



**BAAZ Mini UAV**

OM UAV Systems



Baaz is a fully autonomous Mini Unmanned Fixed Wing aircraft. It is capable of carrying a 200 gram payload or camera without gimbal and is ideally suited for surveying work. The payload is a day still camera or a multispectral camera. Most high quality cameras are under 300 Grams. The UAV is electrically powered 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. The UAV airframe is made of Elasto-Polymer foam and Carbon Fiber Composites.

## OM UAV Major Advantages:

- The airframe and part avionics have been designed and manufactured in India so the components and maintainable cost would be bare minimum.
- The autopilot has been developed in India so upgrade of software would be a simple.
- The propulsion system is all electric so the field operations are simple.
- The GCS software and the autopilot software are windows based making it easier for most would be customers to use the system.
- The operational cost of the craft is bare minimum thus providing cost effective surveillance systems as compared to ground based vehicles.

## Physical Specifications:

Wingspan	: 960mm
Length	: 470mm
Height	: 60mm
Flying Weight	: 690 gms
Payload	: 200 gms
Propulsion	: 100Watt BLDC Motors @11.1 Volt
Propeller	: 9x5 Fiber Reinforced Nylon
Flying Battery	: Lithium-Ion 11.1 Volt, 6400 mAh, Discharge @ 2A.

## Flying Characteristics:

Range	: 7 Km*
Endurance	: 30Mins + 5 Mins reserve for failsafe
Accuracy	: Within 1.0 Meters of programmed waypoint
Cruise Speed	: 48 Km/Hr
Max Speed	: 60 Km/Hr
Stall Speed	: 35 Km/Hr
Max Winds	: 20 Km/Hr
Altitude	: 3000 Meters

## Capabilities:

- Fully Autonomous from Takeoff to Landing.
- Can be programmed for 300 way points.
- Can Loiter over the subject at any way point.
- 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 play-load activation on reaching the way point.
- Failsafe built in. Will "RTL" if link is lost. Will "Land" if battery is low.
- GCS switchable navigation lights.

## Standard Package Contents:

- Bazz Aircraft 1 Nos.
- GCS consisting of windows based palmtop.
- Patch Antenna and Tripod for Communication Link.
- Microprocessor based battery Charger.
- Radio Control Transmitter.
- Mini Tool Kit.
- Semi Ruggedized Carry Box.

**CUSTOM VIDEO LINK OPTIONS AVAILABLE**





## Autopilot:

- Based on ARM Cortex M4 32 bit Processor @168 Mhz, running at 252 Mips, with Real Time Operating System.
- 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

## Radio Control Link:

Encoding	:	Integrated Mavlink Protocol using Digital Wi-Fi Video
Freq Band	:	2400 Mhz
Channels	:	8
Range	:	7Km, when airborne
Display	:	Back-Lit Display
Battery	:	Li-Poly 11.1, 2650 mAh (12 Hrs continuous operation).



## Video and Data Link

Type	:	Digital Wi-Fi Video Transmission and data on mavlink protocol
RF power	:	270mW
Frequency	:	2400 Mhz, secured
Power consumption	:	100 mA @ 11.1 V
Video resolution	:	1080x720 pix
Inlaid OSD with critical parameters.		
Data and Video Recording on GCS side.		

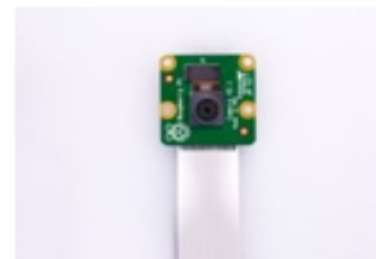


## Camera for Survey:

The aircraft can be 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.

## Camera for Surveillance:

Res	:	5MP
Type	:	Fixed Focus CSI Type
Video Res	:	1080x720
Focal Length	:	3.29
FOV	:	72.4 deg
Size	:	25x23x8mm
Weight	:	3 Grams



### Note:

- Specifications subject to change without notice.
- All values & capabilities mentioned one under ideal test conditions.
- Optional items do effect pricing.





# BAAZ Mini UAV



## Our other products...



Curiosity Quadcopter UAV



Guardian Civilian UAV



Guardian- Trainer



Curiosity Plus Quadcopter UAV



Kisan Crop Duster



Solo Multicopter



Surveyor-I



Pushpak Hexacopter



Kasper Autonomous 4WD Rover

## OM UAV Systems

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