



**sunflower labs**

# **Company Overview**

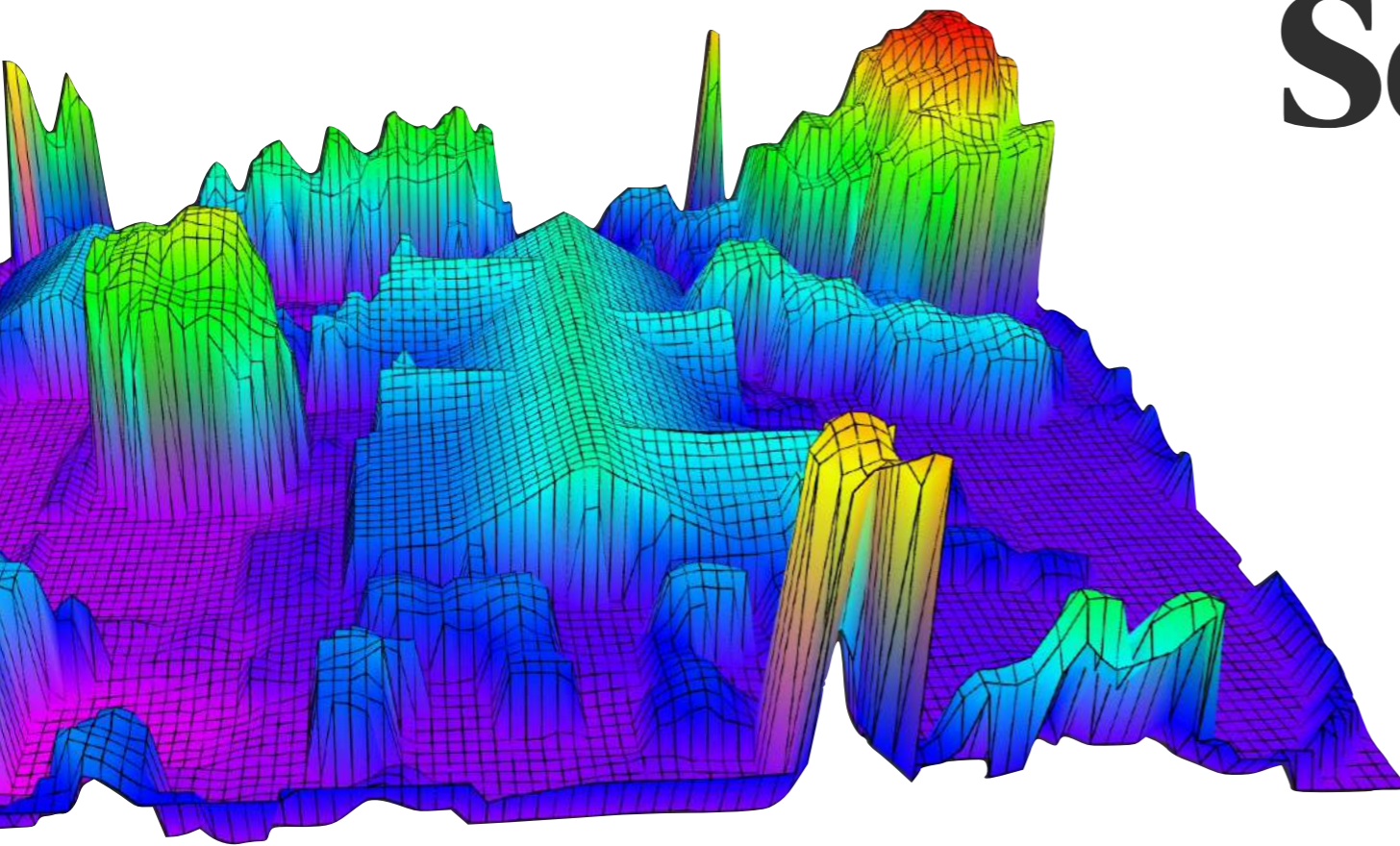
**FEBRUARY 2024**



SUNFLOWER LABS BEEHIVE IS AN

# Autonomous Security Drone

To secure, patrol and inspect  
large outdoor properties



# A complete solution



## Bee

Our lightweight drone features sophisticated technology for autonomous flight, high-quality video capture and reliable precision landing and charging, each and every time.



## Hive

Basestation that houses and charges the Bee. It is the brains of the entire system, processing and analyzing sensor data using edge AI computing.



## Software

A complete software solution to set up, control and overview the system. Works on any mobile device or web browser. Embeddable and easy to integrate using our open API.

