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Drones

Drone and Sensor Options and Costs

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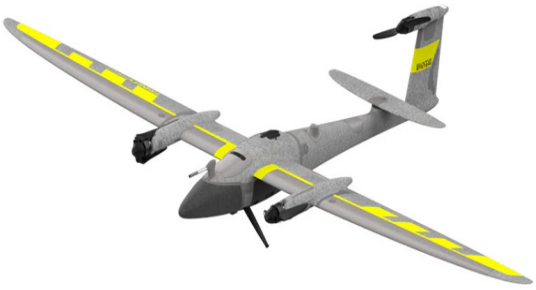
There are many different types of drones, or unmanned aerial vehicles (UAV), and sensors available for use in agriculture. This fact sheet will provide information about these technologies and their relative costs.

There are two main types of drones available; fixed wing and multi-rotor. In general, fixed wing drones are more expensive but can usually fly faster and have a longer battery life so they can cover more area in less time than a multi-rotor. A multi-rotor can hover in place and usually requires less area for landing. These drones can be flown autonomously or manually which also allows for video.

Sensors can be used to detect a number of different wavelengths, such as thermal (infrared), and can focus on specific wavelengths, such as blue or red. In general, the more sensors available within a device, the greater the cost. Many drones can have sensors added.

The following tables describe different types of fixed wing and multi-rotor drones and sensors that can be used in the field. The costs shown reflect prices as of October 2025 and are subject to change. Costs may also vary depending upon the vendor. Omission of similar products is not intentional and inclusion of those products shown here is not an endorsement.

Fixed Wing Drones	Product Information and Cost
	**Name:** Quantum Systems Trinity Pro **Cost:** $23,790 **Product details:** Up to 90 minutes flight time. Can handle wind speeds up 40 mph. Optimal cruise speed of 38 mph. Supports interchangeable payloads including RGB Oblique, Multispectral and LiDAR.
	**Name:** AgEagle Ebee X **Cost:** $15,029 **Product details:** Up to 90 minute flight time. Can handle wind speeds up to 29 mph. Covers up to 1235 acres per flight at 400 ft altitude. Compatible with MicaSense and eBee sensors.

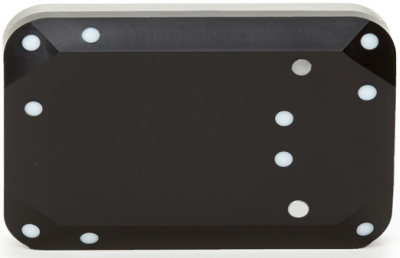
Fixed Wing Drones	Product Information and Cost
	**Name:** Sentera PHX **Cost:** $4,400 **Product details:** Up to 59 minute flight time. Can handle wind speeds up to 28 mph. Cruise speed of 35 mph. Covers up to 360 acres per flight at 400 ft altitude. Compatible with Sentera sensors.

Multi-rotor Drones	Product Information and Cost
	**Name:** Autel Alpha L35T **Cost:** $19,289 **Product details:** Up to 40 minutes flight time. Can handle wind speeds up to 27 mph. Maximum flight speed of 56 mph. Includes 35x optical zoom (8 MP), and wide angle camera (48 MP), dual thermal sensors, and laser rangefinder. Battery recharge in 45 minutes.
	**Name:** ACSL SOTEN **Cost:** Agriculture bundle ($19,250), Survey bundle ($16,940), Thermal bundle ($21,450) **Product details:** Up to 29 minutes flight time. Can handle wind speeds up to 27 mph. Maximum flight speed of 34 mph. Agriculture bundle includes multispectral camera. Survey bundle includes standard camera (20 MP). Thermal bundle includes thermal and standard camera (20 MP).
	**Name:** Parrot ANAFI USA **Cost:** $14,000 **Product details:** Up to 32 minutes flight time. Can handle wind speeds up to 33 mph. Maximum flight speed of 33 mph. Includes wide angle and 32x zoom telephoto cameras (21 MP) and thermal sensor. Battery recharge in 2 hours.

