



Resilient Navigation Solution

Alternative Navigation Systems for autonomous and GNSS-denied operations.



GPSdome



HCINS



HRVS



The joint solution by Honeywell and infinidome provides the best-in-class resilient navigation solution tailored to defend UAVs from GNSS jamming attacks. By tightly integrating Honeywell's Compact Inertial Navigation System (HCINS) with infinidome's GNSS anti-jamming technology (GPSdome) and Honeywell's Radar-based Velocity System (HRVS), we created a solution that could be installed on almost any UAV providing it with continuous, accurate navigation data in GNSS-challenged or fully denied environments. The Resilient Navigation Solution leverages Honeywell's profound knowledge and experience in world-leading inertial navigation HW and algorithms and radar-based alternative navigation capabilities and infinidome's C-SWaP disruptive anti-jamming to bring the world's most resilient navigation solution for UAVs.

Layers of Protection

GPSdome



Anti-Jamming

By attenuating the jamming power, GPSdome creates a protection layer around the UAV making it 20x-50x more resilient to attacks. GPSdome's minimal size, weight and power consumption make it a great fit for the Resilient Navigation Solution and tightly integrated with the HCINS's advanced logic, it significantly enhances the availability of GNSS data for the platform.

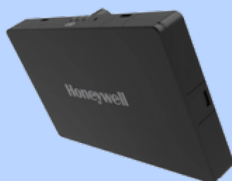
HCINS



Inertial Navigation Systems

Leveraging Honeywell's inertial navigation sensors and algorithms, the HCINS fuses navigational data from multiple sources with proprietary Kalman Filters to determine location, velocity, and heading all in a compact and light form factor. With Honeywell's MEMS-based IMU at its core HCINS allows to maintain accurate navigation even when no external inputs are available.

HRVS



Alternative Navigation Systems

The Honeywell Radar Velocity System (HRVS) is a small, lightweight and low-power radar-based navigation-aiding system. The HRVS uses millimeter wave radar (mmWave) technology (60-64GHz or 76-81 GHz) and outputs range, velocity and angle of objects which compensates for any drift accumulated by the Inertial systems. Combined with the HCINS, even at full GNSS denial, a total error of less than 3% is achieved.