# Making security cheaper and better



**Current physical security solutions are human guards, CCTV cameras & sensors that trigger alarms.**

- ▶ Guards are expensive and unreliable
- ▶ Cameras provide limited coverage and cost ~\$4,000 each (purchase, wiring, mounting)
- ▶ Alarms summon guards, who often ignore them because of the high false alarm rate



**Our system addresses these issues:**

- ▶ Reduces guard spend
- ▶ Increases coverages
- ▶ Increases response rates
- ▶ Lowers installation costs
- ▶ Decreases costs for alarm response



# Advantages of drones for security

## Our autonomous drones:

- ▶ Deploy within seconds
- ▶ Observe large outdoor areas
- ▶ Fly above gates and fences
- ▶ Perform more frequent patrols than people
- ▶ Detect people and vehicles
- ▶ Execute scheduled patrols at randomized intervals
- ▶ Provide active deterrence
- ▶ Track activity
- ▶ Send alerts and reports

Deployed up to 360 times per day \*

\* 1 minute patrol every 3 minutes for 24 hours

# Where our systems can be used



## Automotive Factories

1,500 in North America  
2,000 in Europe  
10k+ worldwide



## Train Depots

100k+ worldwide



## Office Parks

50k in US  
500k+ worldwide



## Stadiums

70k in US  
50k in EU  
300k+ worldwide



## Self-Storage Facilities

50k in US  
15k in EU  
150k+ worldwide



## Correctional Facilities

1,800k in US  
800 in EU  
30k+ worldwide



## Religious Buildings

2k megachurches in US  
30k places of worship  
400k+ temples worldwide

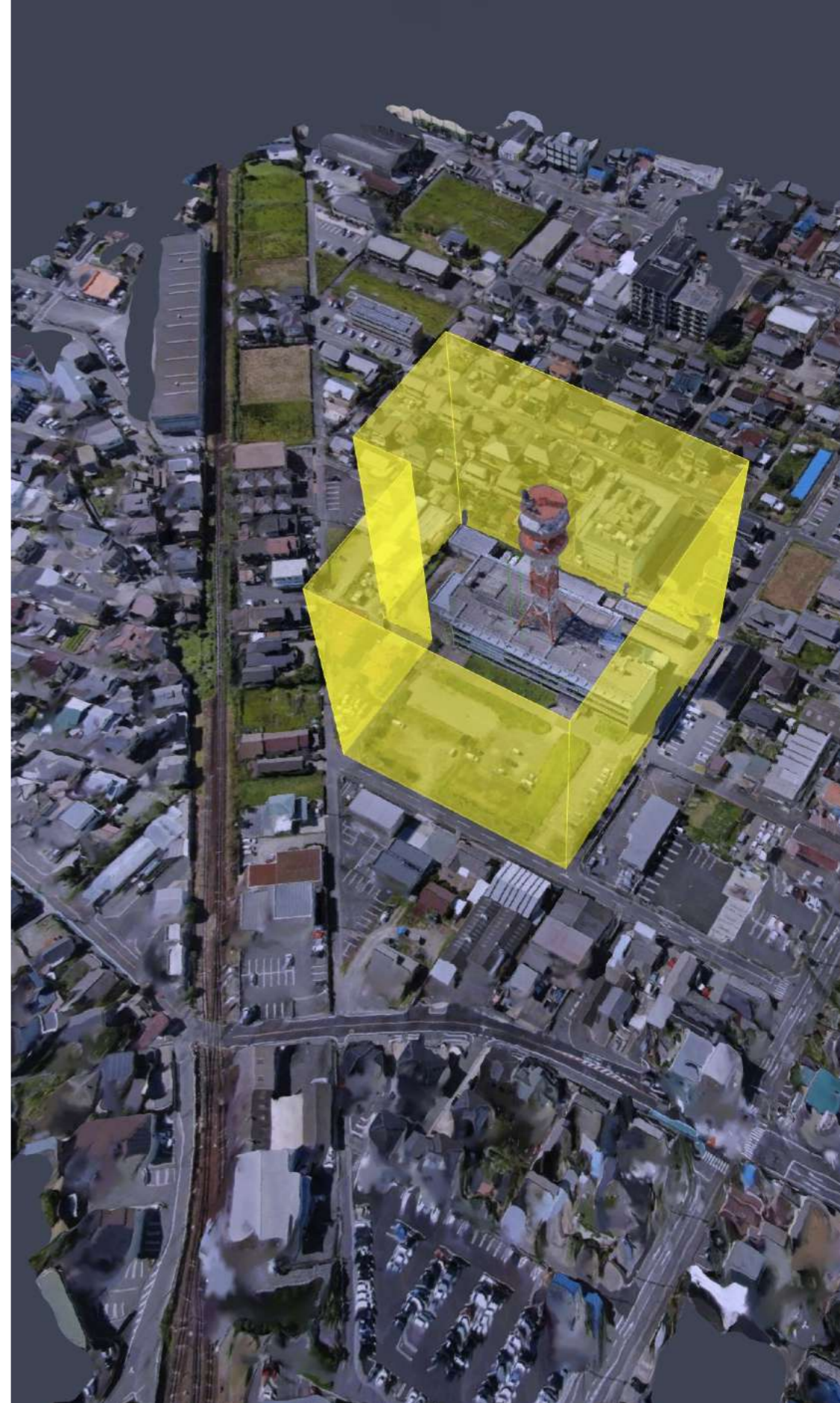
## And many more...

