

# Drone and Drone Pilot Detection/Defense




























# Agenda:

- **Who We Are**
- **Differentiators**
- **Mitigating Drones**
- **Why Organizations Buy Drone/Pilot Detection**
- **AirGuard Live Demo**
- **Technical Details**
- **WebEOC Integration**
- **Facility Requirements**
- **Juvare Resources**
- **Questions**

AirSight is a leading global drone detection security company specializing in delivering real-time, and historical, actionable

## Drone, and Drone Pilot, Detection/Defense Solutions.

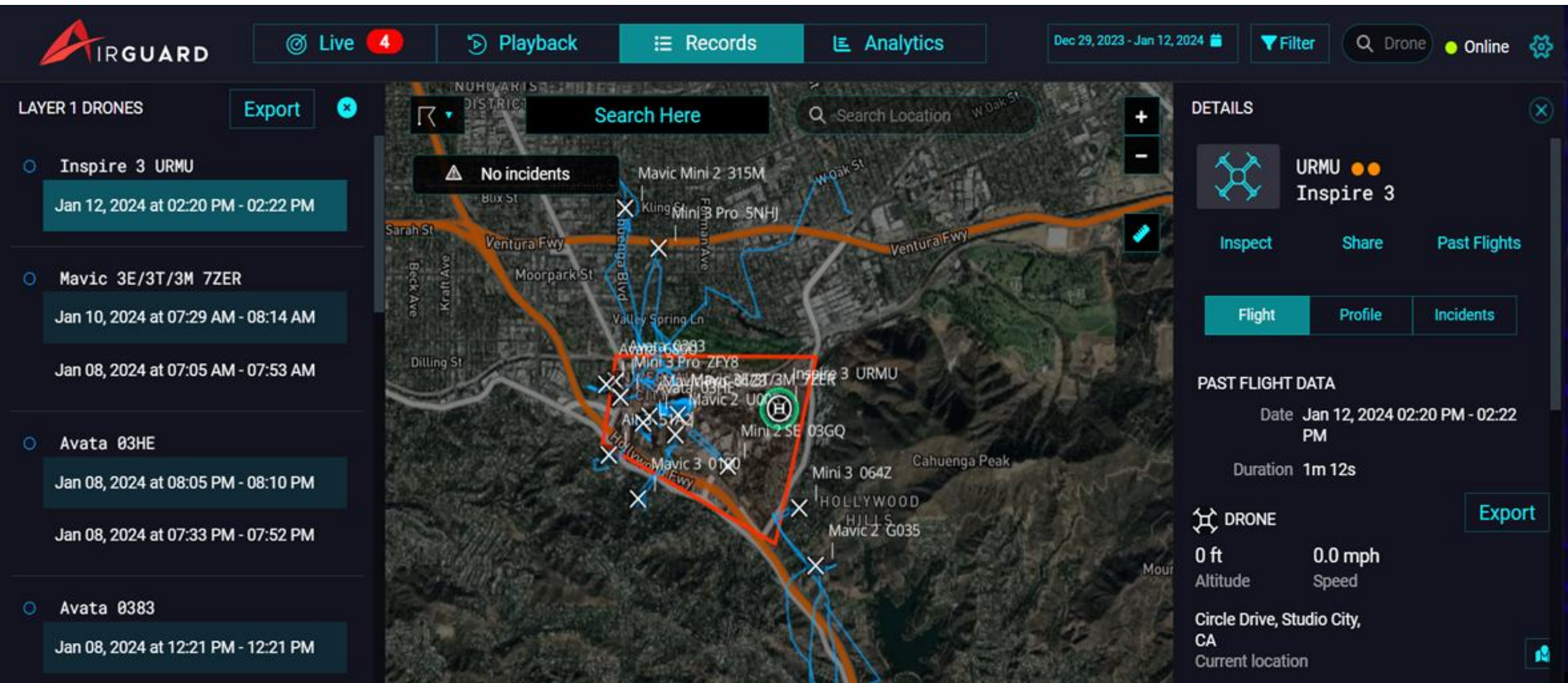
### Customers Verticals:

- **Petroleum/Chemical Plants**   
- **Energy CI**   
- **Correctional Facilities**
- **Movie Production Studios** 
- **Ship Building Facilities** 
- **Shipping Ports**  
- **Healthcare / Airports**
- **Professional Sports**    
- **Universities & Stadiums** 
- **Law Enforcement** 
- **VIP Properties**
- **Fortune 500** 
- **Cities and Counties** 
- **Pharmaceutical**  
- **Aerospace Firms** 
- **Data Centers**



# AirSight Differentiators:

- Focus is Find Pilot
- AirGuard - Software-as-a-Service Model
- Integrated into WebEOC – Early 2025
- Hardware Agnostic
- 4 Options of Protection



**AIRGUARD** | Live **4** | Playback | Records | Analytics | Dec 29, 2023 - Jan 12, 2024 | Filter | Drone | Online

**LAYER 1 DRONES** | Export

- Inspire 3 URMU  
Jan 12, 2024 at 02:20 PM - 02:22 PM
- Mavic 3E/3T/3M 7ZER  
Jan 10, 2024 at 07:29 AM - 08:14 AM  
Jan 08, 2024 at 07:05 AM - 07:53 AM
- Avata 03HE  
Jan 08, 2024 at 08:05 PM - 08:10 PM  
Jan 08, 2024 at 07:33 PM - 07:52 PM
- Avata 0383  
Jan 08, 2024 at 12:21 PM - 12:21 PM

