

SAT-401

Next-Generation Satellite Tracking Transponder

The SAT-401 satellite terminal is a next-generation multi-purpose satellite terminal for tracking and monitoring high-value assets like vehicles, vessels, and cargo containers.

Once an asset has been equipped with a SAT-401 terminal and deployed in the field, the device automatically selects the most appropriate satellite and transmits its location and any additional message data via secure systems.

The SAT-401 terminal is powered by the asset and can be used in virtually all environments. It is favoured in remote regions where terrestrial communication cannot be relied upon. Even more compact in size than its predecessor, the SAT-401 provides global coverage and can be programmed to send and receive customized data from internal and external sensors – including temperature, humidity, vibration and shock.

Like many of TM Tracking's terminals, the SAT-401 uses the Inmarsat constellation of satellites and the IsatM2M standard. This connectivity method delivers an affordable and reliable direct-to-desktop information service with fast and easy-to-use message handling.

The SAT-401 terminal has three fully configurable inputs/outputs for sensor monitoring, and one open drain output suitable for driving relays and other indicators. The data-logging function includes GPS positions, transmissions and data for up to 20,000 entries which are 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.



Features

- **Global Coverage:** Offers secure satellite connectivity worldwide
- **Inmarsat and GPS Connectivity:** Tracks, monitors and communicates with mobile assets anywhere in the world
- **Affordable and Reliable:** Field-proven and cost-effective tracking solution for a wide range of applications
- **Multiple I/O Ports:** Allows connected external sensors to report additional data, e.g., speed, tire pressure, and fuel consumption; ideal for fleet management applications
- **Optional Alert Button:** Convenient in-vehicle button allows drivers to immediately warn others of danger

SAT-401, SAT-401C & SAT-401E Technical Specifications

| Physical | |
|-----------------------------|---|
| Dimensions | 112mm x 37mm (4.4" x 1.5") |
| Weight | 220g (12.0 oz) (excluding cable) |
| Connector | 12-way Bulgin |
| Environmental | |
| Operating Temperature | -40°C to +70°C (-40°F to +158°F) |
| Humidity | ≤ 95% @ +40°C (+104°F) |
| Vibration & Shock | Meets Inmarsat-D requirements |
| IP Rating | IP66 |
| Power (Typical) | |
| Sleep | 1.5 mW |
| Receive | 1.5W (incl. GPS) |
| Transmit | 6W |
| Power Supply Voltage | 9.6V to 32V 'smoothed' DC |
| Interfaces | |
| Serial Interface | Asynchronous serial RS232 |
| Baud Rate | 4800 or 9600 bps |
| Parity/Data Bits/Stop Bits | N, 8, 1 |
| Configurable Inputs/Outputs | Three |
| Open Drain Output | 250mA max. sink current |
| Satellite Connectivity | |
| Transmitter | EIRP: 0-9dBW Tx Burst Duration: 2s or 8s (auto select) Message length: Standard burst up to 85 bits, Double burst up to 170 bits |
| Receiver | User data rate: ~36 bits per second Message length: Up to 800 bits |
| Elevation Angle | 0° - 90° |
| Frequency Range | Transmit: 1626.5-1660.5 MHz Receive: 1525.0-1559.0 MHz GPS: 1575.42 ± 1.0 MHz This product operates in the L-band frequency spectrum, as defined by IEEE standard 521-1984 |
| Message Latencies | Poll/Response: up to 1 minute (typically less) Time to first transmission: up to 45 seconds Forward message delivery: up to 45 seconds Return message delivery: up to 20 seconds |
| GPS | Channels: 50 Typical position accuracy (SA Off): 2.5m (CEP, 2D) |
| Capabilities / Applications | |
| Custom Features | Advanced scripting capabilities enable custom features and functionality |
| Geofencing | Alert areas, Safe Areas, Route corridors, Curfews, Waypoints, Checkpoints, Overdue and more. (Via ViewPoint) |
| Third-Party Connectivity | Can be integrated with existing ERP systems |
| Certifications | |
| Inmarsat Type Approval | Yes |
| FCC | Yes |
| CE | Yes |
| ANATEL | Yes |
| ICASA | Pending |

For more information:
www.tmtracking.com