

Remote Satellite Terminal RST100 – Fixed Site

The Beam Remote Satellite Terminal provides reliable and convenient global telecommunications access voice, data & messaging services via the Iridium satellite network.



Whether the application is for commercial, industrial, leisure or private use the reliance on quality communication services is increasingly becoming more essential to users all over the world.

Beam provides solutions for the following users for fixed site applications;

- Emergency Communications
- Shore to Ship
- Remote Office Sites
- Mining Locations
- Construction Offices
- Homesteads
- Farms
- Roadhouses
- Remote Homes

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 & Control
- Security & Monitoring



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 applications.

Ease Of Use

Standard telephone service features are available using the Beam RST100 including such services features as Call Forwarding, Call Barring, Voicemail, Auto-dial and Speed dial.

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, no unpredictable roaming charges provides an inexpensive means of communicating anytime, from anywhere to anywhere.

PBX / In-building Integration

The RST100 can be easily integrated into a PBX system using the RJ11 connection, enabling calls to be made or received from any extension within a building. In-building integration is ideal for lower cost satellite calling as well as emergency backup.

World Internet & Data Services

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.

Easy Access to Voice Services

Voice services can be easily accessed anywhere on earth using a compact Intelligent Handset or via standard telephone handsets. This means voice communications can be easily accessed using standard Corded, Cordless, DECT or PBX systems.



Use Standard Telephone Equipment



PSTN Emulation / RJ-11

The RJ11/POTS interface emulates PSTN (Public Telephone Service) features and is equipped with off-hook detection, configurable Ring, Busy & Dial service tones.

The Beam RST100 supports long runs of standard copper telephone wire and multiple extensions can be connected to the terminal over distances up to 1000m.

Intelligent Dialling

The Beam terminal is capable of being programmed to pre-empt such dialling codes as the international access of "00" country codes and or area codes. The intelligent number processing is ideal for various applications to enable easy use by any user. Call barring and restricted dialling within certain countries or area codes can also be configured if required.

Intelligent Handset Interface

The optional Intelligent Handset, RST970, provides voice and SMS communications. The handset is compact, lightweight, easy to install and comes complete with hang-up cup and inbuilt ringer.



The unit supports full SMS functionality as well as an easy menu system to access phone settings.



Long Cable Runs

The Beam RST100 supports long runs of standard copper telephone wire and multiple extensions can be connected to the terminal over distances up to 1000 metres.

Iridium Crew Calling

With a single SIM Card and a single Beam terminal, it is possible to have both a traditional subscription service and prepaid service. Authorised officers can use their traditional post-paid subscription services as required for general business whilst others can place prepaid personal calls.



Iridium Prepaid Services

With Iridium prepaid services, users have a cost-effective communications system at their fingertips, eliminating the headaches of monthly bills or subscription fees. Unused minutes carry forward so your minutes can be used in future months.

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

SMS POTS Support

The Beam Remote Satellite Terminal allows the use of an SMS POTS handset.



SMS POTS is a new feature that enables selected standard type telephone handsets to support SMS functionality previously only available on more expensive Intelligent Type handsets.

The specialised handsets connect to the RST100's RJ11 connector and enable SMS messages to be sent, received and stored in the same way as a cellular phone operates. Cordless and corded options are available.

Configuration

The Intelligent processor inside the RST100 interface enables the terminal to be configured remotely or locally. Locally it can be simply configured with a PC using the Beam Management System (BMS) software supplied with the terminal.

Whilst using the BMS is the most simple, it is also possible to configure most of the fields by sending dedicated remote commands to the terminal using SMS.

Power Input

Beam terminals support 11-32V DC power input. A DC power cable is supplied along with an AC 110/240 plug-pack (requires country specific monitor cable) which makes it easy to connect to mains or DC power.

Backup Battery

The use of an RST050 Beam Battery Back-up is an ideal accessory where guaranteed communication is required.