High-end residential  
Gated communities  
Hotels/resorts  
Marinas  
Dealerships  
Distribution centers  
Solar farms  
Industrial storage  
Datacenters  
Livestock farms

Fun fact: All of these pictures are from real locations where our systems were installed

# Customer benefits

- ▶ Fast installation
- ▶ Easy to use
- ▶ Reliable & safe
- ▶ Coverage & rapid response
- ▶ Improves existing security
- ▶ Proactive deterrence
- ▶ Legal & compliant



# Fast installation

- ▶ Fastest and easiest installation of any drone-in-a-box system
- ▶ Two hours from unpacking to first flight
- ▶ No special mounting equipment required
- ▶ The Hive weighs 35kg
- ▶ The Bee weighs 1.5kg
- ▶ The lightest system on the market
- ▶ Can be installed on roofs without reinforcements



## Installation requirements:

1.

**Open sky**  
A meter of clearance

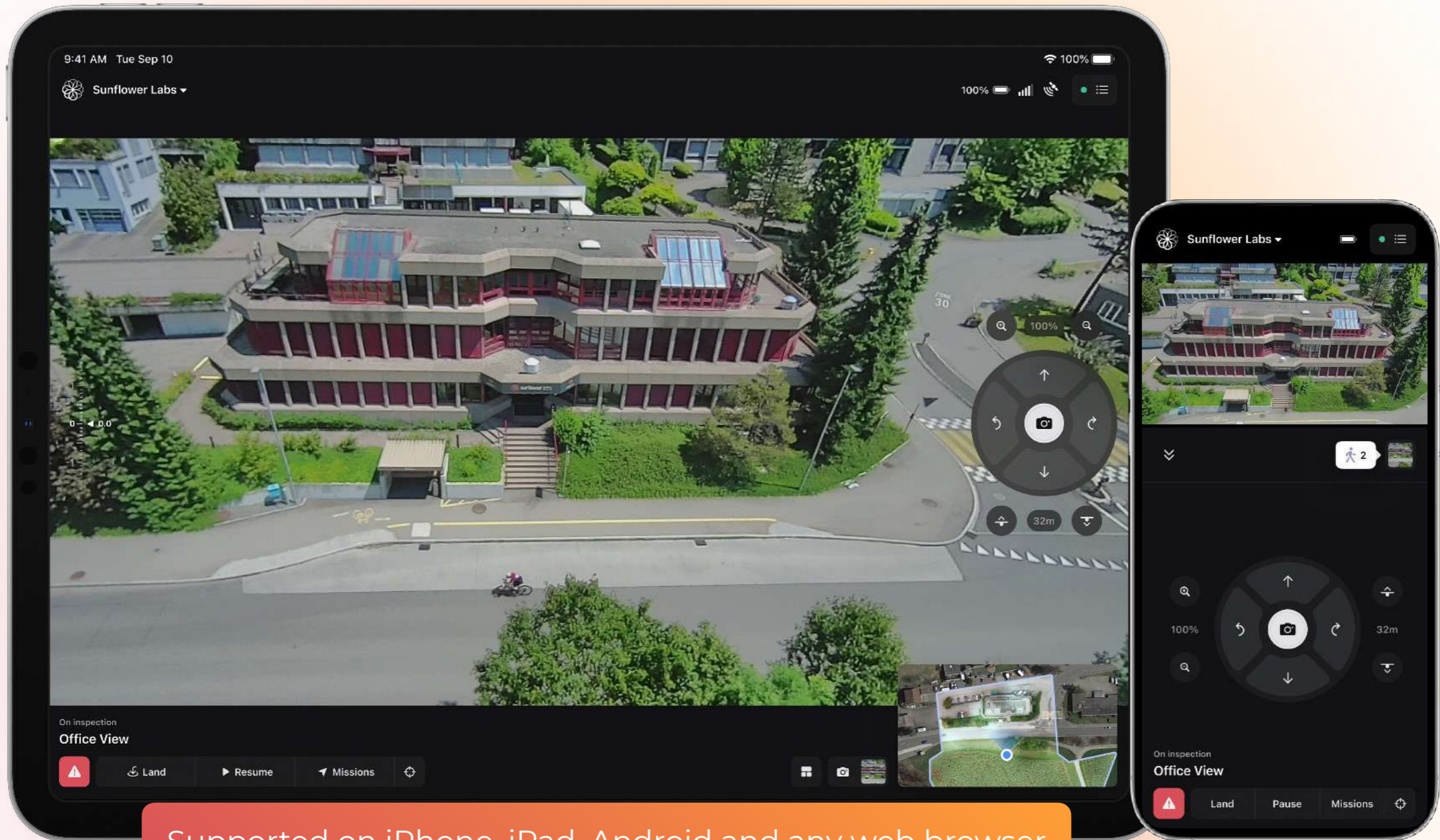
2.

