



## SURVEY & MAPPING



### The Right sUAS for your Needs

The SwiftTrainer™ allows you to capture millions of data points in one short flight. Using Black Swift Technologies' exclusively developed mission planning software, you will be able to collect data over geography that is topically diverse with confidence. There is no need to reserve and man an aircraft or land-based vehicle, thus reducing equipment and pilot costs and scheduling delays. Professional surveyors carry the durable SwiftTrainer with them to the job site and can hand launch the drone for their surveying and mapping jobs. 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 and 3D Point Cloud maps.

### Applications

The SwiftTrainer is ideal for survey and mapping applications offering a fully automated system providing outstanding image quality and photogrammetric accuracy. Professional land surveyors and engineers use the SwiftTrainer to produce detailed modeling and site topography. Data that used to take a week to collect, is collected in a few hours using Black Swift Technologies' sUAS systems. Not only is

there a time savings, but drone pilots and data analysts are confident the data collected is reliable, accurate and detailed. The SwiftTrainer is able to access areas that might be dangerous for human access. Challenging terrain is safely and quickly accessed with a drone eliminating the concern for the surveyor's wellbeing or equipment malfunction.

### Easy to Use

The SwiftTrainer is a turnkey flight system which comes ready to fly and fully assembled. Designed specifically for surveyor use, 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. 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 professional surveyors participate in a Black Swift two hour training session and find they are fully operational and gathering data.



## 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, a surveyor can launch the SwiftTrainer and gather reliable data.

### 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 |

### Hardware

|                                  |                          |
|----------------------------------|--------------------------|
| Storage medium:                  | SD card                  |
| Camera:                          | 24 MPixel                |
| 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                 |

### Processing

The SwiftTrainer can process all leading software survey packages including:

Pix4D  
Drone2Map (Esri)  
DroneDeploy  
Drone Mapper



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