

# GPSdome 1



## *Industry's Most Disruptive GPS Anti-Jammer*

### **Small • Simple • Flexible • Retrofit**

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.

### **Key Features**

- Dual Use (non-ITAR)
- Null steering technology in tiny form factor  
Enclosed 74x47x25mm, 150g
- Board level: 41x41x10mm & 41x27x15mm  
60g Nominal power consumption <1W
- IP67, -40°C to +85°C (enclosed)
- Protected frequency: GPS L1 (C/A Code)  
Passthrough frequencies: GPS L2 &  
Glonass G1 Minimal latency: 100ns ± 15ns  
(constant)

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.

## Specifications

### RF Interfaces

- Antenna Connectors (P/A): 50Ω SMA 2.75VDC designed for 26dB ±2dB gain
- Receiver Connector (R): 50Ω SMA Requires \*3.3VDC – 32VDC 0.75W

### Performance

- Protected Signal: 1575.42 MHz (GPS L1 C/A Code)
- Passthrough frequencies: GPS L2 & Glonass G1
- Latency: 100ns ±15ns (fixed)
- Compression Point: 25dBm
- Insertion Loss: ±2dB

### Environmental

- Operating Temperature: -40°C to +85°C
- IP Rating: IP67

### Mechanical

- Dimensions (hwd): 74x47x25mm (excluding mounting lugs)
- Net Weight: About 150g
- Mounting: 4 x M3 bolts (not supplied)

### Ordering Information:

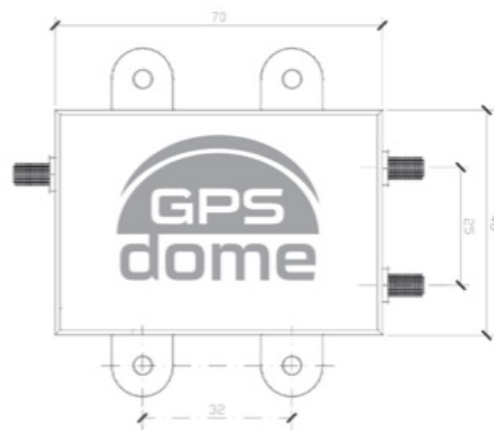
GPSDome 1.03 EPS Part no. 6412 - External Power feed (3.3–32VDC) & interference indication over 3 wire cable (2.15m)

GPSdome 1.03 PPS Part no. 6527 - Phantom Power Supply (3.3VDC – 32VDC) supplied from (R) connector

## Product Illustration



## Product Dimensions



### Regulatory Compliance

- R&TTE 1999/5/EC : EN60950-1, EN301 489-1  
EN301 489-3, EN300 440-2
- RoHS compliant
- FCC Compliant
- CE Compliant (PPS Version)
- WEEE registration number  
WEE/GK2929WW

### EPS Version - Product Wire Connection Description

- Red Wire 3.7 – 32VDC <1W
- Black Wire Ground
- Brown & White Open drain interference detection

## About Focus Telecom

Focus Telecom is a global provider of time synchronization solutions since 1995, offering consulting, cyber defence and synchronization solutions. Our end-to-end timing solutions generate, distribute and apply precise time for multiple industries: Communications, Government & Security, Finance & IT, Industry & Infrastructure. We enable our customers to build more reliable networks and systems supporting today's precise timing standards.

## Want to learn more?

Contact Focus Telecom to find the right products and technologies for your timing and synchronization needs.

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