**Map:** Search Here | Search Location | No incidents | Mavic Mini 2 315M | Mini Pro 5NHJ | Inspire 3 URMU | Mavic 3E/3T/3M 7ZER | Avata 03HE | Mavic 2 U0... | Mini 2 SE 03GQ | Mini 3 064Z | Mavic 2 G035

**DETAILS** | URMU | Inspire 3 | Inspect | Share | Past Flights

**PAST FLIGHT DATA**

Date: Jan 12, 2024 02:20 PM - 02:22 PM  
Duration: 1m 12s

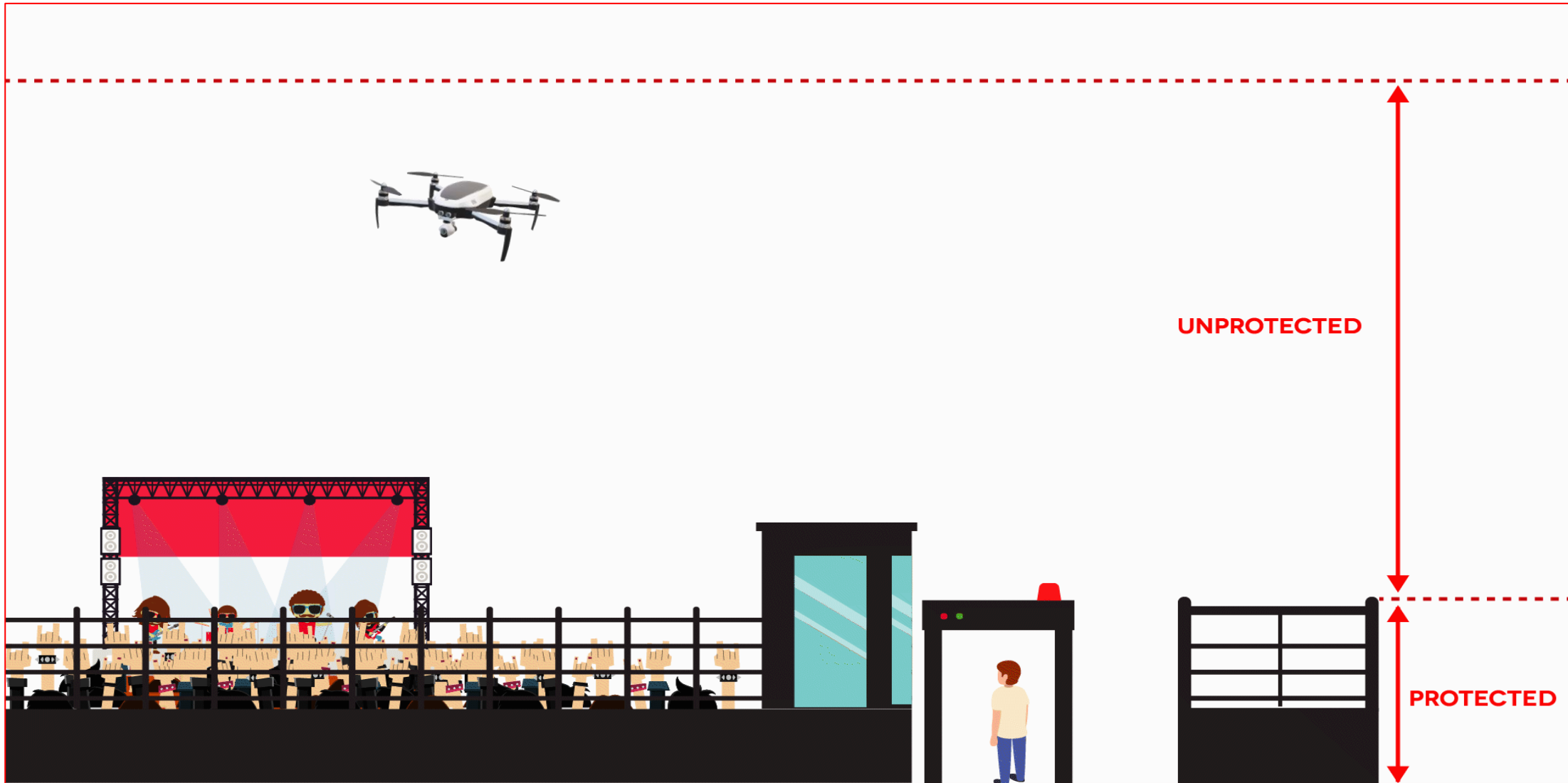
**DRONE** | Export

0 ft Altitude | 0.0 mph Speed

Circle Drive, Studio City, CA  
Current location

## Current Physical Security Space Problem:

Any facility with traditional ground security... currently has an airspace security vulnerability.



