



Curiosity Quadcopter UAV

OM UAV Systems

Curiosity Quad copter UAV is small category UAV designed for both civilian and military use. The craft is portable and can be operated in most terrains with small clearances because of portable GCS. Can be transported by personnel or in a small vehicle. The airframe and part avionics have been designed and manufactured in India so the components and maintenance 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.

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.
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- The propulsion system is all electric so the field operations are simple.
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Physical Specifications:

Size	: 450mm (motor to motor)
Height	: 250 mm
Flying Weight	: 2200 gms
Payload	: 420 gms
Propulsion	: 150 Watt BLDC Motors @11.1 Volt X 4
Flying Battery	: Lithium-Ion 11.1 Volt, 10000mAh,
Propeller	: 11x4.5 carbon fiber X 4

Flying Characteristics:

Range	: 2.5 Km *
Endurance	: 24 Mins
Accuracy	: Within 3 m of the programmed way point
Cruise Speed	: 20 Km/Hr
Max Speed	: 30 Km/Hr
Max Winds	: 20 Km/Hr
Altitude Optimum	: 200 Meters AGL
Altitude (AGL)	: 1000 Meters
Altitude Ceiling	: 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 'RTH' if comm link is lost. Will 'Land' if battery is low.

Autopilot:

- Based on ARM Cortex M4 32 bit processor @ 168 Mhz, running at 252 Mips, with NuttX real time operating system.
- Triple redundant vibration damped IMU.
- GPS with positioning from GPSS, GLONSS, Galelio, Biedu.
- HMC5883L 3-Axis dual magnetometer.
- MS5611 Dual redundant High resolution barometer.
- Onboard Micro SD card for Flight Data Logging
- Inbuilt heating for flying in very low temperatures.

Radio Control Link:

Encoding	: Integrated Mavlink Protocol
Freq	: 2400 Mhz
Channels	: 8
Range	: 2.5 Km. (when airborne)
Display	: Back-Lit Display
Battery	: Li-Poly 11.1V, 2650 mAh (12 Hrs continuous operation).

Video and Communication Link:

Type	: Digital Wi-Fi Video
RF Power	: 270 mW
Frequency	: 2400 Mhz, secured
Power Consumption	: 100 mA @ 11.1 V
Video Resolution	: 1080x720 pix
Camera Mount	: High Accuracy Gyro Stabilization on Roll and Pitch Axis
Data and Video Recording on GCS side. Inlaid OSD with critical parameters.	

Standard Package Contents:

- Curiosity Aircraft 1 Nos.
- GCS consisting of mini windows based laptop and Video Display
- Dual Omni Antenna for Communication Link.
- Microprocessor based battery Charger.
- Radio Control Box.
- Mini Tool Kit.
- ABS Carry Case



Camera Gimbal:

- Gyro Stabilized on Roll and Pitch Axis. Microprocessor based. Correction rate of 2000 deg/sec.



Camera

- Color Day and Low Light HD video CSI fixed focus camera with HD video recording at 1080x720 @30fps resolution. Sensor pixel res of 2592x1944. 75 deg FOV. Recordings are automatically stored on the GCS receiver module on a pen drive. 75 deg FOV lens. The camera is mounted on 2-axis camera gimbal.



CUSTOM VIDEO LINK OPTIONS AVAILABLE



Note:

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



Curiosity Quadcopter UAV



Our other products...



Baaz Mini UAV



Guardian Civilian UAV



Guardian- Trainer



Curiosity Plus Quadcopter UAV



Kisan Crop Duster



Solo Multicopter



Surveyor-I



Pushpak Hexacopter



Kasper Autonomous 4WD Rover

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