Dual Mode Satellite IoT Tracker



TSGD-V1-T

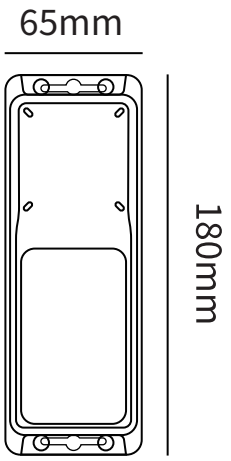
A solar-powered M2M tracking terminal designed for cellular dead zones and unstable networks. Featuring integrated dual-mode satellite-terrestrial connectivity, it intelligently switches communication links to monitor mobile and fixed assets across maritime, transport, oil & gas, agriculture, and water management.

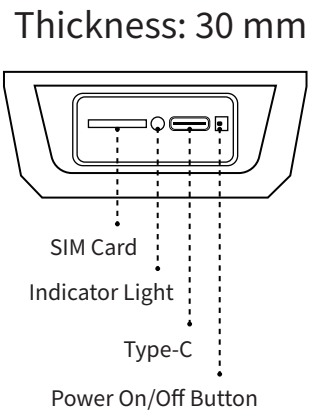
Dual-Mode Satellite IoT Tracker

Zero-maintenance, long-term digital guardian for industrial assets in global blind spots.
A cost-effective IoT solution featuring solar power and smart dual-mode network selection. Breaking coverage limits, it delivers ubiquitous visibility and end-to-end management for mobile assets.

Three core capabilities:

1. Solar-powered & ultra-low-power sleep algorithms for maintenance-free, long-term operation.
2. Dual-mode connectivity for cost-optimized data transmission.
3. Compact, magnetic, and cable-free design for out-of-the-box deployment.





Application Scenarios



International Logistics Transportation



Vehicle Monitoring

For international logistics, vehicle monitoring and asset scenarios where manual inspection comes at extremely high costs.

SpaceIoT

Product Features

- Global Coverage: Through coordinated networking of multiple satellites,it builds an round-the-clock, pervasive, seamless communication service system, ensuring no blind spots in the service area.
- Solar Power with Built-in Lithium Battery: Solar charging + built in 3200mAh wide-temperature lithium battery enables the device to operate autonomously for 5-8 years without an external power supply.
- Satellite-4G Dual- Mode Communication: The device integrates 4G and satellite dual-mode communication capabilities and can intelligently select the communication link based on network coverage, without manual intervention, significantly reducing service costs.
- Low-Power Design: Integrated low-power chipset and intelligent energy management algorithms, through dynamic power adjustment and sleep/wake mechanisms, significantly extend device standby time, adapting to long-term O&M needs in complex field environments.
- Motion Status Monitoring: The device is equipped with motion status monitoring. When the device is stationary, it reduces data transmission frequency to minimize redundant data.
- Easy Deployment: Compact structural design with IP67 protection rating, supporting magnetic mounting and no wiring required-ready to use out of the box, greatly reducing project deployment difficulty.

Performance Specifications

Performance Indicators	Detailed Specifications	Performance Indicators	Detailed Specifications
Product Dimensions	180 x 65 x 30 mm	**Typical Latency**	20s（within 100 bytes）
Antenna	Built-in Antenna	**Signal Strength**	< -117 dBm (Receiver Sensitivity)
Solar Panel	Operating Voltage: 5 V; Output Current: 150mA	**Network Band**	Rx: 1525-1559 MHz Tx: 1626.5-1660.5 MHz
Battery Capacity	3200mAh	**Transmit Power**	⩽30dBm
Battery Operating Temperature	Charging: -20°C to 60°C Discharging: -40°C to 80°C	**Terrestrial Network**	4G. Cat 1; Standard: LTE-FDD, LTE-TDD
Network Coverage	Global（excluding polar regions）	**Positioning**	GPS/GLONASS/Galileo/BDS B1 B2
Communication Satellite	Inmarsat	**Environmental Characteristics**	Waterproof: IP67 Operating Temperature: -30 to 70°C
Two-way communication	Support		

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