# Is it Legal to Mitigate a Drone in Flight?



**The Only Agencies Authorized to Mitigate a Drone in Flight in the US/Canada:**

- **DOJ / Homeland Security / FBI / DoD**
  - **Canadian Military / RCMP**

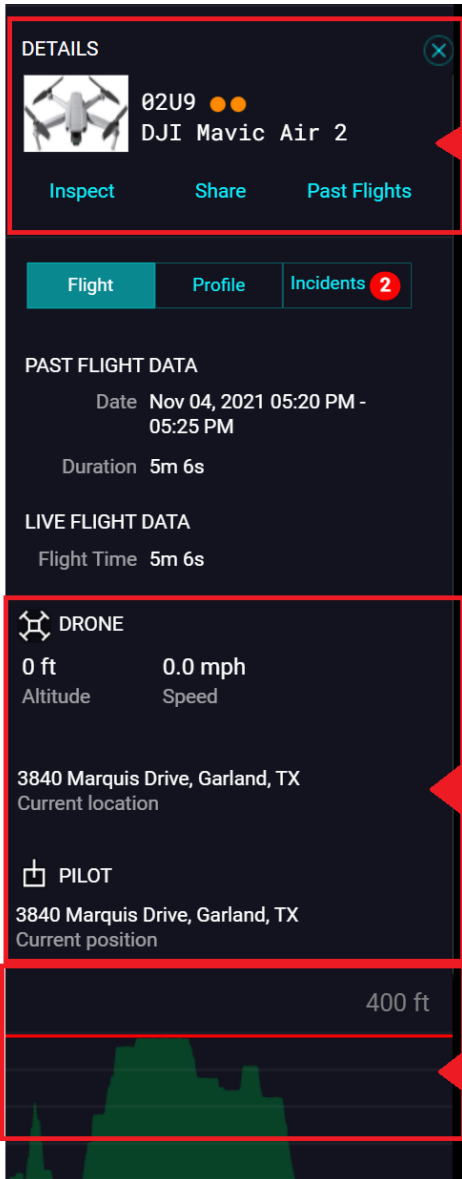
# So, What CAN You Do if a Drone is in your Airspace?

Use AirGuard to Locate the Pilot!

Find the Drone Pilot in Real Time with AirGuard.



That's Actionable Intelligence!



DETAILS

02U9  
DJI Mavic Air 2

Inspect Share Past Flights

Flight Profile Incidents 2

PAST FLIGHT DATA  
Date Nov 04, 2021 05:20 PM - 05:25 PM  
Duration 5m 6s

LIVE FLIGHT DATA  
Flight Time 5m 6s

DRONE  
0 ft Altitude  
0.0 mph Speed

3840 Marquis Drive, Garland, TX  
Current location

PILOT  
3840 Marquis Drive, Garland, TX  
Current position

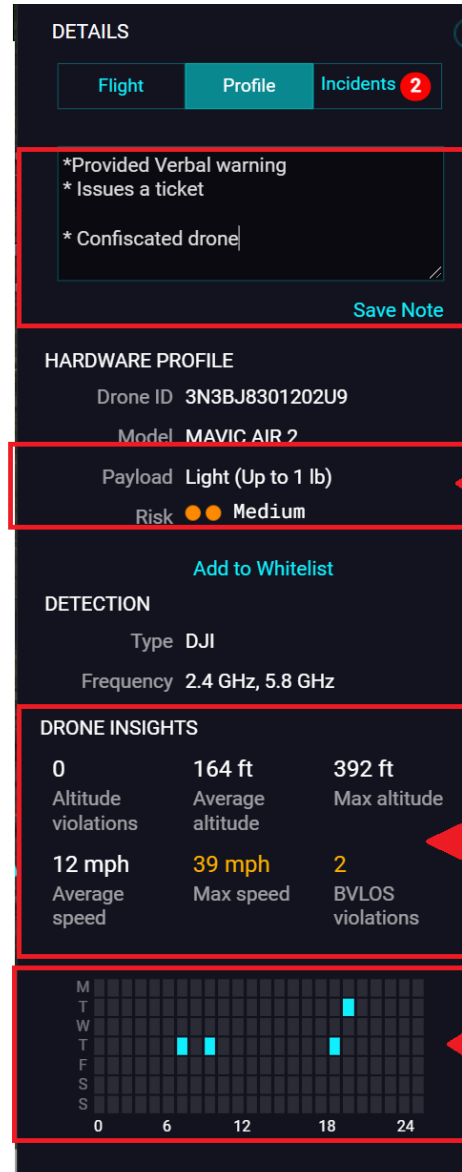
400 ft

Altitude

Drone info

Street Address

Altitude



DETAILS

Flight Profile Incidents 2

\*Provided Verbal warning  
\*Issues a ticket  
\*Confiscated drone

Save Note

HARDWARE PROFILE  
Drone ID 3N3BJ8301202U9  
Model MAVIC AIR 2  
Payload Light (Up to 1 lb)  
Risk Medium

Add to Whitelist

DETECTION  
Type DJI  
Frequency 2.4 GHz, 5.8 GHz

DRONE INSIGHTS

0 Altitude violations	164 ft Average altitude	392 ft Max altitude
12 mph Average speed	39 mph Max speed	2 BVLOS violations

