

TranSAT - RST620

Aero

Integrated Communications

The Beam Fixed Satellite Telephone allows it to be fully integrated within an aircrafts communication system.



The full hands-free operation enables simple and convenient communications through the headset of the aircraft as well as allowing for a privacy mode using the handset provided.

The satellite telephone supports all Iridium Voice, Data and Fax Services.

The use of satellite communications to support voice, data and tracking communications is rapidly increasing and the ability to have one service that guarantees you access anywhere on earth is what's most important.

Beam provides solutions for the following key transport users;

- Commercial aircrafts
- Light Commercial
- Defence aircrafts
- Helicopters



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 Iridium system is the largest fully meshed satellite network constellation in the world and consists of 66 low-earth orbiting (LEO), cross-linked satellites and has multiple in-orbit spares.

Total Peace of Mind

The peace of mind to be able to access communication services anywhere, anytime is what makes the Iridium suite of services so unique. These services include;

- World Voice Communications
- Internet & Email Access
- Messaging
- Tracking & Monitoring



Ease of Use

The Beam equipment provides the ability for various installation options making it very simple to install and to use the satellite system. The convenience of having an easy to use handset or using the integrated hands-free mode makes it ideal and safe for use in various applications.

World Voice Services

The Iridium system provides truly global voice services by covering areas that cellular and landline do not. The excellent signal strength provided by the Iridium constellation supports reliable connectivity across wide ranging landscapes and situations.

Inexpensive Calling

The ability for Iridium to provide standard pricing structure for calling from anywhere to anywhere without the need for confusing zones or bands, provides an inexpensive means of communicating anytime

World Internet & Data

Using Iridium Data Services you now have access to the world from anywhere on earth. The complete range of Iridium data services allows you to simply and conveniently gain access to Internet, Email, and corporate LAN.



Basic Telephone Services

Standard telephone service features are available using the Beam RST620 including such services features as Call Forwarding, Call Barring, Voicemail, phone book and SMS, Short Message Service.

Intelligent Handset Interface

The RST620 Fixed Satellite Telephone comes complete with an Intelligent Handset for voice calls as well as utilizing the Iridium SMS service.



The handset is compact and includes an inbuilt ring alert as well as providing for private conversations in place of hands-free mode.

Communication System Integration

The Hands-free Interface can be easily integrated to an aircrafts communication system. Using the Audio and Microphone outputs from the main interface a conversation can be easily made from within an aircraft.

Equipment Certification

Independent certification for use on an aircraft must be obtained by local authorities before any installation is carried out.

Data & Messaging Service

The Iridium SMS can send and receive messages of up to 160 alphanumeric characters, in a single message. The service operates in the same way as a generic SMS service does providing;

- Two-way global text messaging
- Send to and from other Iridium subscribers
- Send to and from cellular subscribers (Selected Providers)
- Send to and receive from email addresses.

The terminal also supports the following Iridium Data Services;

- Circuit Switched Data
- Direct Internet
- RUDICS
- Short Burst Data

Emergency Alert / "Man Down"

With the increasing demand to monitor personnel and assets through the use of a Beam LeoTRAK terminal in conjunction with the fixed satellite telephone makes it possible to track both assets and personnel at all times.

LeoTRAK

Simultaneously the LeoTRAK terminal can send periodic position reports whilst being alert to monitor any type of incident or alarm trigger, such as that delivered from a "Man Down" device.

Using the Beam LeoTRAK unit in conjunction with the RST620 is the ideal solution to support a simple alert monitoring application.

Sending Tracking / Alert Messages

Beam enables several options for sending alert messages through its global satellite network, using Short Burst Data (SBD) or, Short Messaging Service (SMS) or alternatively through an available GSM network where available.

This can be used for the following activates.

Position Reporting

- Periodic
- Remotely Polled
- Movement
- Alarm activated

Delivery Methods

- Short Message Service (SMS)
- Short Burst Data (SBD)
- Email

Voice / Data / Tracking / Monitoring

The Beam RST620 provides a robust fixed satellite telephone system that can be installed into any transport application.

