SAT-202

Complete Single Unit Satellite Terminal

Compact in size, the SAT-202 provides global coverage and information specific to customer requirements

Attributes

The SAT-202 has been designed as a multi-purpose unit which includes modem and antenna with interface functionality. Power supply is normally provided by the asset, however power source/battery backup is possible via the GEM-100 expansion module.

The SAT-202 terminal has three fully configurable inputs/outputs for sensor monitoring, and one open drain output suitable for driving relays and indicators. The data-logging function includes GPS positions, transmissions and data for more than 6,500 entries which is accessible locally via the serial port. All transmissions are logged with a record of the time the message was created and if applicable, when it was transmitted.

There are two cable entry variations for the SAT-202 depending on how the terminal is to be installed - either bottom or side entry. Direct interface is possible with most application environments without extra circuitry, providing the opportunity to minimize system integration costs and timescales.

The SAT-202 terminal is ideal for all environments and is favored in remote regions where terrestrial communication cannot be relied upon.

Network & Process

Each asset is fitted with a SAT-202 terminal. When out in the field the unit automatically selects the most appropriate satellite depending on its GPS position. The message is then sent via secure systems before being delivered to the designated recipient.

Like many of EMS Global Tracking's terminals, the SAT-202 utilizes the Inmarsat constellation of satellites via the IsatM2M standard. This service delivers an affordable and reliable direct-to-desktop information service with fast message handling and high quality service.

- Locate, track and communicate with mobile assets
- Safeguard personnel, fleets and cargo
- Monitor fixed assets

SAT-202

Complete Single Unit Satellite Terminal

Technical Specifications

Physical

Dimensions	112mm x 45.75mm
Weight	350g (excluding cable)
Connector	12 way plug

Environmental

Temperature	-40°C to +70°C
Humidity	≤ 95% @ +40°C
Vibration & Shock	Meets Inmarsat-D &
Ingress protection rating	EN60945 requirements IP66

Frequency Range

Transmit	1626.5 MHz to 1660.5 MHz
Receive	1525.0 MHz to 1559.0 MHz
GPS	1575.42 ± 1.0 MHz

Elevation Angle Range

0° - 90°

Transmitter

EIRP	0 - 9dBW
Tx burst duration	2s or 8s (auto select)
Message length	Standard burst - up to 84 bits Double burst - up to 170 bits

Receiver

G/T	≥-25dB/K at EL = 30°
User data rate	~36 bits per second
Message length	Up to 800 bits

Message Latencies

Poll/Response	1 minute
Time to first transmission	45 seconds
Forward message delivery	45 seconds
Return message delivery	20 seconds

GPS

Channels	50
Time to first fix (typical)	<29s
Cold Start	<1s (GPS was off for less
Hot Start	than 2 hours)
Accuracy (SA Off)	
Position (CEP, 2D)	2.5m (Typical)

Control & Monitoring

Interface	Asynchronous serial RS232
Baud rate	4800 or 9600 bps
Parity/data bits/stop bits	N, 8, 1

Data Interfaces

3 x Configurable inputs/outputs

1 x Open drain output	250mA max. sink current

Power Consumption (typical@12V)

Sleep	0.75mW
Receive (Incl. GPS)	1W
Slotted receive	50mW (effective continuous receive power)
Transmit	6W

Power Supply Voltage

9.6V to 32V 'smoothed' DC

Capabilities

Enhanced Scripting
Geofencing
Selectable NMEA Interface protocol for connection to third party GPS devices/applications

Certification

Inmarsat Type Approved
FCC Compliant
EN60945
CE

1901 South Andrews Avenue
Fort Lauderdale, FL 33315
USA
Phone: +1.954.709.7232
Toll Free: +1.888.256.3001
sales@gsat.us