M T W T F S S  
0 6 12 18 24

Days/Hours of operations

Logging notes

Risk level

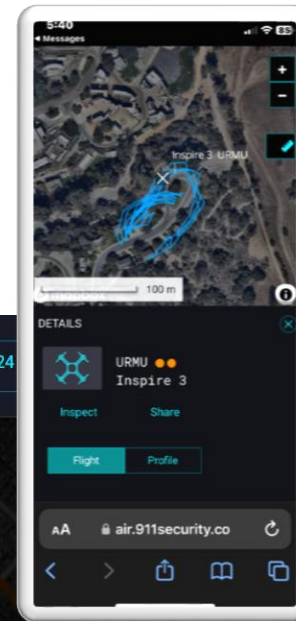
Violations

Days/Hours of operations

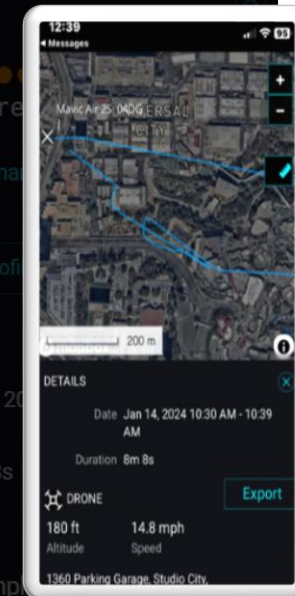


# Quickly Share Live Pilot Location with Law Enforcement / Security Team

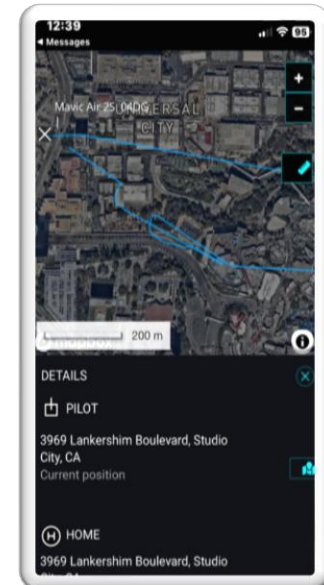
The screenshot shows the AIRGUARD web interface. At the top, there are navigation tabs: Live (7), Playback, Records, and Analytics. Below the tabs is a search bar and a list of drones. One drone, 'Inspire 3 URMU', is selected, showing its flight history for Jan 12, 2024. A 'SHARE A DRONE' dialog box is open in the foreground, containing the text: 'Use phone number in international format number to send link directly to a phone. Link available for 24 hours.' Below this text is an input field with the example '+E.g. +12223334444, +13334445555' and two buttons: 'Send' and 'Get sharable link'.



