



## AGRICULTURE



### The Right sUAS for your Needs

The SwiftTrainer™ allows you to capture millions of data points from agricultural fields in one short flight. Using Black Swift Technologies' exclusively developed mission planning software, you will be able to scout areas, collect data, analyze the images and plan corrective action within hours. There is no need to reserve and man an aircraft or land-based vehicle, thus reducing equipment, pilot costs and scheduling delays. Users carry the durable SwiftTrainer with them to the selected field and hand launch the drone. Once it gains altitude, the SwiftTrainer automatically takes images using the onboard camera and sensors. The SwiftTrainer can be programmed in minutes to calculate the area under review and then begin collecting the data for immediate analysis and decision making. Using your choice of survey software, you can develop outstanding 2D Orthomosaic, NDVI, IR, and 3D Point Cloud maps.

### Applications

The SwiftTrainer is ideal for precision agriculture applications offering a fully automated system providing outstanding image quality and photogrammetric accuracy. Professional farmers and growers use the SwiftTrainer to produce detailed images to monitor the health of crops and track the location, condition and movement of livestock. Farmers are able to gather more precise data allowing

them to assess plant health, drought conditions or presence of disease and take action whether that be applying water, nitrogen, herbicides or pesticides to the precise area in need. Being able to react more quickly and more precisely allows for earlier detection of problems - resulting in costs savings and being able to assess how their crop management actions are performing.

### Easy to Use

The SwiftTrainer is a turnkey flight system which comes ready to fly and fully assembled. Designed specifically for agriculture use by farmers, the SwiftTrainer is priced as an entry level sUAS but delivers full functionality with high-end stitching and processing. Each photograph is time and GPS tagged ensuring the reliability of the data and can be used for cataloging the entire area for future use so farmers can track changes of fields over time.

Users find the SwiftTrainer's exclusive Mission Planning Software to be intuitive and most can be up and flying their first mission within a few hours of unpacking the SwiftTrainer. The SwiftTrainer is hand launchable and includes automated landing functionality - requiring no additional equipment and a short training session. Most farming staff participate in a Black Swift two hour training session and find they are fully operational and gathering data that same day



## Features

### Reliable Components

The SwiftTrainer's rugged and forgiving high end airframe is perfect for new pilots. The vehicle is durable enough to withstand accidental groundings, while providing unparalleled protection around its electronic components. Even in inclement conditions, farming staff can launch the SwiftTrainer and gather reliable data. The SwiftTrainer lands itself after capturing rich, detailed, geotagged images.

### Ensuring your Success

Black Swift Technologies' team represents over 40 years of collective sUAS systems experience including hundreds of deployments using many different systems. Black Swift Technologies professionals can help you integrate an efficient system combining the right airframe and sensor suite with our flight management system.

The aerospace engineers of Black Swift Technologies works closely with the FAA, and are familiar with the process required to operate sUAS safely within the national airspace. Accuracy of flight following picture locations significantly reduce errors resulting in data between control points.

## Stats

### Operations

Mission length:	1 hour
Area covered:	600 acres
Photo tagging:	In the field with SwiftStation™
SwiftStation mass:	2 lbs.
SwiftStation run time:	4+ hours
Gross Takeoff Weight (GTOW):	6 lbs.
User Interface:	Intuitive gesture based controls

### Processing

The SwiftTrainer integrates with leading processing software packages including:

Pix4D  
Drone2Map (Esri)  
DroneDeploy  
Drone Mapper

### Hardware

Storage medium:	SD card
Camera:	24 MPixel, I, 640 x 480 IR, 1280 x 960 NDVI
Field tripod:	Included
R/C handset (for manual backup):	6-channel transmitter
Aircraft battery:	8000 mAh LiPo
Battery charger:	Performance LiPo charger
SwiftTab Model	9.7" Android® Tablet
Toolkit	Included



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