

# Leading Edge

Aerial Technologies



**Designed, Engineered, and Built in the USA**

By Leading Edge Aerial Technologies

## PrecisionVision® 35X Unmanned Aircraft Systems (UAS)



**PrecisionVision® 35X** technologies assist with several aspects of mosquito control programs – including surveillance, treating challenging mosquito habitat, and reducing time in the field.



**Extremely efficient solution to inaccessible locations**



**A safer option when compared to several other applications methods**



**RTK centimeter precision applications**



**Reduce inclement weather delays associated with larger aircraft**



**Cost effective option for small acreage**



**Seamless integration for imagery and aerial application flight planning**

## A STRONG HISTORY OF AERIAL APPLICATION + DROPLET ANALYSIS TECHNOLOGIES

**LEAT is a team of dedicated UAS designers, engineers, manufactures, applicators, and consultants.**

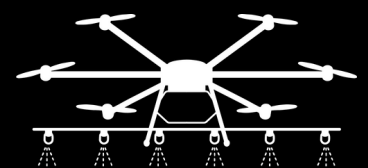
With over 35 years of experience inventing GPS guidance systems, droplet analysis, and aerial application solutions - Leading Edge Aerial Technologies (LEAT) has never stopped embracing new technology. The company understands every aspect of an aerial application, from the regulatory issues at the federal and state levels to the point that a droplet deposits on a weed, on a crop, in the water, or on an insect. CEO Bill Reynolds has worked with the FAA on aerial applications via UAS since the beginning. LEAT was the first company to receive certification and perform UAS spray applications for agricultural products in vector control, noxious weed control, forestry, and agriculture.

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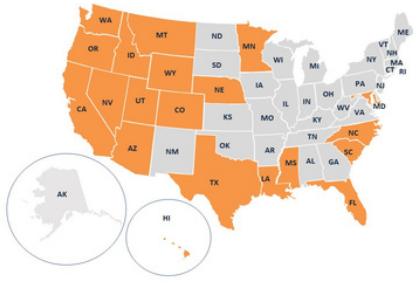
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**ARE YOU READY TO TAKE FLIGHT?**

**Bill Reynolds, CEO and Chief Pilot**  
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# PrecisionVision® UAS 35X Technologies



The PV35X is built on the most advanced U.S. based, proven flight controller providing the user confidence and compliance operating an unmanned aircraft from a U.S. manufacturer.

Leading Edge helped mosquito control districts across the country navigate FAA requirements as well as UAS aerial application technologies with unparalleled support (references available anytime).



## PrecisionVision® Ground Control Station (GCS)

The PV35X was engineered in parallel with PrecisionVision® Software. The PV35X Avionics Suite is capable of fully autonomous surveillance operations and applications, with features to fit any type of UAS aerial application - mosquito, noxious weed, pest, algae, forestry, seeding, and more.

- Complete autonomous flight planning and execution
- User definable values for swath width, speed, height, entry and exit waypoint swap, flight line heading 0 - 360 degrees
- Full manual control and spraying mode
- Flight data recording of applications captured and stored as shapefiles
- Ability to export shapefiles to any GIS system
- Battery warning and battery critical feature
- Single click emergency return to home feature
- and much more...



## Three Types of Flight Patterns

Polygon swath back and forth pattern | Spot treatments | Designated path

## Camera Systems

- 1080p HD video camera - First person view
- 1080p HD video camera - Downward facing



## Dual LiDAR Technologies + Real-Time Kinetic (RTK) Flight Precision

- Sensors capable of measuring the distance to an object from .1m - 12m
- Obstruction avoidance immediately enters UAS into hover flight mode
- Terrain following LiDAR adds a critical layer of precision and safety
- PV35X provides the user an RTK option, resulting in single centimeter precision horizontally and vertically.

## Three Application Systems

Granular | ULV Adulticiding | Liquid



## Ask our team about our Droplet Analysis Software

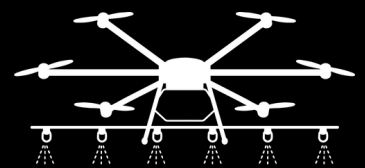
DropVision AG software analyzes cards, placed at an intended application site, to determine the spray rate deposited, providing volume, droplet spectrum, density, and percent coverage.



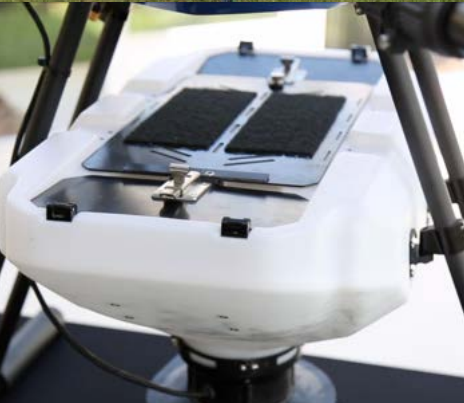
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# PrecisionVision® UAS 35X Technologies



## The PV35X has the most advanced and payload diverse UAS manufactured in the United States.

The discipline of understanding aerial application is key to success when operating a UAS. Knowing how to set up payloads, such as liquid and granular applications, to apply products with precision - that is a whole other business. Leading Edge has a rich history of aerial application experience in the vector control industry with numerous technologies such as Spray Drift Optimization and DropVision AG for swath characterization. The PV35X was designed and engineered with this knowledge.

## Interchangeable Application Systems + Autonomous Flight = Game Changer

Application systems, standard with the PV35X Ground Control Station, allow users to control application rates using a built-in variable rate controller. Additionally, spray on/off, ground speed, altitude, heading, and application rate can be controlled autonomously.

The PrecisionVision® line supports surveillance efforts as well as three interchangeable application systems.

Adaptable Application Systems	Granular Payload	ULV Adulthooding Payload	Liquid Payload
<b>Payload Capacity</b>	25 lbs/ 22 liters	25 lbs/ 16 liters	25 lbs/ 16 liters
<b>Swath</b>	12' - 90'	300' - 500'	16' - 22'
<b>Average Acres/Min</b>	0.1 - 3 acres/min	14.5 acres/min	0.05 - 0.8 acres/min
<b>Flow Rate</b>	2 - 20 lbs/min	3.4 - 10 oz/min	10 - 233 oz/min
<b>Droplet Spectrum</b>	n/a	DV 0.5 38-45 DV 0.9 < 70 microns	80 - 2000 microns

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