



Transceiver S9977

- **Message Size: 6-250 bytes**
- **Position Resolution: 375 meters**
- **Operating Temp: -40 F to 185 F**

The device is an low earth orbiting (LEO) satellite transceiver and data recorder capable of sending and receiving two-way alphanumeric packets, similar to two-way paging for the LEO satellites that provide worldwide geographic coverage. There are four operational modes: transmit for burst uplink transmission, receive for continuous reception of downlink, I/O monitoring for event detection, and sleep for timer-controlled transmission and reception. The transceiver integrates with monitoring instruments for full transfer capability to and from the system. The system operation is similar in concept to cellular phone service, but is strictly for data communications. Data can be sent and received by the end user using a personal computer with e-mail or internet accessibility. No unique software or dedicated computer is required.





Technical Specifications

S9977

Input Voltage

8 or 12 volt, direct current, 2.5 A/h

Transmit Frequency

148.000 - 150.050 MHz

RF Transmit Power

5.0 Watts

Receive Frequency

137.000 - 138.000 MHz

Sensitivity

-116 dBm

Message Size

6 - 250 bytes typically, no maximum

Position Resolution (optimum, 1 pass)

375 meters

Data Rate

4800 bps transmit

2400 bps receive

Total Power Requirements (at 12.0 VDC)

Transmit 2.5A

Receive 90mA

Power Save Receive 60mA

Monitoring I/O. <150µA

Sleep Mode <100µA

Temperature and Humidity

Operating: -40 F to 185 F (-40 C to 85 C)

Humidity: 95%

Physical Size

7.1" L x 4.1" D x 1.6" H

(180 mm x 104 mm x 41 mm)

Interfaces

RS 232 1

LED indicators 2

RS485 (optional in place of ne RS 232

port) 1

Digital Inputs (optional): 5-6 optically
isolated, either status or counting
accumulator (6 with 128k
memory option)

Digital Outputs (optional): 4-6 optically
isolated, (6 with 128k memory option)

Analog Input: 5, 0-5 V, 10 bit resolution

Power Control: 1, 3A, in place of one
digital output

I/O Processor Development Environment

Programming Memory: 8k

(128k optional) flash

Data Memory: 512B (4k optional)

RAM & EEPROM

Connectors

I/O High Density DB26

Serial DB9

ORBCOMM Antenna . . BNC (TNC optional)

GPS Antenna SMB

Space Segment

Satellite: 2 Near Polar 28 Incline 45°

Altitude/Orbit: 475 miles (775 km) Circular