

# MOVIA™ Air System

## Solid-state lidar payload module for most advanced UAVs

MOVIA™ Air System is equipped with MicroVision's pure solid-state lidar sensor MOVIA™ and autonomous navigation software to redefine perception and autonomy for commercial and the most advanced defense UAVs. The drone-agnostic module allows situational awareness in darkness, urban clutter, and contested environments, unlocking a range of different applications.

The resulting 3D map created by the module can be streamed to the ground in real-time, either for visualization or to autonomously explore unknown environments, even in GNSS-denied areas.

### Applications

#### Real-time precision when every second counts

MOVIA™ Air System cuts through darkness and dense, unknown terrain to reveal obstacles and locate missing persons faster. Rescue units can use it to assess collapsed structures, for nighttime searches supported by detailed point clouds or safe navigation through hazardous zones.

#### Enhancing even more security when needed

Enhancing protection and situational awareness by detecting objects, movements, and structural changes in real time, MOVIA™ Air System enables faster threat assessment. Security teams can monitor - day or night, in any weather - large or hard-to-reach areas safely and efficiently.

#### Transforming surveying efficiency

Transforming modern surveying through precise 3D data capture by penetrating vegetation and mapping terrain with centimeter-level detail, MOVIA™ Air System enables surveys, site planning, and volume calculations. Delivering reliable, high-density point clouds, it helps surveyors work safer, faster, and with unmatched precision.

#### Precise navigation in unknown terrain

Enabling precise navigation in unknown environments and communicating with operators or other units, MOVIA™ Air System supports missions such as infrastructure inspection, environmental surveying, and autonomous exploration. The payload modules ensure reliable path planning, and safe operation even without GNSS.

### Core Components

- ▶ MOVIA™ Sensors
- ▶ Camera
- ▶ Companion Processor
- ▶ Autonomous Exploration Software
- ▶ Optional: Power Module



## Technical Data MOVIA™ Air System

Feature	Specification
Maximum Power Consumption	Full system: < 25 W
Typical Power Consumption	Full system: < 18 W
System Field of View	Combined lidar and camera field of view coverage: Forward: enabling complex navigation and vertical mapping Downward: maximizing ground coverage for mapping
Compatible Lidar Sensors	MOVIA™ L 60°, MOVIA™ L 120°, MOVIA™ S 180°
Map Resolution	Configurable, 5-100 cm cubes
Mapping Altitude	0.5 m - 50 m
Map Attributes	RGB texturing, elevation, surface inclination, traversability, semantic labels, obstacle occupancy, optical reflectivity

## 3D Mapping and Measurement

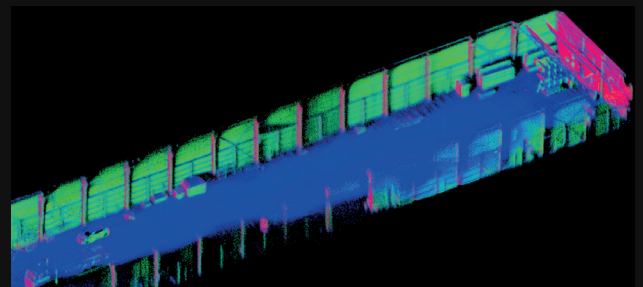


Front Camera View into a Storage Facility Building

By utilizing 3D measurements - shown here using the example of a storage facility - the mapping solution transforms unknown areas into detailed representations of the environment, including paths (drivable and non-drivable), textures, surfaces, ground changes, and irregularities, even in areas where GNSS is unavailable.



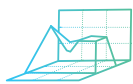
Total View: 3D Map in GNSS-Denied Environment, Colored by Camera RGB Values



Total View: 3D Map of a GNSS-Denied Environment, Colored by Surface Inclination

## Technology & Innovation

### Key Features



Real-Time 3D Mapping



Indoor & Closed Sky Operations



Autonomous Exploration in Complex Environments



ATAK Compatible

### Sensor Modes



Aerial Usage



Passive Mode



Photon Energy Mode



Low Power