When used in conjunction with the Beam LeoTRAK then provides a complete communications solution encompassing voice, data, messaging, monitoring, tracking and alert reporting.



Power Inputs / Backup Battery

The RST620 terminal supports a 10-32V DC power input and the terminal is capable of being wired to an auxiliary/accessory power supply as well as constant power.

The unit is also equipped with some intelligent power off features that delay power off functionality after the ignition is turned off. There is also the option powering up the unit on accessory power in emergency applications.

Network Access Features

- Global coverage –pole to pole
- Low cost airtime rates
- No regions or zones
- Crew calling service
- Pre or post paid
- Itemised billing
- Support all data services
- Support all Voice services

Terminal Features

- Compact intelligent handset
- Sturdy hang-up cradle
- Compact Installation
- Convenient serial data port
- Private or Hands-free mode
- Echo Cancellation
- Superior voice quality
- 10-32V DC power input
- SMS / SMSMO
- Tracking & Monitoring Capable
- Intelligent Processor & Interface
- Easy to install

Configuration

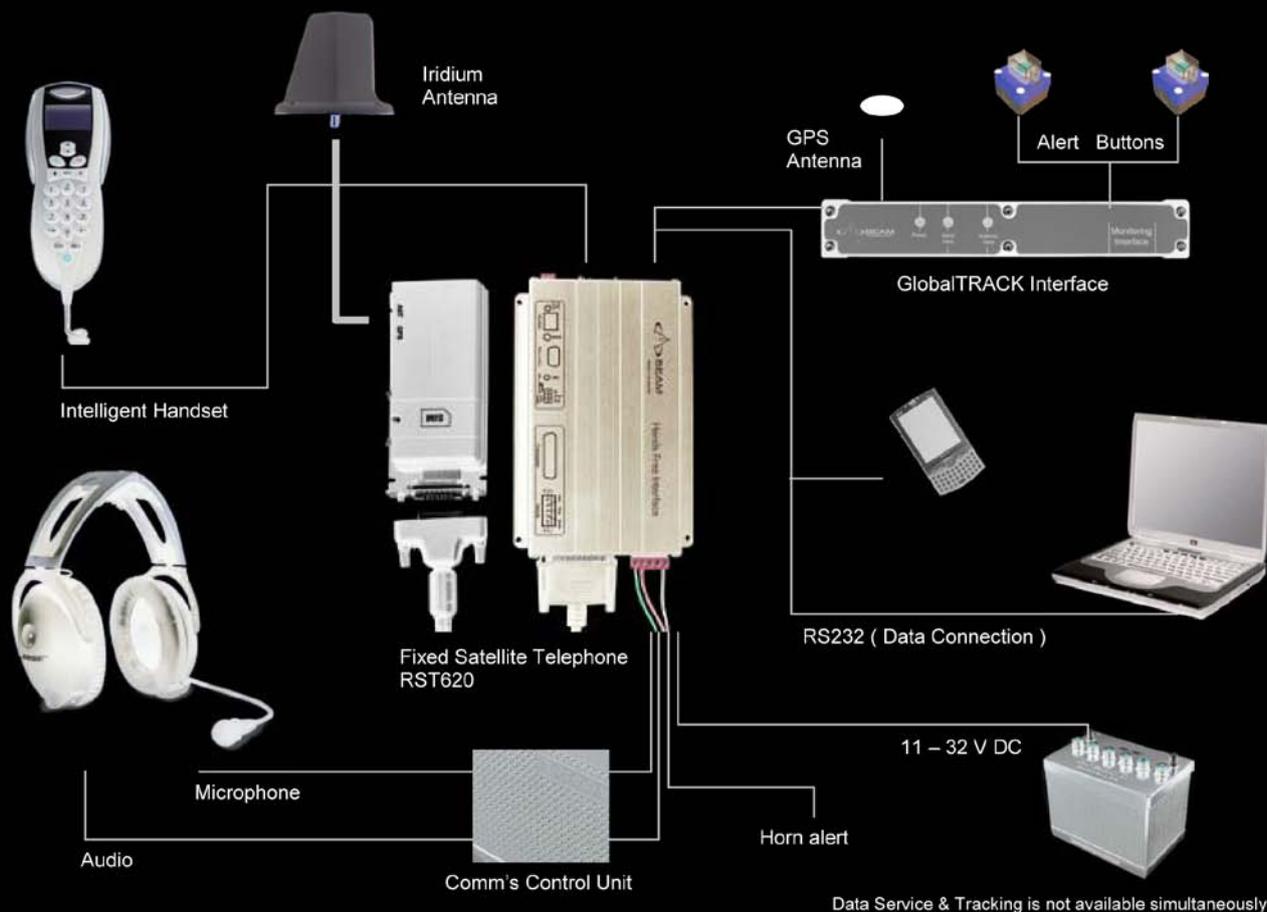
The Beam RST620 comprises an intelligent microprocessor for managing the operation of the terminal at optimum performance. If required it is possible to configure the terminal locally using a programming and configuration kit.