Drone Make/Model & Flight Path



Date/Time /Speed/Altitude



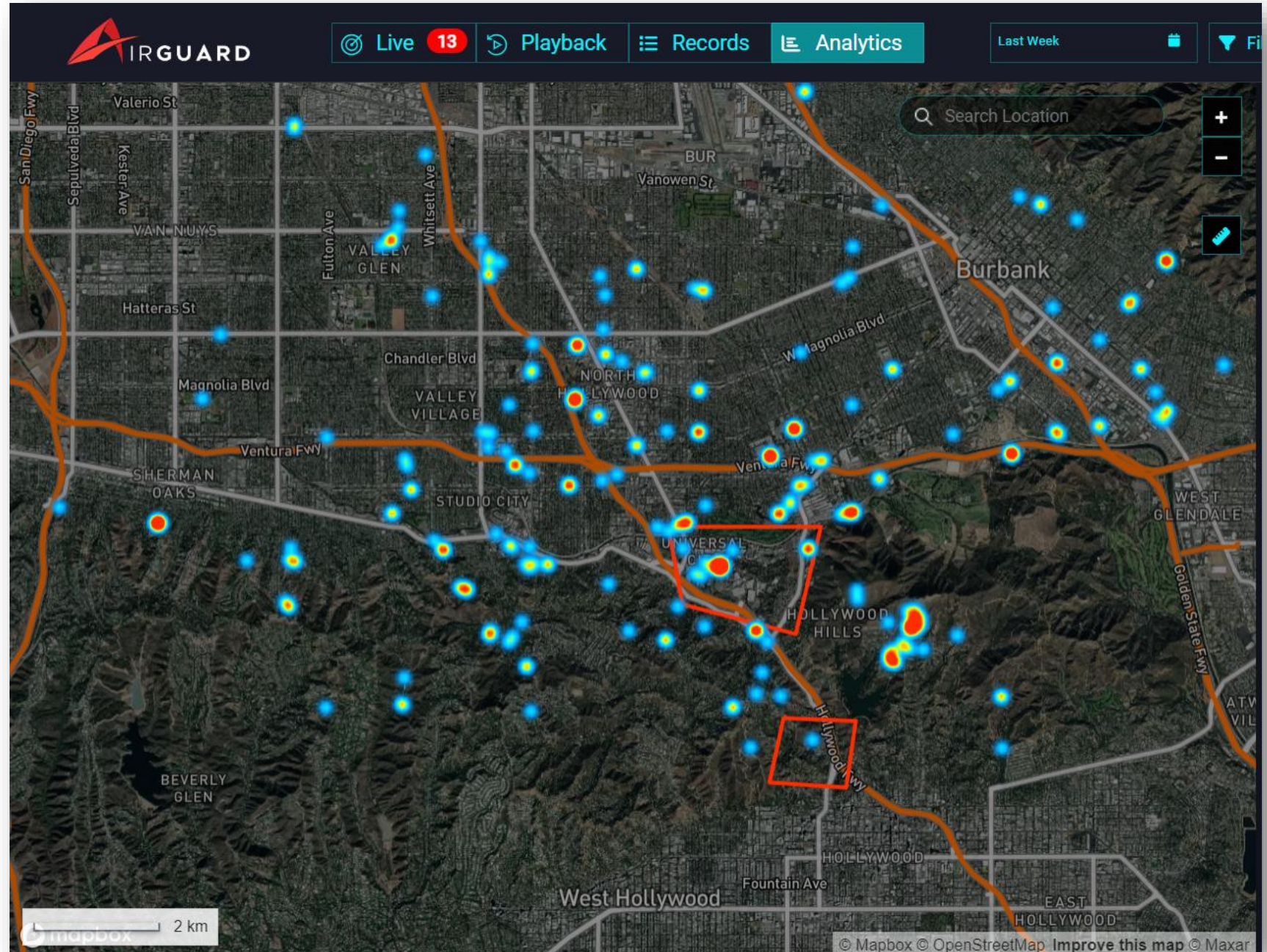
Pilot & Home Location & more

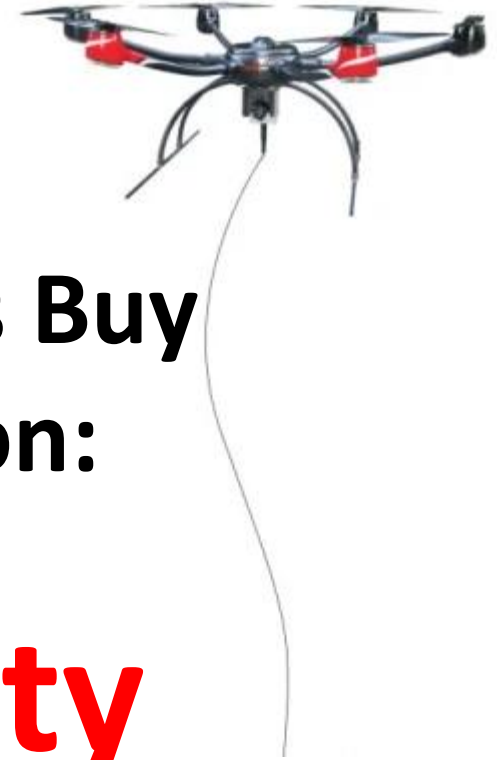


# Heat Map Analytics

Provides Details on Where Drones and Pilots Most Frequently Take Off/Land Around Your Perimeter.

**That's Actionable Intelligence!**





**#1 Reason Why Organizations Buy  
Drone/Drone Pilot Detection:**

**Limit Their Liability**

**Protect People, Assets, Infrastructure & Brand Reputation**



# #1 Reason Why Drone/Drone Pilot Detection:

## Limit Liability

Protect People, Assets, Infrastructure & Brand

Organizations **with**  
Drone/Drone Pilot Detection  
When/If an Incident Occurred.

- ✓ Have Drone ID
- ✓ Have Drone Pilot Launch Location/Address
- ✓ Have Drone Flight Path, Altitude, Speed, Date, Time & More
- ✓ Have Historical Drone/Drone Pilot Flight Data & Locations
- ✓ Have the Ability to Locate the Drone Pilot

**Result: Limited Liability**

Organizations **without**  
Drone/Drone Pilot Detection  
When/If an Incident Occurred.

- ✓ Have Physical Drone – Potentially
- ✓ Have Verbal Stories of the Drone

**Result: High Liability**



# AirGuard Live Demo:

<https://air.airsight.com/login>

The screenshot displays the AirGuard web interface. At the top, there are navigation tabs for 'Live' (with a red badge showing '3'), 'Playback', 'Records', and 'Analytics'. A date range filter is set to 'Jan 08, 2024 - Jan 22, 2024'. The main map area shows a satellite view of Universal City, CA, with a red polygon indicating a monitored area. A 'No incidents' warning box is overlaid on the map. Various drone flight paths are visible, with labels for different drone models and IDs such as 'Avata 0383', 'Mavic Air 2S 01AJ', 'Mini 3 0CKQ', and 'Mavic 3 Pro M8K9'. On the left, a 'LAYER 1 DRONES' list shows several drone entries with their respective flight times. On the right, a 'DETAILS' panel for the selected 'M8K9 Mavic 3 Pro' drone shows flight data: 'Date: Jan 22, 2024 09:03 AM - 09:10 AM', 'Duration: 6m 20s', 'Altitude: 0 ft', and 'Speed: 28.5 mph'. The current location is listed as '3900 Alfred Hitchcock Lane, Studio City, CA'. The bottom of the interface includes a 'Page 1 of 1' indicator and a 'mapbox' logo.

LAYER 1 DRONES

Export

- Mavic 3 Pro M8K9  
Jan 22, 2024 at 09:03 AM - 09:10 AM
- Mavic Air 2S 01AJ  
Jan 21, 2024 at 01:26 PM - 01:34 PM
- Mini 3 0CKQ  
Jan 19, 2024 at 02:57 PM - 03:00 PM
- Mavic Air 2S 09NT  
Jan 17, 2024 at 05:07 PM - 05:14 PM
- Mavic Air 2S 03SK  
Jan 17, 2024 at 05:07 PM - 05:13 PM

