

GENERATION II SATELLITE ENABLED TRACKING AND INTRUSION DETECTION (GEN II SETID) TAG

Asset visibility is critical to your organization, and the Cubic field-proven Global Sentinel® GS-5B devices, referred to by the U.S. Department of Defense as Generation II Satellite Enabled Tracking & Intrusion Detection (GEN II SETID) tags, are essential to your enterprise. The GS-5B is a flexible device that provides worldwide infrastructure-free tracking, monitoring and security for dry containers.

The GS-5B device mounted on a container reliably reports anomalies from any region in the world securely and timely, providing you the ability to respond to an unplanned situation. The device communicates using least-cost satellite, cellular, and mesh radio technology and provides two-way, encrypted, redundant wireless communications. This allows for continuous global positioning, status reporting, event alerting and remote configuration.

When your organization must stay informed of the security status of your valuable assets, trust the advanced engineering of Cubic's GS-5B. The GS-5B is designed with sensors that monitor door intrusions and an extended battery life of up to 3 years or 3,000 reports. The device detects and monitors environmental conditions of the container including temperature, humidity, motion and light. Most importantly, if an intrusion or tampering occurs, the device issues an alert and the customer is notified by their preferred mode of communication either by web, text, SMS or e-mail.



Key Features and Benefits.....

- Global coverage through satellite and cellular communications
- Immediate reporting for event notification
- Data encryption delivering secure reporting
- Data storage for container manifest history or sensor log history
- Customized reporting based on time, event, or geofencing transitions (up to 2,000)
- Position status updates at timed intervals or driven by an event
- Remote reconfiguration for re-routing, cargo profile changes and firmware updates
- Requires no fixed infrastructure
- Self-sufficient device minimizes man-power costs

Actionable Information to Manage Your Operations



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Physical Characteristics

- Dimensions..... 11 x 8.25 x 1.75 in.
- Antenna Dimensions..... 5.75 x 2.5 x 2 in.
- Weight 7.25 lbs. (3.3 kg)

Environmental

- Temperature -40 C to +85 C
- Humidity..... 100% @ 40 C
- Vibration..... SAE J1455 2006
6 G RMS all axis
- Shock (survival) 1 meter drop 6-sided
- Ingress Protection Rating..... IP-67/NEMA-4

GPS

- Receive 1575.42 MHz
- Channels..... 50
- Sensitivity..... -138 dBm (cold start)
- Time to First Fix (typical)
 - Cold Start 36 sec
 - Warm Start 36 sec
 - Aided Start..... 4 sec
- Accuracy (SA Off)
 - Position (CEP, 2D)..... <8.0 m (unobstructed)

Power (Internal Battery Only)

- Sleep/Operating 250 uA/500 uA
- Battery Type..... Lithium-thionyl Chloride
LS-17500 or equivalent
- Battery Quantity 12 ea
- Battery Life..... 5,000 reports
3+ yrs (6 hr reporting)

Sensors

- Independent Right/Left
 - Door State..... Proximity and mechanical
- Motion 0.12 – 16 G threshold
- Light 350 nm to 970 nm
- Temperature, ambient air -40 C - +85 C ±2.5 C*
- Humidity, ambient air 0 – 100 % RH ±5 % RH

Certifications

- FCC Part 15B and 15C ID: (Pending)
- IC: (Pending)
- CE : ETSI EN 300 328 (Emissions),
ETSI EN 301 489-1 (Immunity)
- SAE J1455 2006, IP-67/NEMA-4
- HERO, HERF, HERP (In Process)

Indicators

- LED..... Red/Green
- Audible..... 2.3 kHz

Functional

- Global Coverage SATCOM and cellular
- Low Latency Reporting..... <2 minutes
- Encryption..... AES-128/CCM
- Data Storage..... 1 Mbyte
- Reporting..... Timed, event driven,
Geofencing transition
- Geofencing 2,000 user-defined
zones on device
- Position Timed or event driven
- Configuration & Upgrade Remote via comm.

Satellite Radio

- Radio Type..... Iridium 9602
- Radio Standard Short Burst Data (SBD)
- Transmit/ Receive 1616 MHz - 1626.5 MHz
- ERP +33 dBm
- SBD Message Size
 - Mobile Originated 340 bytes
 - Mobile Terminated 270 bytes

Global Cellular Radio

- GSM/GPRS Enfora GSM0408-40
GSM 850/900
 - Transmit power 2W peak
 - Transmit Duty Cycle 12.5%
 - ERP..... +35 dBm
- GSM 1800/1900
 - Transmit power 1W peak
 - Transmit Duty Cycle 12.5%
 - ERP..... +31 dBm

Mesh Radio

- Radio Type..... TI CC2530
- Radio Standard 802.15.4 Phy only
- Transmit 2402 MHz – 2480 MHz
- Receive 2402 MHz – 2480 MHz
- ERP -3.3 dBm
- Modulation DSSS
- DSSS Chip Rate 2 Mchips/sec
- Data Rate..... 250 kbps
- Channels..... 16
- Channel Bandwidth..... 3 MHz

