

Product Installations

Remote Satellite Terminal Installation RST100

There are several installation options available for the RST100. Depending on the application and the types of Voice and Data services required the following will outline some of the core options.

Remote Satellite Modem:

The RST100's on board processor supports remote commands configuration and Intelligent RJ11/POTS connection for use with standard type phone equipment such as a corded/cordless phone. This terminal is fully certified for use in harsh environments and is vibration, corrosion and temperature certified to IEC60945.

For more detailed information on the Remote Satellite Terminal click here [RST100](#)

Installation Configuration



Intelligent handset

The optional Intelligent Handset RST970 comes complete with cradle and mounting bracket it provides flexibility to install a compact handset. If the handset is used in conjunction with the hands-free interface, RST973 then this will allow a private call to be made by lifting the handset. The Handset is supplied with a 5' / 1.5mcm cable to enable convenient installation. The cable can be extended using an approved extension cable up to 10' / 3.0m maximum.

The Intelligent handset is connected directly to the Beam RST100's RJ45 Handset connector.



POTS/RJ11 Handsets

The intelligent RJ11/POTS port on the RST100 allows any type of standard phone equipment to be used. This includes corded, cordless handsets, answering machines and or extension ring alerts. The RJ11.POTs connector complies with standard PSTN requirements. The RJ11 line can be run up to 1000m from the terminal if required. Multiple handsets, up to 3REN can be supported off the RJ11 port. The use of a cordless handset in some application will provide the increased flexibility of having away from vehicle or in-building type use.

In-building/PBX Integration

Using the RJ11 port connection of the RST100 enables an integrated PBX solution to be deployed for in-building use. Once integrated with a PBX system this will enable any extension within the PBX system to access a satellite line for making or receiving calls. This is an ideal way to save costs for head office to remote location communications.

Hands-free Interface: RST973

The optional Hands-free Interface (HFI) for the RST100, RST973 provides full duplex voice communications particularly for in-vehicle type applications. The RST973 is easily connected to the RST100's RJ45 port and accepts an 11-32V DC input and is equipped with specialised wiring features such as external horn alert, radio mute and the ability to have radio integration for audio. The RST973 kit comes complete with the RST970 Intelligent Handset user interface.

Audio Integration

The optional RST973 Hand-free interface allows for audio and microphone integration with some existing vehicle type audio systems such as those used in aircrafts. In most cases the communication system allows for audio / mic inputs that will then allow an integrated call to be made or received.

Data Connectivity

The RST100 is fitted with a DB9 data connector for accessing serial data services on the Iridium network. The Serial port provides a Hayes Compatible modem interface. The serial lead can be extended up to 150' / 50m if required.

Power Inputs

The Beam RST100 is supplied with a 110/240V DC plug pack. The actual unit itself accepts an 11-32V DC input and therefore can be connected directly to most Dc power outputs upon installation. The Optional Beam RST050 Battery Back-up can also be installed as part of the installation if required where emergency or back up power is required.

Antenna/Cable Installation

An antenna is not supplied with the RST100 therefore an appropriate antenna should be selected for the installation along with the suitable length of cable to minimize the distance between the antenna and the unit.

The antenna cable should be within the Iridium specification, maximum 3DB loss. All Beam cable is within this standard. If a local cable supplier is being used then it is advisable to verify this specification. Any bends in the cable, extreme heat or the use of additional connectors with impact the loss of the cable and thus the performance of the terminal.

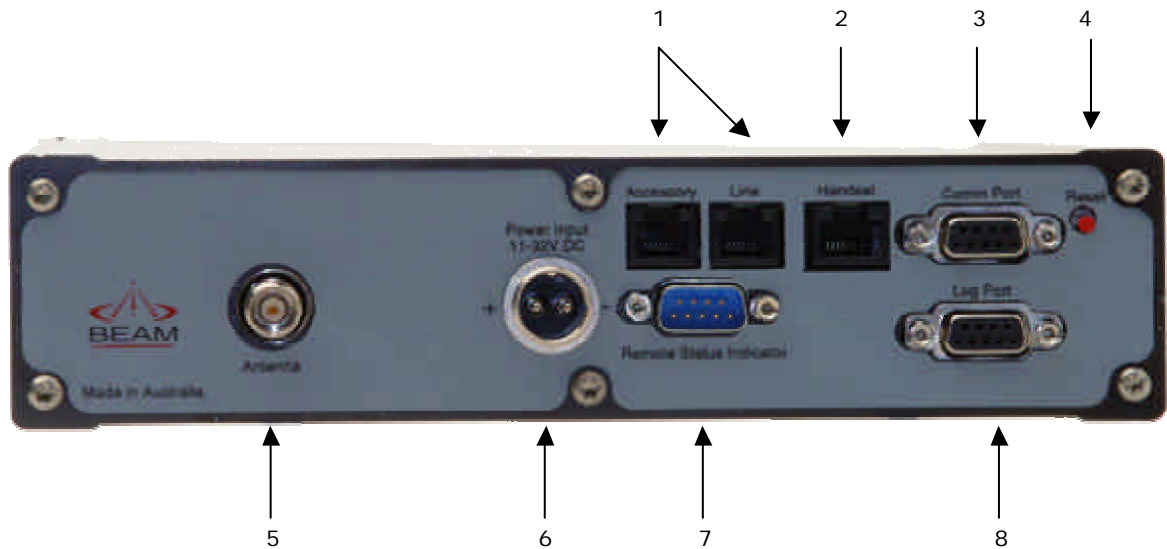
The antenna should be installed with clear line of sight to the sky; 8 degrees line of site above the horizon is ideal. Whilst clear line of site is not always possible for 360 degrees, every effort should be made to gain as clear line of sight as possible.

