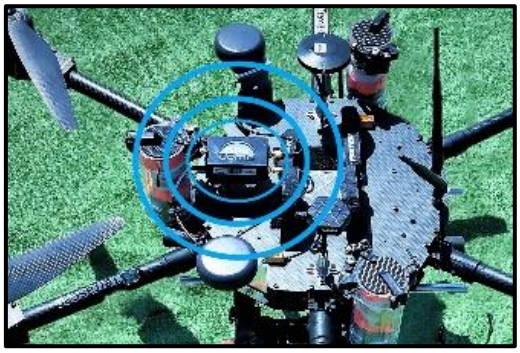
infiniDome
THE GPS SECURITY COMPANY

Drone/UAS Jamming Protection Brief

GPSdome Anti-Jamming

Quick & Easy Installation or Retrofit
Smallest, Lightest & Lowest Power Requirements



The use of UAVs has become ubiquitous. Currently being driven by COVID-19 “no human touch” initiatives, drones are performing tasks from delivering goods and services to monitoring and scanning inaccessible areas. infiniDome’s GPSdome is the cyber-protection solution that counters interference caused by GPS jammers. With GPSdome anti-jammer, the UAV market has a simple retrofit protection solution for all GPS receivers. infiniDome's products are field proven and sold worldwide.

UAVs are proving to be critical in situations where workers cannot access an area or perform dangerous and often risky tasks in a timely and efficient manner. Using UAVs in aerial business operations leads to reduced costs and increased overall operational performance and safety. With GPSdome protecting a BVLOS (Beyond Visual Line of Sight) drone, operators know they have drastically reduced the risk of it being jammed down in mid-air.

Today’s drones are being deployed for a variety of aerial activities that need protection ranging from:

Monitoring for Border Security	*Critical Missions & Reconnaissance*	*Critical Infrastructure Monitoring*	*Delivery of Merchandise i.e. Medical Supplies*
			

GNSS — Position, Navigation, and Timing

The need for global navigation system (GNSS) position, navigation, and timing (PNT) services from satellite constellations is growing rapidly in our highly interconnected world. Drones and drone services are decidedly dependent on GNSS services whether from GPS, GLONASS or Galileo. GNSS compatible equipment can use navigational satellites from other networks, and more satellites means increased receiver accuracy and reliability. Even though the drone may be equipped with back-up methods like INS, video analysis or a stationary geophysical reference point, GNSS references are still required for position and timing accuracy.

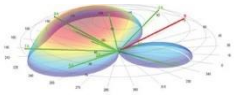
infiniDome — GPSdome *Detect, Alert, Protect*

Countering interfering signals through patented anti-jamming techniques, infiniDome offers the industry's only dual-use (non-military) GPS anti-jamming protection, GPSdome. Not only does GPSdome detect, it also shields the received signals from being overpowered by inexpensive jamming products purchased online for as low as $50. Protecting GPS signals ensures continuity of navigation and timing signals which assures normal operations during an attack. These attacks can have drastic effects, including losses in property as well as the potential risk to lives.

The GNSS satellites deliver amazingly accurate position and time information. However, herein lies one of the most significant problems for drones and their services; PNT information is transmitted by extremely low power (-160dBm to -120dBm). This is equivalent to the power of a 20W light bulb turned on in California being seen in New York City (mathematically expressed ~$10^{-15} \div 10^{-19}$ Watt). GNSS signals are weakened by external noise interferences from other electronic devices in-addition to having to deal with GPS jammers. GNSS reference receivers that are not protected against widely available and inexpensive jamming products are especially vulnerable. GNSS jamming is a real threat to drones and drone services. infiniDome's patented Phased-Array Anti-Jamming technology protects GPS receivers from jamming and other forms of interference easily and cost-effectively. Our technology provides UAVs with:

Null Steering In a Tiny Form Factor

GPSdome's proprietary interference filtering algorithm combines the patterns from two antennas which, in real-time, analyzes where the interference is coming from, then precisely targets a null in the direction of the attacking signals. This is executed within a tiny module that has minimal impact on the payload and mission time of even small to medium sized drones.



Intel Gathering, Monitoring and Early Alert

GPSdome has an inherent capability of extreme early sensing of GNSS interferences. When triggered, GPSdome creates an alert that it is sensing a pending attack which can be directly transmitted to the flight controller. When infiniDome's CommModule is combined with GPSdome, the alert is also sent over a cellular data link to infiniDome's proprietary infiniCloud, our GPS cyber security cloud. infiniCloud provides access to real time and statistical data on GPS attacks for its users as seen in the field.

About infiniDome, Ltd.

infiniDome provides front-end cyber solutions protecting wireless communications from jamming and spoofing attacks. infiniDome's products protect against attacks of GPS-based systems which are critical for autonomous vehicles, drones, connected fleets and critical infrastructure. infiniDome's products have been successfully proven in the field and sold to customers globally.

GET YOUR EVALUATION KIT TODAY! REACH OUT, Chat or CALL: +1-212-729-6052