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

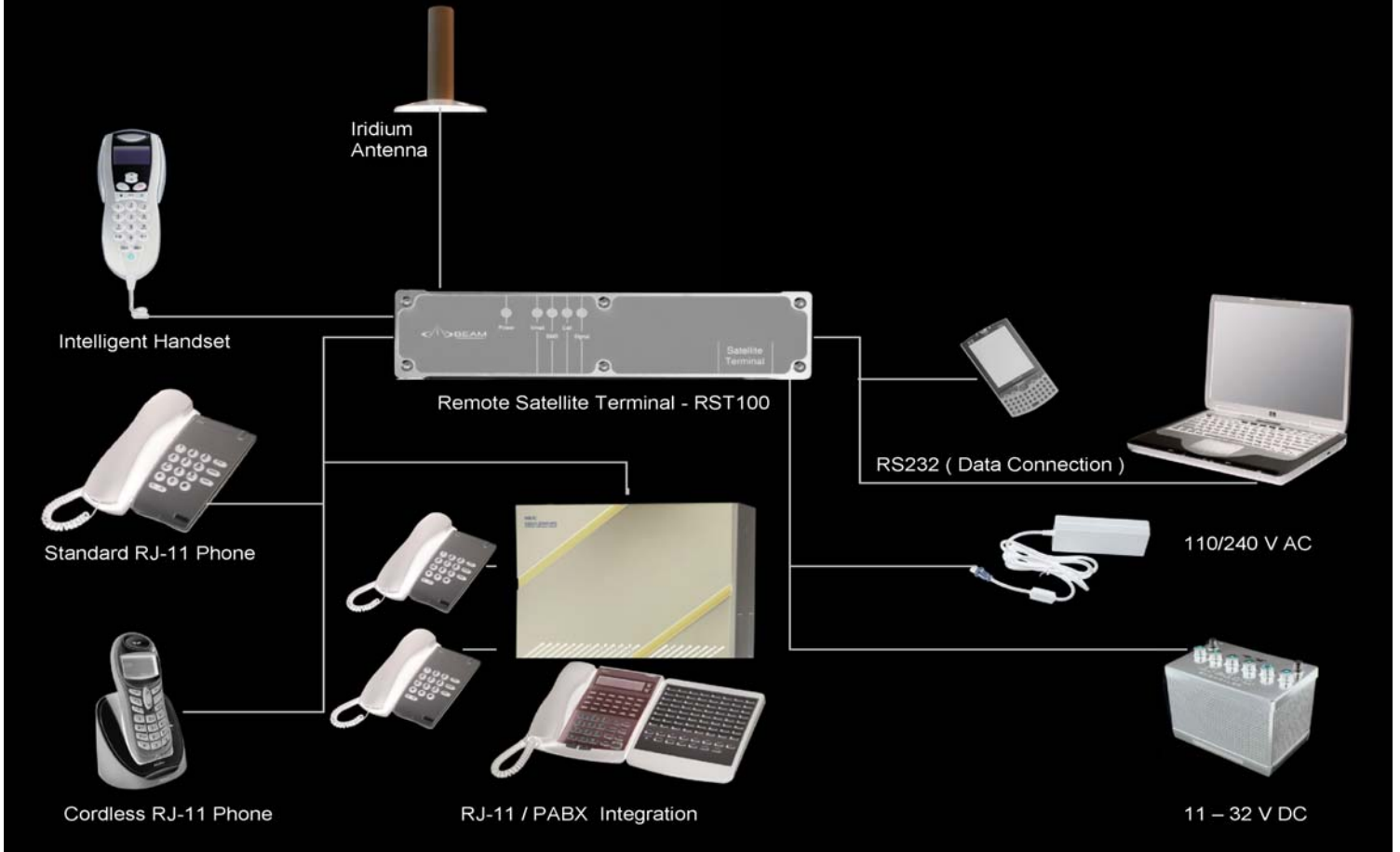
- Uses intelligent handset
- Supports standard phones
- Connect to PABX
- SMS / SMSMO from terminal
- Supports SMS over POTS
- Intelligent Processor
- Phone Number Processing
- Line Reversal for Pay phone use
- Secure SIM Card Enclosure
- Local and Remote Configuration
- External Ringer available
- Supports Back up Battery
- Incorporates Call Logging
- Certified – corrosion / vibration
- Easy to install

Specialised Installations

The RST100 can easily be adapted to be used in conjunction with specialised installations. Some of these applications include card, coin, industrial and intrinsic telephony equipment.



Installation Options



Technical Specifications

Iridium Network

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

RST100 - Remote Satellite Terminal

Power Specifications

Power input voltage	11 - 32 V DC	
Power Consumption (AMPS)	12 V DC	24 V DC
Stand-by	0.35	0.16
Transmit	0.51	0.25
Stand-by - inc handset	0.47	0.22
Transmit - inc handset	0.59	0.29

Environment Specifications

Temperature	Degrees °C	Degrees °F
Operating Range	-15 to +55	+5 to +131
Storage	-30 to +70	-22 to 158
Humidity	93% non condensing	
Vibration	2 Hz - 13.2 Hz & 13.2 Hz - 100 hz	
Corrosion	40 °C with 90% - 95% relative humidity after 2h salt spray	

Connectors / Interfaces

Intelligent Handset	RJ45 DPL BUS
Telephone / POTS	RJ-11 2-wire / TN12 or 600Ω
Data Port	RS232 Serial Interface
Log Port	RS232 Serial Interface
Power	2 Pin screw type

Kit Contents

RST100 Main terminal
Mounting Brackets
AC 110/240V Plug Pack
DC 1.5m Power Cable
Data Cable
User & Installation Manual
CD - Beam Management System, AT Commands, Manuals

Satellite Constellation

Intersatellite 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

	Unit only	Packed
Dimensions - mm	225 x 271 x 45	400 x 325 x 90
Dimensions - inches	8.8 x 10.6 x 1.2	15.7 x 12.8 x 3.5
Weight - kg	2.25	3.25
Weight - lbs	4.9	7.1

Certifications

IEC60945
Germanischer Lloyd
American bureau of Shipping
electrical Safety
EMC Compliance

LED / Display

Power	Green
Signal	3 Colour
Call	Yellow
Voicemail	Green

Accessories

Mast mount antenna	RST910
Intelligent handset	RST970
Antenna cables	
6 m / 18 f	RST932
9 m / 27 f	RST930
12 m / 36 f	RST933
External ringer / alarm	RST952