Connecting TrackALERT

To connect the Beam TrackALERT to the RST100 is very simple. The Beam TrackALERT will connect directly to the Beam RST100 and does not require any additional power to the terminal. The TrackALERT connects directly to the Log Port on the rear of the RST100, the Log Port is then replicated on the rear of the TrackALERT interface for configuration of both the TrackALERT terminal and the RST100.

Once connected to the RST100 the TrackALERT can be configured for the application.

RST100 Connector Summary



1. 2 x RJ11 Sockets: Standard Phone Equipment Connection
2. 1 x RJ45 Socket: Connection of Intelligent Handset / Hands-free Interface
3. 1 x DB9 Serial Connector: Comm. Port for accessing Data Services
4. 1 x Momentary Switch: Reset Terminal
5. 1 x TNC Connector: Iridium Antenna Connection
6. 1 x Positive Lock Connector: 11-32V DC input. 110/240V Plug Pack Included
7. 1 x Serial Connector: Remote Status Indication
8. 1 x DB9 Serial: Log Port, Terminal Configuration/TrackALERT Connection

Typical In-building/PBX Installation

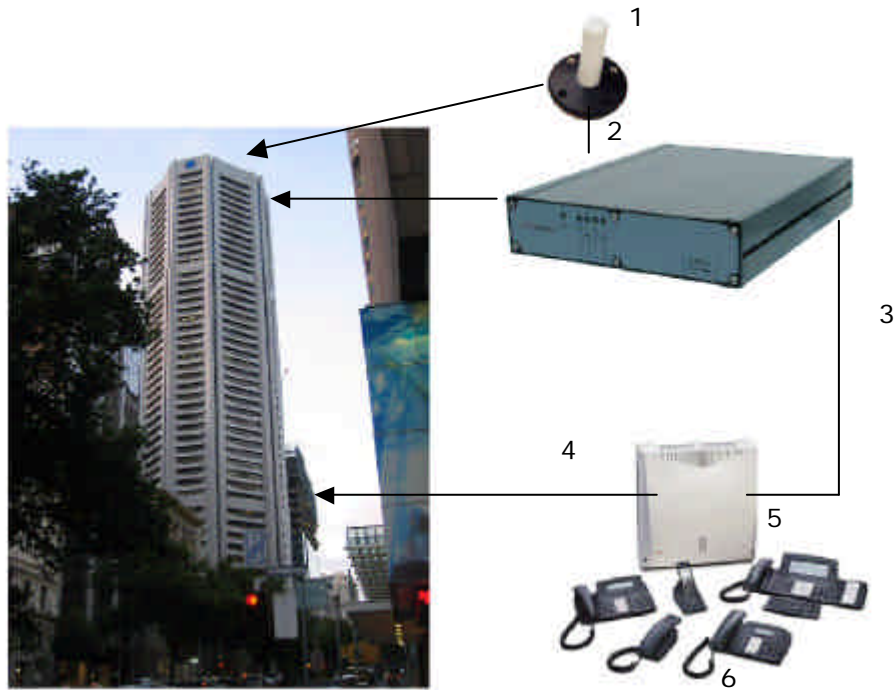
The Intelligence of the Beam Remote Satellite Terminal, RST100 allows the integration to a PBX system for in-building use. This type of installation allows for multiple handsets connected to the PBX system to be able to make and or receive calls through the RST100 terminal.

As Iridium offers lower call rates for making Iridium to Iridium calls this is cost effective way of managing head office to remote location communications anywhere in the world.

The ability to run the standard copper telephone wire from the RJ11 socket up to 1000 metres enable the main terminal to located within a reasonable distance from the antenna to ensure that the minimum distance and lowest loss possible on the antenna cable.

In-building/PBX Wiring Installation

The Intelligence of the Beam Remote Satellite Terminal, RST100 to be installed some 1000 metres / 3000 feet away from the interconnecting PBX System. This provides the most flexibility for the installation of satellite terminals into large buildings.



1. The Iridium antenna should be installed with as clear line of site to the sky as possible. Obstruction from other RF transmitting and receiving devices interfering should be avoided as this can interfere with the Iridium signal.
2. The Antenna can be installed up to 50m/150f away from the terminal if required. A very heavy, low loss cable, is required to span this distance. This is the reason why it is more ideal to have the main terminal installed as close to the antenna as possible. Average distances of 12m/36f can be easily installed with light flexible cables such as LMR400. Refer to the Cables calculation table for detailed specifications.
3. The Copper wire between the RJ11 socket of the RST100 and the integrating PBX system / or single phone point can be up to 1000m/3000metres from the terminal. This provides the greatest flexibility to run down over 100 floors in a building. In this scenario many customers have installed the Beam equipment in a service facility on the roof of a building and then run the copper wire 30-40 floors to the interconnecting PBX system.
4. The PBX system can be located anywhere within the building. The PBX system will require an analog line input in order to connect and have access to the Beam POTS/RJ11 line interface.
5. Once installed multiple handsets connected to the PBX system can access the RST100 terminal for making and receiving calls.