Conformal Coating to Circuit Board	

Physical Specifications		Unit only	Packed
Dimensions - mm		114 x 104 x 28	335 x 228 x 69
Dimensions - inches		4.5 x 4.1 x 1.1	13.2 x 11.3 x 2.7
Weight - kg		0.3	1.0
Weight - lbs		0.66	2.2
Enclosure Construction		Powder – coated Aluminium	

Certifications	
CE,	
C-Tick	
A – Tick #N13271	
IEC60945:2002 (sections 9 &10)	
Fully ROHS compliant EU2002/95/EC (All 6 substances)	
Iridium Approved	
Safety – Low Voltage Directive - IEC / EN / AS / NZ 60950-1	
Flame Retardant – UL94.0	