**Power**  
Standard  
110/220V socket

3.

**Internet**  
Ethernet, LTE,  
5G or Starlink

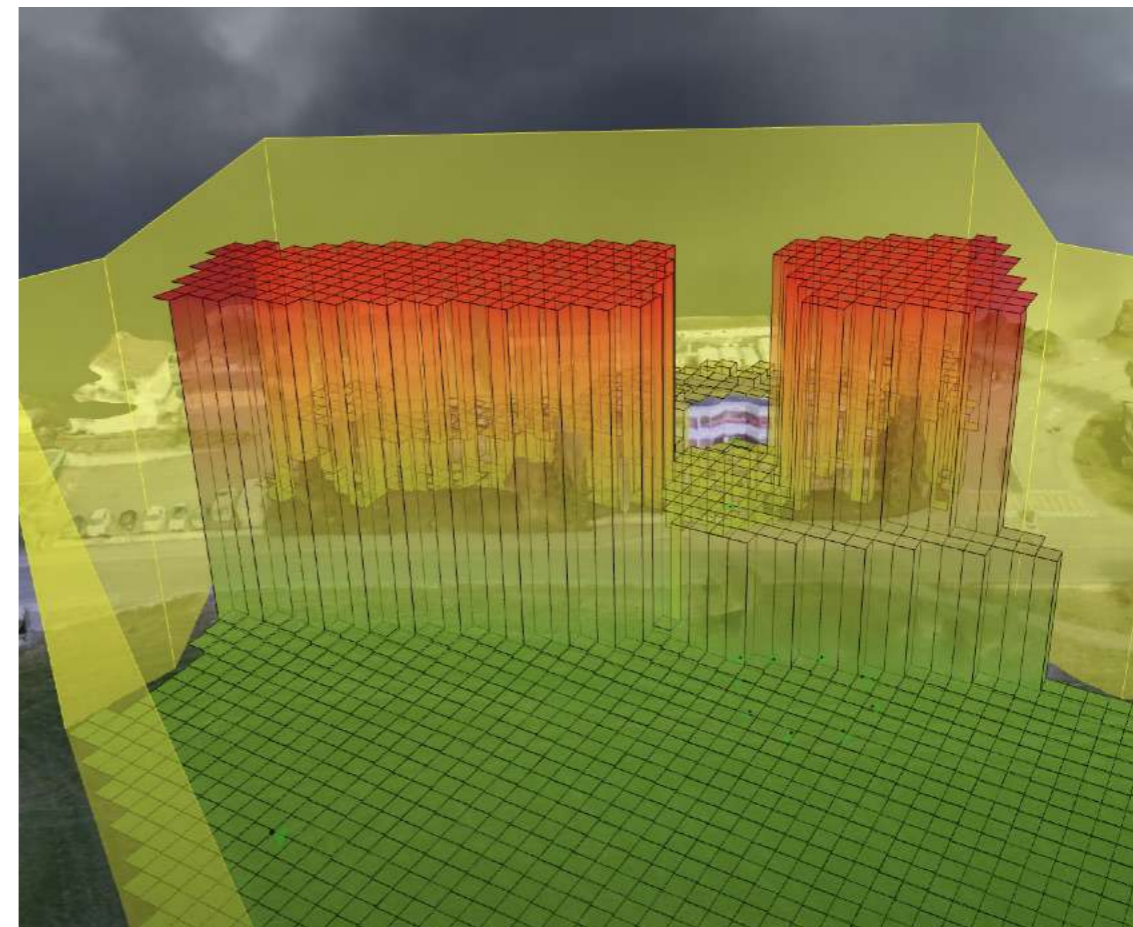
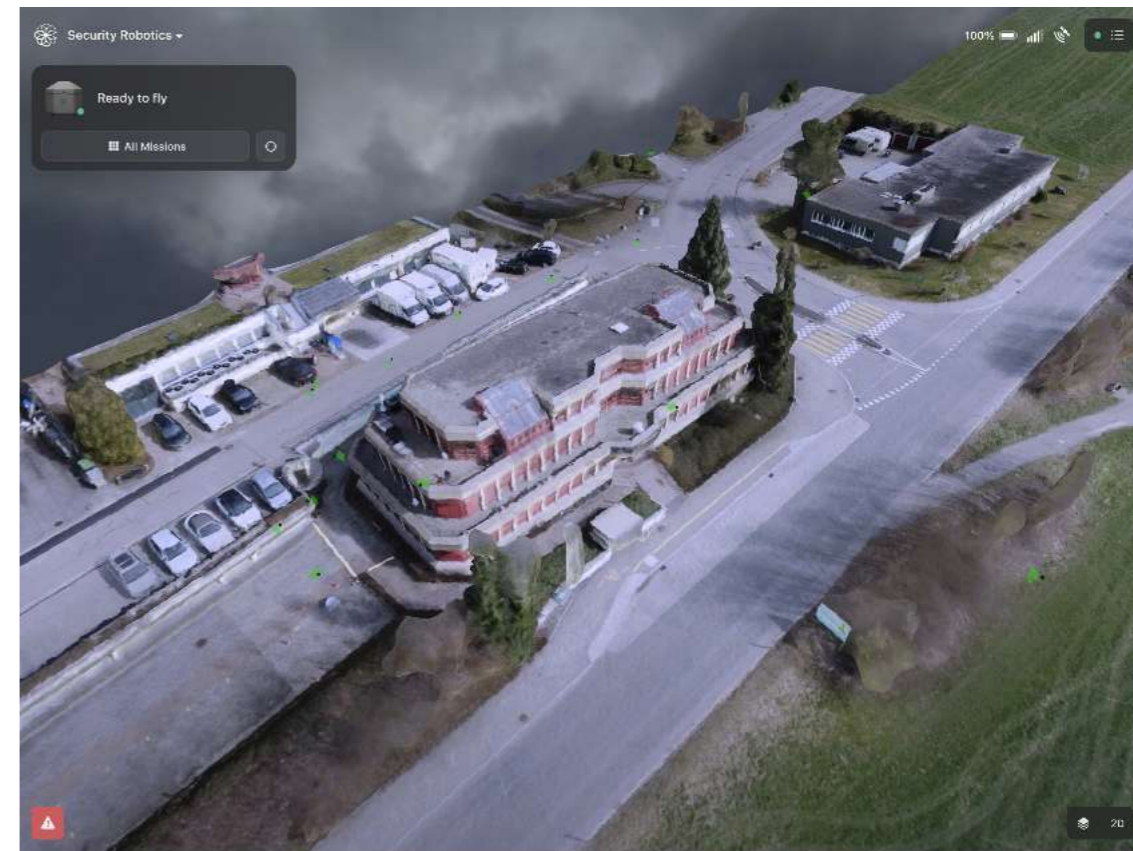
# As easy to use as a camera