Search Here

No incidents

DETAILS



M8K9  
Mavic 3 Pro

Inspect

Share

Past Flights

Flight

Profile

Incidents 2

PAST FLIGHT DATA

Date Jan 22, 2024 09:03 AM - 09:10 AM

Duration 6m 20s

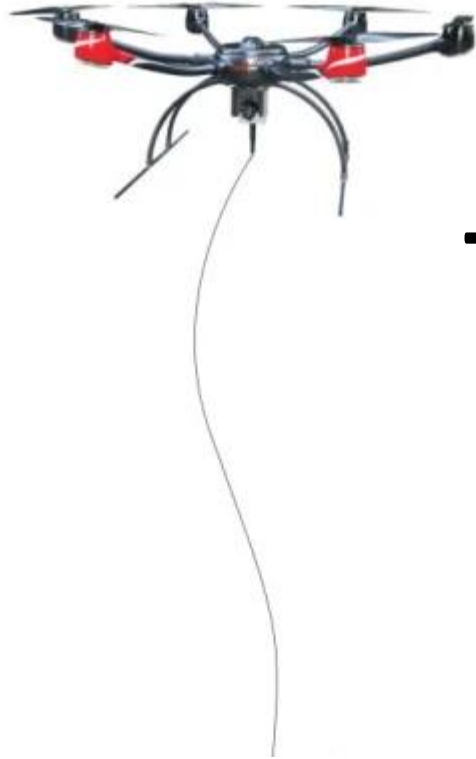
DRONE

0 ft  
Altitude

28.5 mph  
Speed

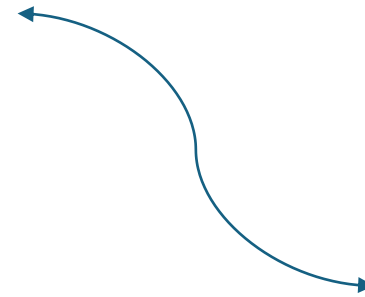
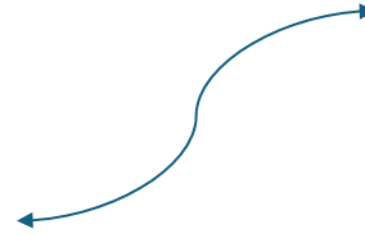
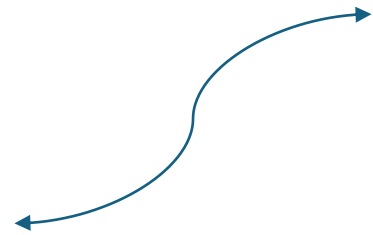
3900 Alfred Hitchcock Lane, Studio City, CA  
Current location

Export



# Technical Summary





**Drone Controller and Drone Communicate  
With Each Other Via Radio Frequency.**



**AirSight Sensor's Capture the Radio  
Frequency Data and Import into AirGuard  
in Real Time.**





### **Remote ID:**

As of Sept. 2023, mandated by FAA to be broadcast by any Drone over 250g. Provides Drone ID, Altitude, Pilot Location, Controller Location and Flight Path and more.

### **AeroScope Signal:**

DJI proprietary signal broadcast by DJI. Provides Drone ID, Altitude, Pilot Location, Controller Location and Flight Path for DJI Drones only (pre Sept. 2023). DJI discontinued summer of 2023.

### **Frequency and Channel signatures:**

Unique to each make and model of Drone. Can be seen by RF sensors to determine that a Drone is in the area.



All DJI Drones



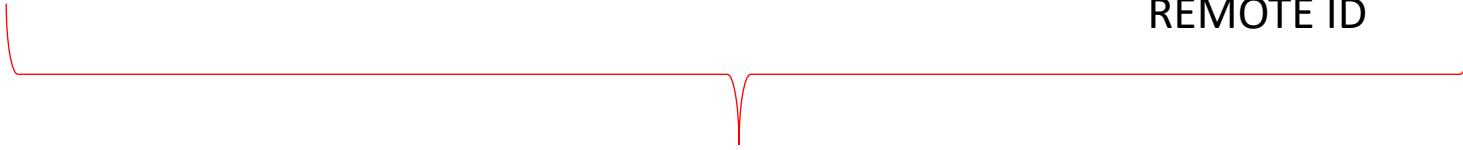
All Drones Broadcasting Remote ID



Non-DJI drones or drones NOT broadcasting REMOTE ID



Dark drones, home-made drones, ghost drones, RF modified drones or drones flying Non-RF signal like 5G



75% +



15%



8%



2%

Rough percentage of drone space today.

They are all growing exponentially YoY.







Remote ID  
Detection

75% + of  
Drones Detected



Most Popular Solution

Layer 1  
Detection

90% of  
Drones Detected



Layer 2  
Directional Sensors

95% of  
Drones Detected



Layer 3:  
Radar and Camera

99% of  
Drones Detected

**All Solutions Include:  
All Sensor Hardware, SaaS  
Software and 24/7/365  
Customer Service.**



All New Drones Since  
Sept 2023 & All Firmware  
Updated Drones



All New & Legacy DJI  
Drones and all Drones  
Broadcasting Remote ID



Radio Frequency Non-DJI  
Commercial drones using standard  
frequencies and Not Remote ID



Dark drones, home-made drones, ghost  
drones, RF modified drones or drones  
flying Non-RF signal like 5G

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Tarsier

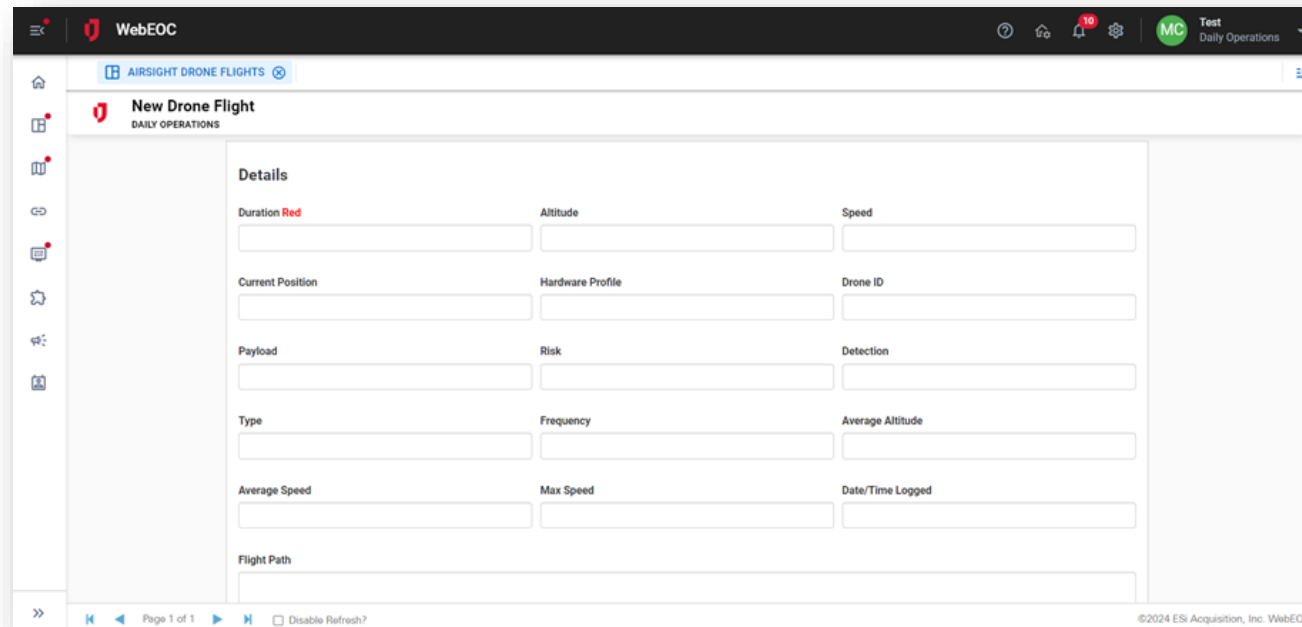




# Integration



- The WebEOC integration consists of new board called “AirSight Drone Flights”.