"This is by far the best communications system we have tested – much better than anything else we have used in the planes before. Having that quality of coverage is going to make it much safer and easier for our doctors and patients."

NSW Royal Flying Doctor Service

Installation Options



Technical specifications

Iridium Network

L-Band transceiver frequency	1616 - 1625 MHz
Compressed Data	2.4 kbps
Voice / data modulation	10 - 12 kbps

RST620 - Fixed Satellite Telephone

Power Specifications

Power input voltage	11 - 32 V DC	
Power Consumption (AMPS)	12 V DC	24 V DC
Stand-by - inc handset	0.33	0.14
Transmit - inc handset	0.63	0.23

Environment Specifications

Temperature	Degrees °C	Degrees °F
Operating Range	-15 to +55	+5 to +131
Storage	-30 to +70	-22 to 158
Humidity	85% non condensing	

Connectors / Interfaces / LEDS

Transceiver	D25
Intelligent Handset	RJ45 DPL BUS
Data Port	RS232 Serial Interface
Speaker	3.5mm mono
Microphone	2.5mm mono

Kit Contents

Iridium 9522A Transceiver module	Main terminal
Hands-free & power interface	
Cable assemblies: DC cables, interface cables	
Mounting adhesive / velcro	
Data Cable	
User & Installation Manual	
CD - Beam Management System, AT Commands, Manuals	

Satellite Constellation

Inter-satellite Links	23.18-23.38 GHz, Ka-band
Ground Segment Links	
Downlinks	19.4-19.6 GHz, Ka-band
Uplinks	29.1-29.3 GHz, Ka-band

Physical Specifications

	LBT	Interface	Packed
Dimensions - mm	196.4x82.6x39	183x130x27	400 x 325 x 90
Dimensions - inches	7.73x3.25x3.25	7.2x5.1x1.0	15.7 x 12.8 x 3.5
Weight - kg	0.659	0.3	1.6
Weight - lbs	1.45	0.66	3.52

Certifications

IEC60945	
Electrical Safety	EMC Compliance
HFI - AS/NZ 4601 : 1999 - 3.3.2 / 3.3.4 & 3.3.5	

-Temperature / Humidity / Impact / Vibration / Accelerated Aging

Independent Aeronautical certification MUST be gained prior to installation

Connectors / Interfaces / LEDS

Constant power	Screw connector
Auxiliary power	Screw connector
Horn Alert	Screw connector
Audio mute	Screw connector

Accessories

Mast mount antenna	RST910
Magnetic Mount Antenna	RST915
Bolt Mount Antenna	RST920
6 m / 18 f Antenna cable	RST932
9 m / 27 f Antenna cable	RST930
12 m / 36 f Antenna cable	RST933
Tracking & Alert interface	GlobalTRACK