Supported on iPhone, iPad, Android and any web browser

# Reliable and safe

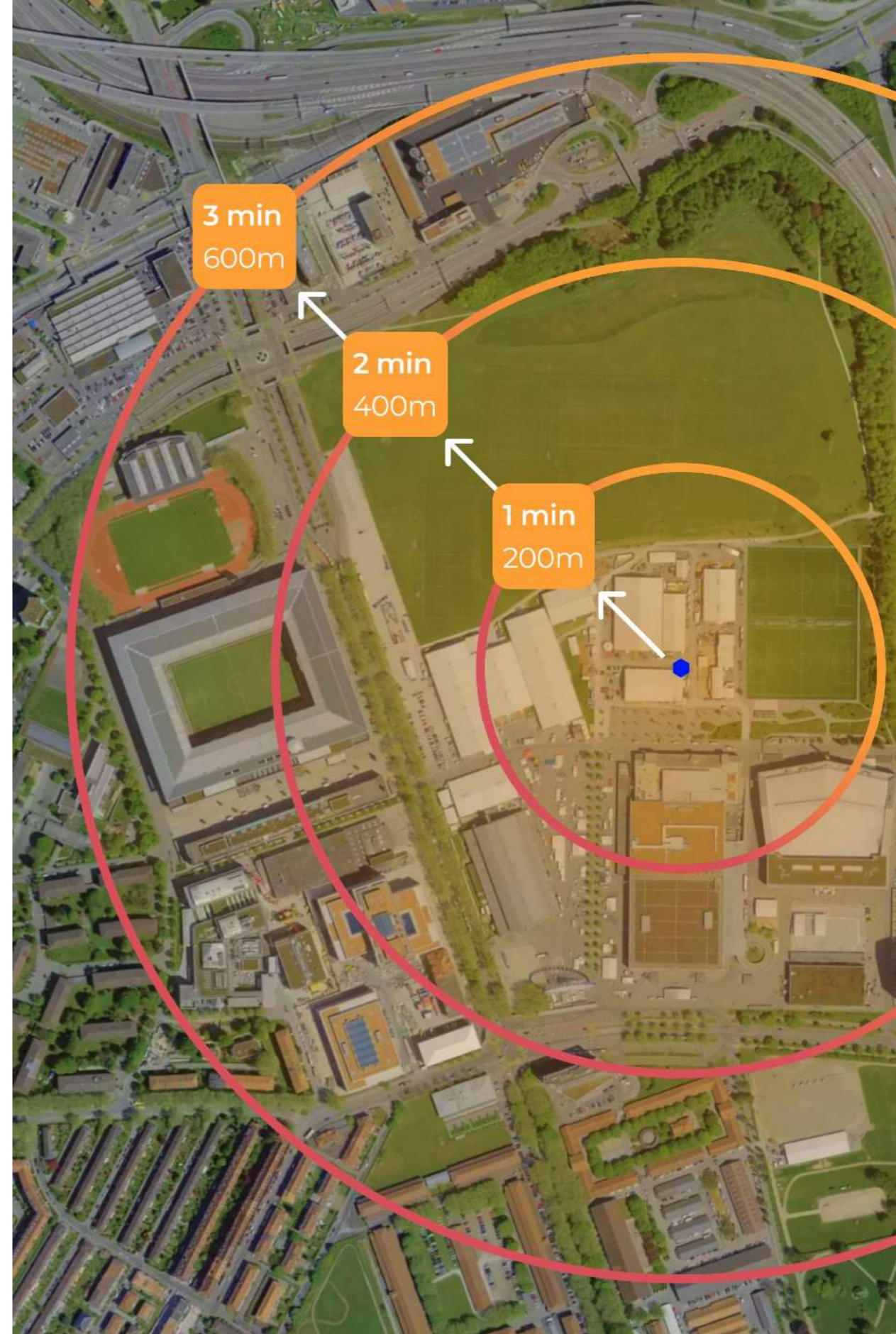
- ▶ Fully autonomous operations
- ▶ Automatic pre-flight checks
- ▶ Geo-caged operations
- ▶ All-weather obstacle avoidance and re-routing
- ▶ Automatic return, landing and recharging
- ▶ Air-traffic monitoring and automated deconfliction
- ▶ AI-based self-diagnosis
- ▶ Over 17,000 flights
- ▶ 99.9% reliability



# Coverage & rapid response

- ▶ Security requires a fast response
- ▶ Our system has the fastest drone deployment on the market
- ▶ From alert to flight in less than **5 seconds**
- ▶ Observe anything on a 30 acre property in under **1 minute**
- ▶ Integrated rapid recharge system

Response Time	Distance	Area (Hectars)	Area (Acres)
< 1 minute	200m	12	30
< 2 minutes	400m	50	120
< 3 minutes	600m	120	250