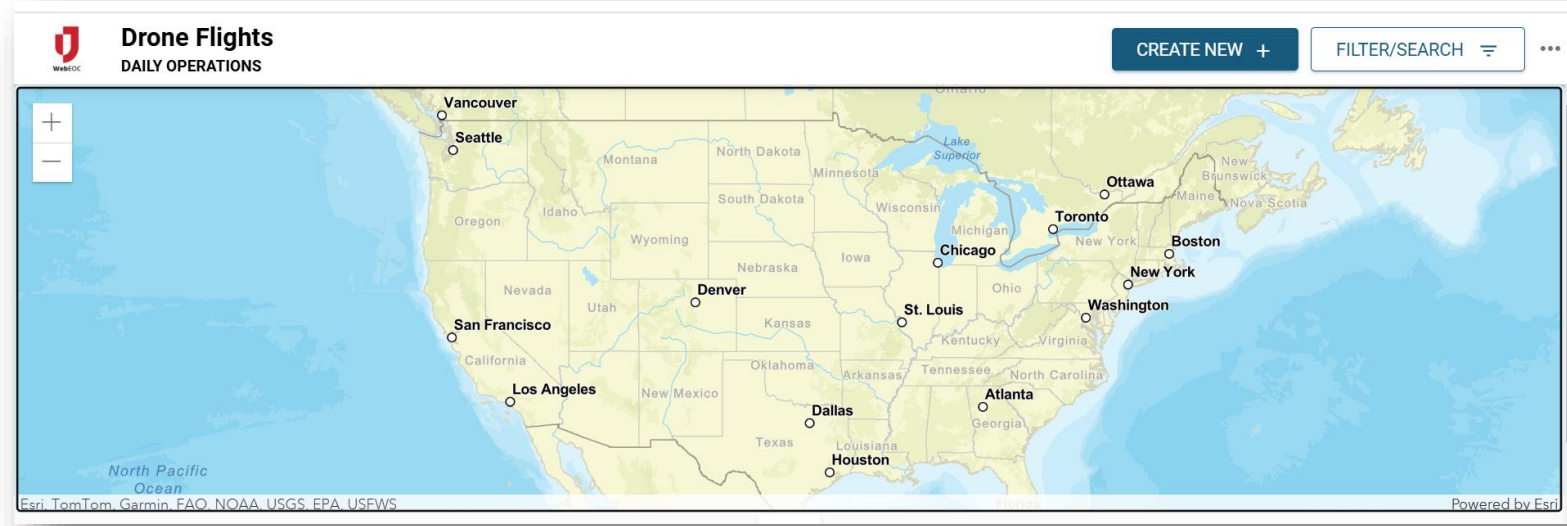


The screenshot shows the 'New Drone Flight' form in the WebEOC interface. The form is titled 'New Drone Flight' and is part of the 'DAILY OPERATIONS' section. It contains several input fields for recording flight details:

Details		
Duration <span style="color: red;">Red</span>	Altitude	Speed
<input type="text"/>	<input type="text"/>	<input type="text"/>
Current Position	Hardware Profile	Drone ID
<input type="text"/>	<input type="text"/>	<input type="text"/>
Payload	Risk	Detection
<input type="text"/>	<input type="text"/>	<input type="text"/>
Type	Frequency	Average Altitude
<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	Max Speed	Date/Time Logged
<input type="text"/>	<input type="text"/>	<input type="text"/>
Flight Path		
<input type="text"/>		

At the bottom of the form, there is a navigation bar with 'Page 1 of 1', a 'Disable Refresh?' checkbox, and a copyright notice: '©2024 ESI Acquisition, Inc. WebEOC'.

- Key data will fill the “AirSight Drone Flights” board in near real-time, for a unified view of drone activity.
- Alerts can be created from within WebEOC.
- WebEOC customers have access to the AirGuard portal for a deeper dive into the data.



**Drone Flights**  
DAILY OPERATIONS

CREATE NEW + FILTER/SEARCH ☰

Date/Time Logged	Duration	Altitude	Speed	Model	Hardware Profile	Drone ID	Payload	Risk	
10/16/2024 03:10:00	51 min, 15 sec	286.76 ft	98.55 mph	Mavic Air 2		3YT7KAH003R04F	None	High	...
10/15/2024 21:55:00	24 min, 13 sec	235.14 ft	34.55 mph	Inspire 1		F6XFA27A5MK7EGY9	3 lbs	Moderate	...
10/14/2024 20:20:00	9 min, 15 sec	57.00 ft	38.32 mph	Avata 2		F4XFA22A5ML7EGC0	6 lbs	Moderate	...
10/14/2024 14:40:00	35 min, 03 sec	121.40 ft	49.67 mph	Mavic Air 2S		11VKGCL002015D	None	Low	...
10/14/2024 05:50:00	8 min, 55 sec	54.22 ft	78.00 mph	Alturia Sentry		1581FZFdpid012402000	21 lbs	High	...
10/17/2024 17:00:00	21 min, 02 sec	90.30 ft	65.15 mph	Mini 4 Pro		F6Z9A242MML3EE0P	None	Low	...
10/16/2024 12:40:00	14 min, 04 sec	68.43 ft	36.56 mph	QComm Gold		1581F3923sPcmQ1050	17 lbs	Low	...
10/15/2024 21:50:00	5 min, 36 sec	43.33 ft	61.04 mph	DJI Mini 3		1581F395ikjslc1752000	9 lbs	Moderate	...



