



# **Surveyor-I Mini**

OM UAV Systems

Surveyor-I is a fully autonomous Mini Unmanned Fixed Wing aircraft. It is capable of carrying a 400 Gram payload and is ideally suited for surveying work. The payload is a day still camera. Most high quality cameras are under 400 Grams. The UAV is electrically power with a very low dB level. The aircraft is autonomous right from Takeoff to Landing. For ease of operation the aircraft is capable of hand launch and normal ground landing. Catapult or arrester net is not required. The UAV airframe is made of Elasto-Polymer foam and Carbon Fiber Composites

## Physical Specifications

Wing Span	: 1800MM
Length	: 1200mm
Height	: 150MM
Flying Weight	: 2500 Gms
Payload	: 400 Gms
Propulsion	: 350Watt BLDC Motors @11.1 Volt
Propellers	: 11x5 Fiber Reinforced Nylon
Flying Battery	: Lithium-Ion 11.1 Volt, 13000mAh, Discharge @ 30A

## Flying Characteristics

Range	: 10 Km*
Endurance	: 100 Mins + 20 Mins reserve for failsafe
Accuracy	: Within 10 Meters of programmed waypoint
Cruise Speed	: 48 Km/Hr
Max Speed	: 60 Km/Hr
Stall Speed	: 35 Km/Hr
Max Wind	: 20 Km/Hr
Altitude	: 3000 Meters
*Total Distance Traversed: 48Km	

## Capabilities

- Fully Autonomous from Takeoff to Landing
- Can be programmed for 300 Waypoints/Mission Commands
- Can 'Loiter' over the subject at any waypoint
- Has Manual over ride at any stage
- Can be 'Guided' to specific location during flight by clicking over map
- Can activate/deactivate any payload from the GCS
- Auto payload activation on reaching the waypoint
- Failsafe built in. Will 'RTL' if link is lost. Will 'Land' if battery is low
- GCS switchable navigation lights

## Standard Pacakge

- Surveyor Aircraft 1 Nos
- GCS consisting of windows based palmtop
- Yagi Antenna for Data Link
- Microprocessor based battery Charger
- Radio Control Transmitter
- Mini Tool Kit
- Semi Ruggedized Carry Box

## Radio Control Link

Encoding	: PPM
Modulation	: FHSS
Freq Band	: 400-455 Mhz
Max Rf Output	: 500mW
Channels	: 8
Range	: 5 Km when airborne
Display	: Back-Lit LCD panel on Tx
Battery	: Li-Poly 11.1V, 2650 mAh (10 Hrs continuous operation)



## Datalink

Output Power : 500mW  
 Modulation Type : FHSS  
 Freq Band : 900 Mhz (885-915 Mhz)  
 Range : 10 Km (with Yagi antenna)



## Autopilot

- Based on ARM Cortex M4 32 bit Processor @168 Mhz, running at 252 MIPS, RTOS
- MPU-6000 InvenSense 3-D Six Axis, Dual Gyro+Acc
- uBlox GPS with positioning from GPSS, GLONSS, Galelio, Biedu
- Secondary GPS for backup (optional)
- HMC5883L 3-Axis Dual Magnetometer
- MS5611 High Resolution Barometer
- Onboard Micro SD card for Flight Data Logging



## Survey Camera

The aircraft is fitted with a CANON Powershot camera which takes still pictures at the grid waypoints automatically. The pictures are then geo tagged using the telemetry log and then processed on a stitching software like Pix4D to form a 3D map that can be used for engineering purpose



# Surveyor-I Mini



## Our other products...



Baaz Mini UAV



Guardian Civilian UAV



Guardian- Trainer



Eagle Eye Mini



Kisan Crop Duster



Solo Multicopter



Curiosity Quadcopter UAV



Curiosity Plus Quadcopter UAV



Kasper Autonomous 4WD Rover

## OM UAV Systems

60-UA, Jawahar Nagar, Delhi 110 007, India  
[sales@omuavsystems.com](mailto:sales@omuavsystems.com), [www.omuavsystems.com](http://www.omuavsystems.com),  
 Contact: Ravindra Singh, Mob.: +91 9810442574