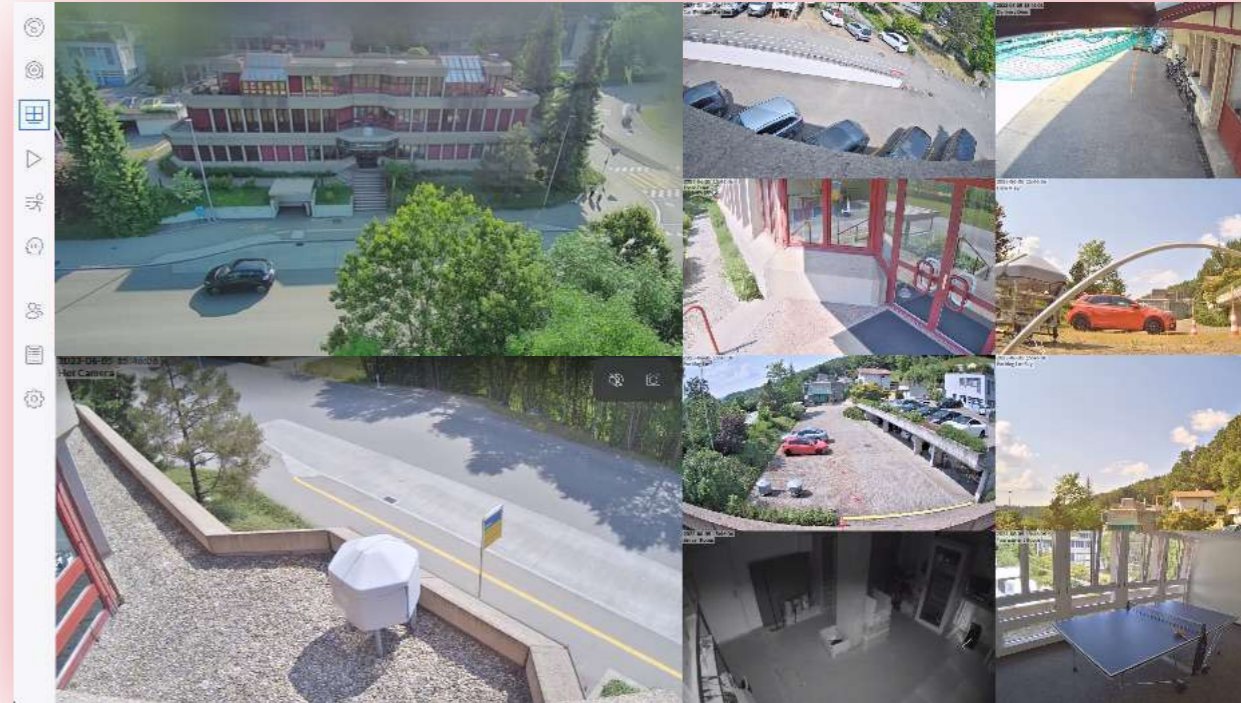


# Integrates with existing security systems

Our system integrates and extends any modern security system.

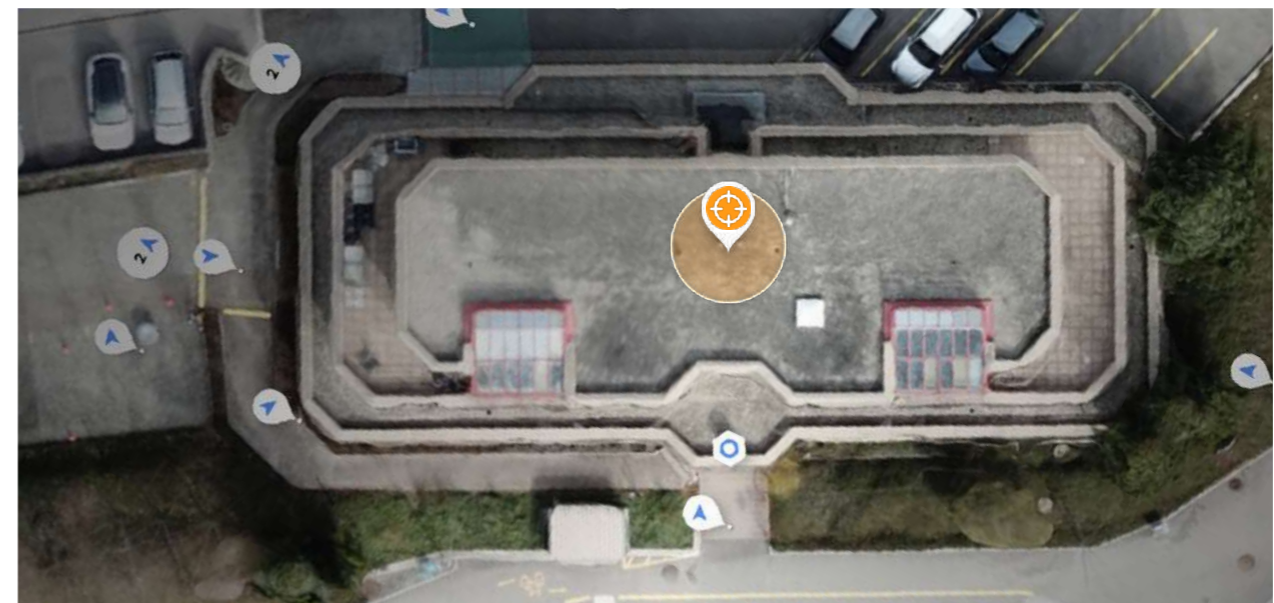
Video from the Bee is streamed like any other camera using the standard **RTSP** and **ONVIF** protocols.

The Bee can be controlled from any browser tab, using an embedded web app, with our **open API**, or via standard HTTPS **webhooks**.



# Proactive deterrence

- ▶ Dynamically observe any location
- ▶ Click on anything in the 2D map, 3D map & on live video via ray-casting
- ▶ The Bee automatically flies around obstacles to provide the best point of view
- ▶ Lets intruders know that they have been noticed
- ▶ Most intuitive way to fly a drone - no piloting experience required