Multi-rotor Drones	Product Information and Cost
	**Name:** DJI Matrice 350 RTK **Cost:** $11,129 **Product details:** Up to 55 minutes flight time. Can handle wind speeds up to 27 mph. Maximum flight speed of 52 mph. Includes night vision first person view camera. Compatible with multiple sensor options. Battery recharge time is 60 minutes for two batteries. Can carry three payloads simultaneously.
	**Name:** Autel Robotics EVO Max 4T XE **Cost:** $8,999 **Product details:** Up to 42 minutes flight time. Can handle wind speeds up to 27 mph. Maximum flight speed of 52 mph. Includes 8K 10x optical zoom camera (48 MP), wide angle camera (50 MP), thermal sensor, and laser rangefinder.
	**Name:** DJI Matrice 4 Series **Cost:** 4E $5,189 4T $7,849 **Product details:** Up to 49 minutes flight time. Can handle wind speeds up to 27 mph. Maximum flight speed of 47 mph. Includes wide, medium and telephoto camera. The 4T model includes a thermal sensor. Battery recharge in two hours.
	**Name:** DJI Mavic 3 Multispectral **Cost:** $5,729 **Product details:** Up to 43 minutes flight time. Can handle wind speeds up to 27 mph. Maximum flight speed of 34 mph. Includes standard camera (20 MP) and multispectral camera. Battery recharge in 1.5 hours.

Multi-rotor Drones	Product Information and Cost
	**Name:** Autel Robotics EVO Lite 640T Enterprise **Cost:** $4,239 **Product details:** Up to 40 minutes flight time. Can handle wind speeds up to 22 mph. Maximum flight speed of 40 mph. Includes 4K, 48 MP camera and thermal camera. Battery recharge time is 90 minutes.
	**Name:** DJI Mavic 4 Pro **Cost:** $3,550 **Product details:** Up to 51 minutes flight time. Can handle wind speeds up to 27 mph. Maximum flight speed of 60 mph. Includes wide (100 MP), medium (48 MP), and telephoto (50 MP) lenses with up to 24x optical zoom and 4K video.
	**Name:** DJI Mini 4 Pro **Cost:** $759 **Product details:** Up to 45 minutes flight time. Can handle wind speeds up to 24 mph. Maximum flight speed of 36 mph. Includes standard camera (4K, 48 MP). Foldable. Battery recharge in 58 to 101 minutes (depending on battery and charger).

Sensors	Product Information and Cost
	**Name:** Sentera 6x Thermal Pro **Cost:** $20,375 **Product details:** Equipped with four 3.2 MP multispectral sensors (measuring green, red, red edge, and near infrared), a 20 MP RGB imager, and a FLIR Boson 640 thermal imager. A high capture rate, ultra-lightweight, and gimbaled design. Includes reflectance panel for radiometric calibration.
	**Name:** DJI Zenmuse L2 **Cost:** $15,490 **Product details:** High precision aerial LiDAR system. Uses lasers to develop high-quality 3D images. Accuracy of 2 cm at the distance of 150 m. Includes 20 MP camera for colorization. Compatible with drones like DJI Matrice 400, Matrice 350 RTK Matrice 300 RTK
	**Name:** DJI Zenmuse H30T **Cost:** $11,150 **Product details:** Includes a wide-angle, zoom, and infrared thermal camera, a laser range finder, and an NIR auxiliary light. Works effectively both in day and night.
	**Name:** Deepthink S3 Tri-Sensor **Cost:** $6,999 **Product details:** Hybrid payload incorporating thermal imaging, a laser rangefinder, and a zoom camera. Thermal Imaging Camera has AI night vision designed for ultra-low light scenarios. Specifically designed for compatibility with the DJI M300 and M350 RTK drones.

Sensors	Product Information and Cost
	**Name:** MicaSense RedEdge MX **Cost:** $5,500 **Product details:** This sensor captures 5 wavelengths of light (blue, green, red, red edge, and near infrared) at once.
	**Name:** Parrot Sequoia+ **Cost:** $4,899 **Product details:** Captures four spectral bands (green, red, red edge, and near infrared) along with 14 MP standard images. Integrated sunshine sensor for automatic adjustment of readings to ambient light. Easily mounted to a diverse array of fixed-wing or multi-rotor drones.
	**Name:** Sentera Double 4K **Cost:** $2,300 **Product details:** This sensor captures near infrared and red edge spectral bands.
	**Name:** Micasense Downwelling Light Sensor (DLS 2) **Cost:** $999 **Product details:** These sensors can monitor lighting conditions. They should be used in tandem with other sensors so they can be used to make corrections to images so that a cloudy day vs. a sunny day won't make a difference in the collected data. Developed to work with MicaSense cameras (RedEdge 3, RedEdge-M, RedEdge-MX, and Altum).

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