

## Protecting Urban Air Mobility Brief

### infiniDome assures continuous anti-jamming protection of operations for Urban Air Mobility

*QUICK & EASY INSTALLATION OR RETROFIT OF THE SMALLEST, LIGHTEST AND MOST AFFORDABLE GPS SOLUTION*



Urban air mobility (UAM) is a general aviation industry term for on-demand and automated passenger or cargo-carrying air transportation services, typically flown without a pilot. Imagine a future where instead of sitting in traffic making your way to and from work, you travel via a rideshare aerial vehicle, possibly unmanned. This scheduled air taxi drops you off at a landing pad, where there is another vehicle waiting to take you to your destination.

Travel in and out of major metropolitan areas could be more fun than sitting in a car in traffic for more than two full weeks each year; which the typical Los Angeles resident experiences according to [McKinsey](#).

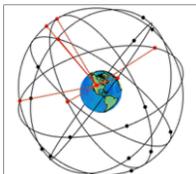
The private sector and government agencies in the United States, European Union and China are working to make UAM possible. Following in the footsteps of Unmanned Air Vehicles (drone) technology; they are considering the multiple factors required for how to make it both safe and scalable. Adding the new emerging UAM to urban transport networks will revolutionize the way lives are lived. When considering last-mile delivery by manned or unmanned aerial services, the specifics regarding safety (e.g. vehicles malfunctioning and harming people and property), theft (of deliveries), and invasion of privacy (from autonomous vehicle camera systems) are among the issues being addressed. In the world of UAM, the safety of both passengers and bystanders are among the primary concerns..



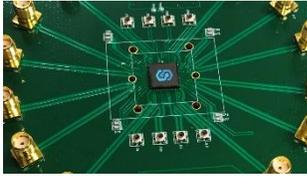
The next generation of UAM will be a union of technologies and advanced capabilities including electric propulsion, innovative passenger arrangements, modifying multiple types of public and private infrastructure, along with the new innovative aircraft now moving from concept to early trials and demonstrations. The early entrepreneurs in the UAM industry are addressing the multiplicity of challenges associated with highly interdependent

system to system integration.

## GNSS — Position, Navigation, and Timing



The need for global navigation system (GNSS) position, navigation, and timing (PNT) signals from satellite constellations is growing rapidly in our highly interconnected world. GPS has become an indispensable silent utility that creates significant economic advantages transforming lifestyles and businesses. For the UAM world, GPS satellites have multiple internal atomic clocks that enable very precise and reliable time data. The integrity of the GNSS signals is of paramount importance. On-board GPS receivers decode these timing signals, synchronizing to the GPS network to within 100 billionth of a second. Multi-sensor positioning systems and precision timing have made sub-centimeter positioning and nanosecond-level timing a reality. Criminals, terrorists, and other adversaries create havoc and mayhem by jamming GPS signals. Overcoming and ensuring continued operations during jamming disruptions for UAM is critical.



In airborne operations such as UAM, GNSS data is shared between other critical onboard systems, e.g. the ADS-B (Automatic Dependent Surveillance-Broadcast) for collision avoidance and the ground proximity warning systems (GPS data is used to give terrain information). For UAM the integrity of the GNSS signals is highly critical. Without it, systems and devices of all kinds will continue to be compromised by escalating levels of interference that show no sign of stopping. infiniDome's solutions deliver proven resilient PNT anti-jamming performance for GPS receivers operating in airborne environments. They deliver interference detection and mitigation (IDM) while maintaining a receiver's GPS signal connectivity during a jamming attack. Rejecting RF interference while protecting GNSS signals ensures continuity of operations.

We can track UAM's through a cloud interface for any GPS interference on a real-time basis. This is made possible by infiniDome's full stack hardware and software solutions which are small, lightweight and very affordable add-on modules that enhance and protect any GNSS/GPS receiver. Interfacing at the RF level, our patented anti-jamming capabilities set infiniDome apart. Military and Homeland Security applications have solutions to protect field assets from GPS jamming; however, for commercial applications like the Urban Air Mobility, it will be an absolute necessity.

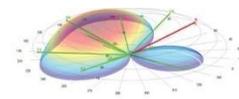


For last-mile delivery by manned or unmanned aerial services, infiniCloud monitors the health of the GNSS signals in addition to providing instantaneous alerts, allowing early detection and immediate response for attacks. When a jamming attack is detected, operators can alert authorities with actionable intelligence for appropriate response to the alert. Being cloud-based, infiniCloud can be readily accessed through popular web browsers and supports FCAPS (Fault, Configuration, Accounting, Performance and Security), the 5 major pillars that define network management monitoring systems.

## infiniDome technology provides:

### *Resilient PNT In a Tiny Form Factor*

Allows manned or unmanned aerial services operators to enhance and protect any GNSS/GPS receiver due to its low cost, small and light form factors — whether it be last-mile-delivery, air metro, or air taxi services — to monitor, detect and protect GPS disruptions and gain tangible advantages by getting real-time notifications and reports on all their assets. Providing complete resilience!



### *Intel Gathering, Monitoring and Early Alert*

All infiniDome products offer resilient PNT and support IDM to protect and defend GNSS signals. When triggered, an alert is transmitted to both the operator and the operations center. If configured with infiniDome's optional CommModule, the attack data is also sent via a cellular data link to the secure infiniCloud data warehouse which is accessible only to registered users.

## 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.

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