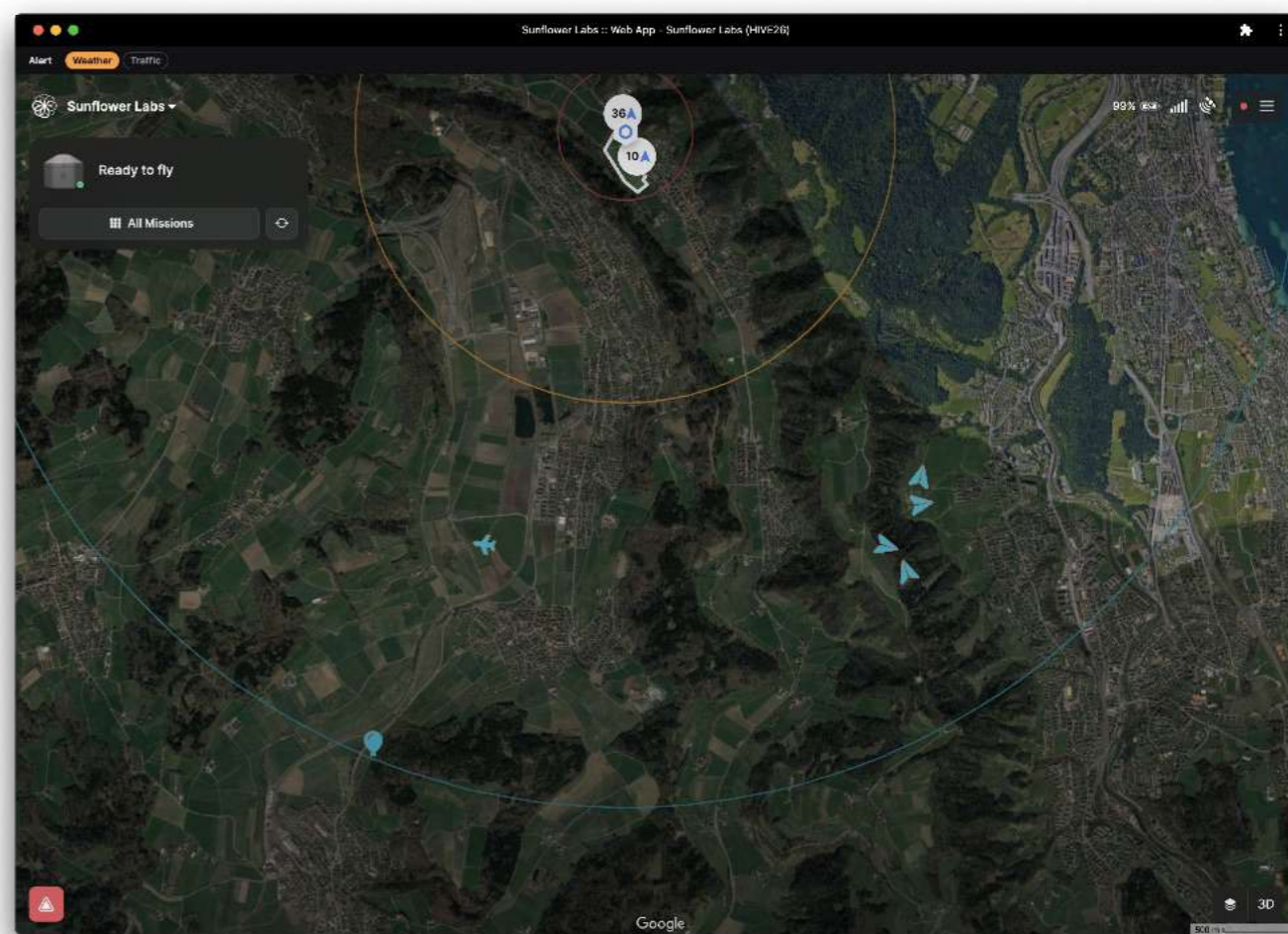


# Live Privacy Protection

- ▶ Blurs out the portion of video and photos captured outside the property
- ▶ Works in realtime at 25fps
- ▶ Optional user-configurable feature
- ▶ Required for operations in dense populated settings and in some countries

# Air Traffic Monitor

- ▶ Optional integration with a sophisticated air traffic monitoring solution
- ▶ Detects, tracks and reacts to air traffic broadcasting: ADS-B, MLAT, OGN & FLARM
- ▶ Capable of detecting cooperative planes, helicopters, glider, parachuters and hot air balloons (example in the top picture)
- ▶ Configurable reactions allow to automatically return to land, prevent flights, or perform an emergency procedure
- ▶ This unique capability allows us to receive operational approvals in some restricted airspaces





Federal Aviation  
Administration



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# FAA & EASA Approvals

- ▶ FAA Part 107 waivers for BVLOS, VO, operation over people and vehicle
- ▶ EASA SORA for SAIL-II operations
- ▶ Received first location-independent approval
- ▶ Night operations
- ▶ No visual observers
- ▶ Over populated areas
- ▶ Even in some restricted airspace

# Deployed Worldwide





**Thank you!**



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