# AirSight/WebEOC Integration

☰ JU **WebEOC**
?
🏠
1
⚙️
JU
Test
Daily Operations ▾

🏠 AIRSIGHT DRONE FLIGHTS
🔍

JU

## Drone Flight Details

DAILY OPERATIONS

⋮

<b>Duration</b> 51 min, 15 sec	<b>Altitude</b> 286.76 ft	<b>Speed</b> 98.55 mph
<b>Current Position</b> 1454 West Belle Plaine Avenue, Chicago, IL	<b>Hardware Profile</b> Mavic Air 2	<b>Drone ID</b> 3YT7KAH003R04F
<b>Payload</b> None	<b>Risk</b> High	<b>Detection</b> DJI
<b>Type</b> Private	<b>Frequency</b> 2.4 GHz, 5.8 GHz	<b>Average Altitude</b> 151.00 ft
<b>Average Speed</b> 78.00 mph	<b>Max Speed</b> 101.58 mph	<b>Date/Time Logged</b> 10/16/2024 03:10:00

**Flight Path**

⏪
⏩
Page 1 of 1
⏮
⏭
 Disable Refresh?

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## Facility Requirements:

- **110v/220v Power Outlet Connection At Mount Location**
- **Internet Connection.... 5G or Ethernet Connection**
- **Rooftop/High Elevation Access**
- **Roughly 4 Hour Install Window**
- **That's it!**



## International Locations:

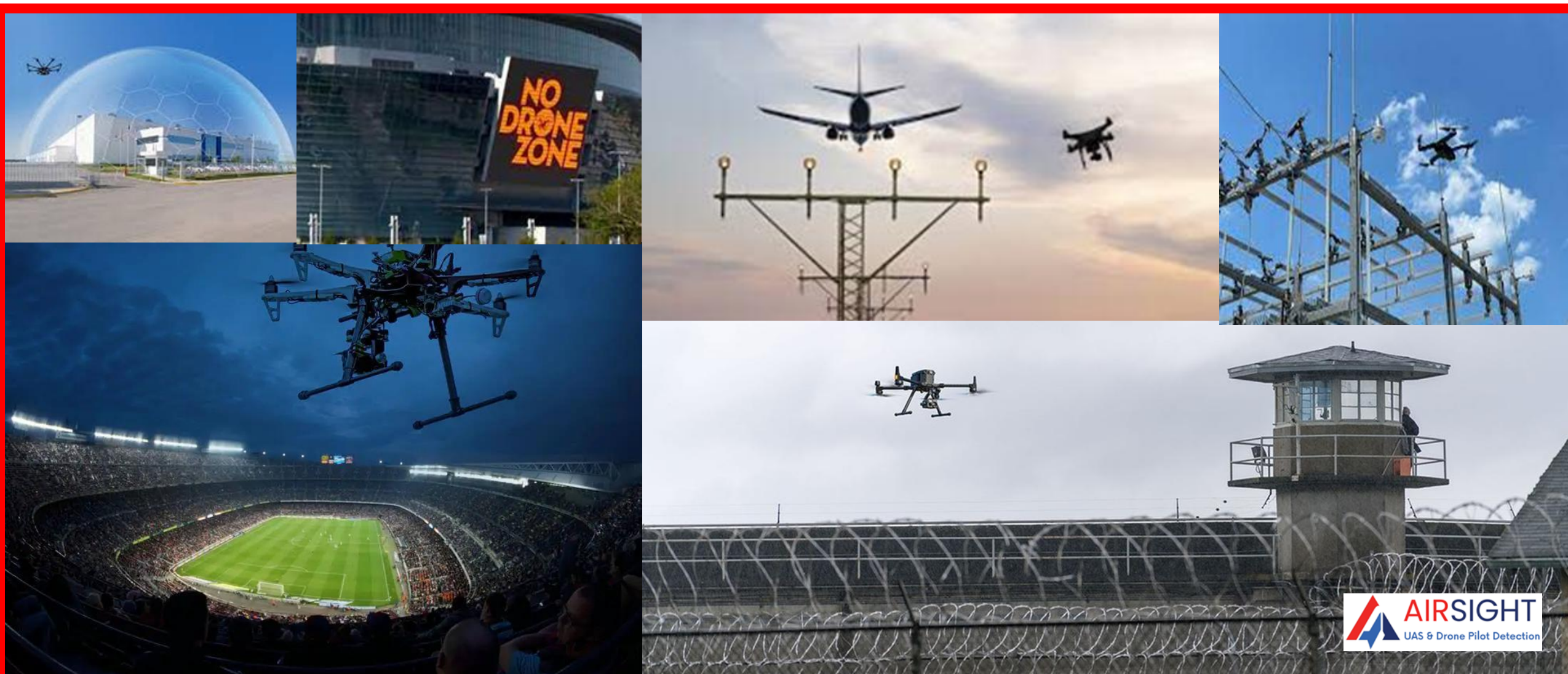
- AirSight's Platform Includes Drone Jamming/Mitigation for International Locations Only.



# More Information?



# Questions?





# Thank you!

