Global Sentinel GS-6C

SECURE ASSET MONITORING YOU CAN TRUST

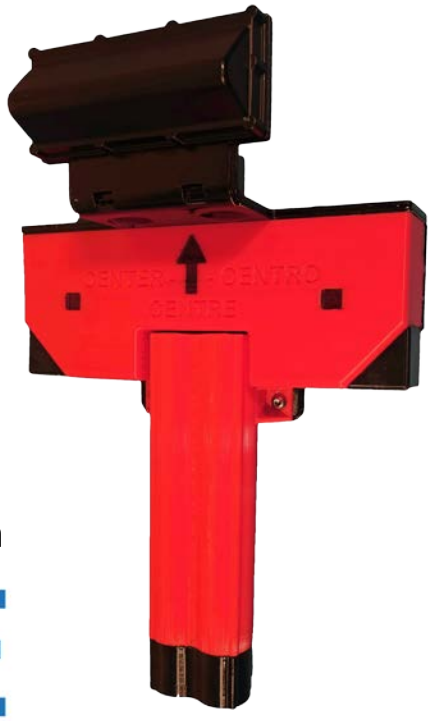
Asset visibility is critical to your organization, and the RSAE Labs Global Sentinel-6C is essential to your enterprise. The GS-6C is a flexible device that provides worldwide infrastructure-free tracking, monitoring and security for ISO dry containers.

The GS-6C 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 the latest cellular 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 RSAE Labs' GS-6C. The GS-6C is designed with sensors that monitor door intrusions. The device detects and monitors environmental conditions of the container including temperature, humidity, motion, shock 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.

Cargo and Environmental Monitoring

- LTE Cellular
- Iridium (optional)
- mist® Wireless Mesh
- Temperature
- Humidity
- Shock
- Motion
- Tilt
- Door State
- Load State (optional)
- Auto-inventory via wireless mist® mesh



RSAE LABS

REAL TIME • RELIABLE DATA

GLOBAL SENTINEL® 6C (GS-6C)

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Key Features and Benefits

- Near global coverage through the via the latest cellular communications technology.
- 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 (over 200)
- 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

Physical Characteristics (preliminary)

Dimensions	11" x 11" x 2"
Antenna Dimensions	5.75" x 2.5" x 2"
Weight (less battery pack)	4 lbs. (1.8 kg)

Magnetic mount for ease of installation and removal

Environmental

Temperature	-40 C to +85 C (Dependent upon battery option)
Humidity	100% @ 40 C
Vibration	SAE J1455 2006 6 G RMS all axis
Shock (survival)	2 meter drop 6-sided
Ingress Protection Rating	IP-67/NEMA-4

Contact:Info@RSAELabs.com

Global Navigation Satellite System (GNSS)

Concurrent reception of up to 3 GNSS (GPS, Galileo, GLONASS, BeiDou) satellites with omni-directional and wideband antenna

Channels 72

Sensitivity ..... -148 dBm (cold start)

Time to First Fix
Cold Start ..... 26 sec

Position Accuracy ..... 2.5 m (unobstructed)

GNSS Power consumption 28 mA

Power

Sleep/Operating ..... 250 uA/500 uA

Removeable battery packs ..... IP67 rated

Battery Options .....

Rechargeable NiMH, Low Self-Discharge

Estimated Reports* 1200 reports 5+ months

Operating temperature range -20 C to +50 C

Weight ..... 2 lbs (0.9 kg)

Permanent Charge Lithium-thionyl Chloride

Estimated Reports* 3,000 reports 3+ yrs

Operating temperature range -40C to +85 C

Weight 1.5 lbs (0.7 kg)

*6-hour reporting

Sensors

Independent Right/Left
Door State ..... Proximity

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

CE/RED optional

SAE J1455 2006, IP-67/NEMA-4

Indicators

LED ..... Red/Green

Functional

Near Global Coverage ..... Modem options listed below

Low Latency Reporting ..... <2 minutes

Encryption..... AES-128/CCM

Data Storage..... 1 Mbyte

Reporting ..... Timed, event driven, Geofencing transition

Geofencing ..... 2000+ user-defined zones on device

Position..... Timed or event driven

Configuration & Upgrade..... Remote via comm.

Contact:Info@RSAELabs.com

Satellite Radio (future option)

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

Cellular Radio

Pentaband 3G/ Quadband 2G . **Ublox SARA-U201 (standard)**
3G bands 1, 2, 4, 5, 8
2G bands 2, 3, 5, 8

LTE Cat 1/Quadband 3G/Quadband 2G **Ublox TOBY-R200 (optional upgrade)**
LTE bands 2, 4, 5, 12
3G bands 1, 2, 5, 8
2G bands 2, 3, 5, 8

Future Option

Cat M1 Global Coverage

mist® Mesh Radio

Radio Type ..... TI CC2538
Radio Standard ..... 802.15.4 Phy only
Transmit ..... 2402 MHz – 2480 MHz
Receive ..... 2402 MHz – 2480 MHz
Output Power ..... up to 7 dBm
Modulation ..... DSSS
DSSS Chip Rate ..... 2 Mchips/sec
Data Rate ..... 250 kbps
Channels 16
Channel Bandwidth ..... 3 MHz

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