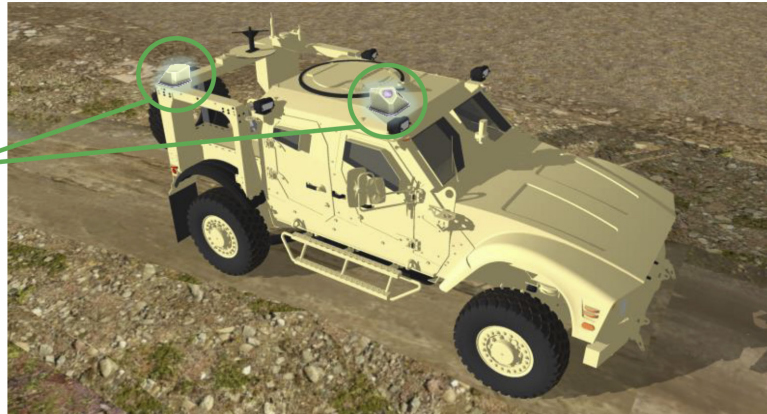


PATS: Passive Aerial Threat Surveillance Sensor

ADSYS
CONTROLS INC.

Long range full hemispherical optical threat detection of small UAS in a low SWaP package



PATS provides on-the-move sensing of extremely low signature airborne threats such as small unmanned aerial vehicles (UAVs). A distributed aperture sensor configuration with central processing unit provides full hemispherical threat surveillance without the need for broad area scanning. The result is extremely fast detection times of SUAS threats at extended standoff ranges.

PATS can additionally support adjunct capability including threat identification and kill assessment.

KEY FEATURES

- » **360 Degree Surveillance Coverage** - Using a distributed aperture sensor configuration.
- » **Low SWaP** - System size and weight of 12.5" x 12.5" x 9.5" (per module) and less than 10 Kg (per module). Average operational power of less than 50 Watts.
- » **Low Signature Threat Detection at Extended Ranges** - PATS employs various features including digital line of sight stabilization, false detection filtering, and a proprietary SNR enhancement algorithm. These features enable extremely low signature threats to be detected at extended ranges.
- » **Wide Surveillance Coverage Area** - The design incorporates a unique optical configuration with electronic stabilization to meet wide surveillance coverage requirements without sacrificing detection performance.
- » **Background Clutter Compensation** - Continuous measurement of background clutter and compensation enables optimal performance even in the presence of significant background clutter such as sunlit clouds, terrain, or open water.
- » **Configurable for Either Ground or Airborne Platforms** - A distributed sensor configuration allows for repackaging for aircraft or ground vehicles.

Adsys Controls provides
state-of-the-art solutions
for the
most challenging problems

PATS: Passive Aerial Threat Surveillance Sensor

SPECIFICATIONS

Size, Weight and Power

- » Size: 12.5" x 12.5" x 9.5" (per sensor module)
- » Weight: < 10 kg (per sensor module)
- » Power: < 50 Watts

Detection Range

- » Small UAS: Up to 10 km
- » Large Aircraft: Beyond 50 km

Sensing Specifications

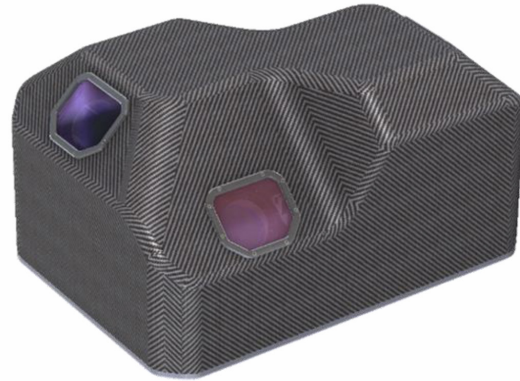
- » FOV: 360 x 54° (Azimuth x Elevation)

Tracking

- » Target Track Accuracy: < 0.01 degrees
- » Maximum Tracked Targets: > 50
- » Max Time to Track Declaration: < 3 sec

Environmental

- » -30° to 50°C Operational
- » IP66 sealed against dust, rain, fog



Features

- » 360 Degree Surveillance Coverage
- » Low Signature Threat Detection at Extended Ranges
- » Configurable for Airborne or Ground Platforms
- » On-the-move Operational Capability
- » Background Clutter Rejection
- » Digital Stabilization
- » Threat SNR Enhancement
- » Detection of Stationary and Moving Targets
- » Autonomous False Target Rejection
- » Threat Confidence Metrics
- » Threat Cataloging
- » Threat Prioritization
- » Threat Classification

Adsys Controls provides solutions for precision control systems, advanced electro-optical systems, laser systems, modeling and simulation, and unmanned aerial systems for military and commercial markets. From electronics design, embedded RT software, and image processing to game-changing laser and electro-optical systems for ISR&T, weapons, communication, and navigation, Adsys Controls provides state-of-the-art solutions for the most challenging problems.

ADSYS
CONTROLS INC.