#### **ELECTRONICS & DEFENSE**





## GPSdome: Industry's Only Non-ITAR GPS Anti-Jammer

COMPACT GPS JAMMING PROTECTION

GPSdome is a small-sized, add-on device that provides protection against GPS jamming, ensuring continuity of autonomous navigation and operation during jamming conditions. No other solution that offers such protection is as small, light, affordable or as easily installed as GPSdome.

#### **Features**

- Null steering technology
- Small form factor: 70 x 48 x 24mm, 150g
- Minimal power consumption: <0.8W</li>
- IP67, -40°C to +85°C
- Protected frequency: GPS L1 (C/A Code)
- Passthrough frequencies: GPS L2 & Glonass R1
- Latency: 100ns +/- 15ns (fixed)
- Insertion loss: 6.5 dB +/- 2 dB

Safran Electronics & Defense is with you every step of the way, building in the intelligence that gives you a critical advantage in observation, decision-making and guidance.



#### **How GPSDome works**

**The Vulnerability of GNSS** is well known. Orbiting at 20,000km, the GNSS satellites emit a signal which is incredibly weak when received by GNSS receivers (~-125dBm). To jam or spoof this signal all one must do is overpower it, either with a simple jammer bought online which blocks it completely or with a spoofer, a slightly more sophisticated signal which can trick it with erroneous data.

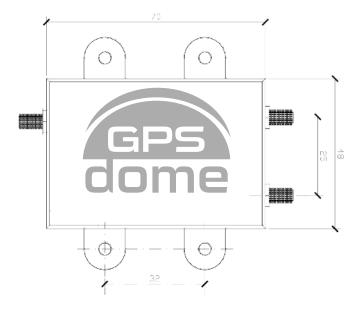
**The Null Steering Algorithm** was originally developed for military applications to protect wireless signals. GPSdome adds our own sophisticated algorithms and proprietary RFIC to detect suspicious signals, combine antenna patterns and precisely target a null in the direction of the hostile signal.

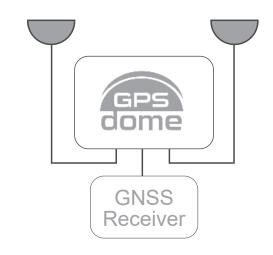
**Installation Couldn't Be Easier.** After mounting the 2 antennas on a flat, sky-facing base with at least 10cm separation (optimally > 25cm), connect antennas to GPSdome, connect it to the antenna input on your GNSS receiver, feed it with power and you're set to go.

**GPSdome is Completely Standalone.** GPSdome is compatible with any GNSS receiver on the market and compatible with any off-the-shelf GNSS antenna. GPSdome does not include the GNSS receiver or the antennas.

**Jamming / Spoofing Detection** is available from an LED on the GPSdome itself or via an external wire that could be integrated into any system computer. An optional CommModule could be added to enable attack alerts to be sent to infiniDome's GPS Cyber Security Cloud.

### **Technical Specifications**





| Physical                    |  |  |
|-----------------------------|--|--|
| Enclosure                   | 70 x 48 x 24 mm (excluding mounting lugs)      |  |
| Weight                      | 150g   |  |
| Mounting                    | 4 x M3 bolts (not supplied)                    |  |
| Environmental               |  |  |
| Operating Temperature Range | -40°C to 85°C                                  |  |
| Protection                  | IP67   |  |
| RF Interfaces               |  |  |
| Antenna Connectors (P/A)    | 50Ω SMA 2.75VDC<br>designed for 26dB ±2dB gain |  |
| Receiver Connector (R)      | 50Ω SMA<br>Requires *3.3VDC–32VDC 0.75W        |  |

| Performance                           |                               |
|---------------------------------------|-------------------------------|
| Protected Signal                      | 1575.42 MHz (GPS L1 C/A Code) |
| Passthrough additional 2 GNSS signals | GPS L2 & Glonass R1           |
| Latency                               | 100ns ±15ns (fixed)           |
| Compression Point                     | 25dBm                         |
| Insertion Loss                        | 6.5dB ±2dB                    |

| Safety & Compliance                           |                            |  |
|---|----------------------------|--|
| R&TTE 1999/5/EC : EN60950-1, E<br>EN300 440-2 | N301 489-1, EN301 489-3,   |  |
| RoHS compliant                                | CE Compliant (PPS Version) |  |
| WEEE registration number WEE/GK2929WW         |                            |  |

| EPS Wire Connection                                   |  |
|---|--|
| Red Wire: 3.3VDC – 32VDC                              |  |
| Black Wire: GND                                       |  |
| Brown & White: Dry contact NO interference indication |  |

#### **Ordering Information**

| Product Name              | Product Number | Description  |
|---------------------------|----------------|--|
| GPSdome V1.03- <b>EPS</b> | 1036           | GPS L1 Protection, R1 & L2 Passthrough. External Power & Interference Indication Over 3 Wire Cable. Loss Compensation. |
| GPSdome V1.03-PPS         | 1037           | GPS L1 Protection, R1 & L2 Passthrough. Phantom Power Supply Over (R) RF connector. Loss Compensation.                 |

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