AEROSYS
AVIATION INDIA

Backed by **SIIC, IIT Kanpur**

IIT KANPUR

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STARTUP
INCUBATION AND
INNOVATION
CENTRE
IIT KANPUR

Vedansh- Mapping Drone

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Specification

Endurance	40 min +
Wind resistance	> 8 m/s
Flight speed	10 m/s
Encryption	AES 128 bit encryption
Range	1 km+ (VLOS as per DGCA)

Failsafe features

- Low battery
- GeoFence Breach
- Communication loss
- Terrain Following
- RTL/RTH

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CMOS Sony Sensor
24MP Camera
64GB Storage

RTK/PPK	L1&L2, G1 & G2
GNSS	GPS, GLONASS, Galileo
Log rate Accuracy	1 ppm CEP
Logging	SD Card upto 16gb

Altitude	120 AGL
GSD	3CM
Side Overlap	60%
Area (typical)	>1 sq km
Photogrammetry Accuracy Z	<15 cm
Photogrammetry Accuracy X/Y	<10 cm

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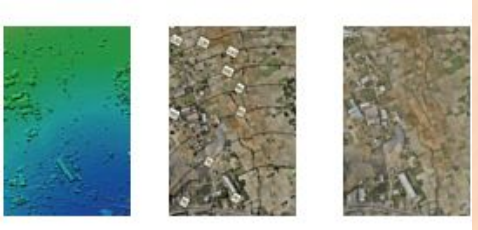
Precision Data by VEDANSH

Assemble Landscape
Data by UAV

Geographical Identification
By geo Tagging

Process Data
For Protected Output

Unify
Collected Data



Export Data
In Desired Format

Custom Payload integration

EO-IR Dual vision Payload

Visible Camera Resolution: 1920 X 1080 P
Thermal resolution: 640 X 480P Visible
Camera Zoom: 40X Control Range (PTZ): -45°
C to +135°C(Tilt), -180°C to +180°C (Pan)

RGB Day Payload

Visible Camera Resolution : 1080p @
60fps Visible Camera Zoom : 10X (Optical)
Control range (PTZ): -90°to +90° (Tilt),
-150°to +150°(Pan), -45°to +45°(Roll)

Mapping Payload

Camera effective megapixel:24.3MP
Sensor type: CMOS Uncompressed
format: RAW, RAW+JPEG Hot shoe for
PPK: Yes Camera weight: 105 g

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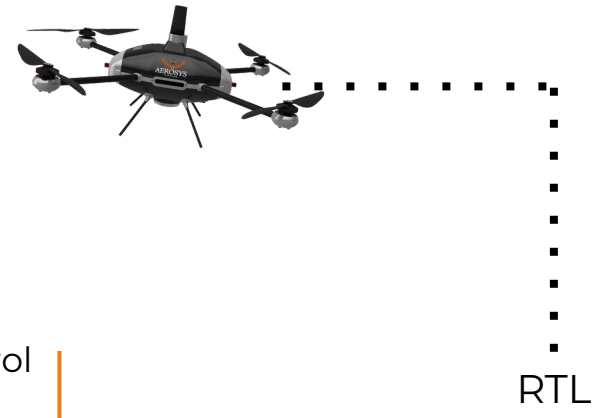
Waypoint navigation

It allows the pilot to pre-program a flight path for Vedansh to follow with specific coordinates or points of interest.

Return to home

It allows Vedansh to automatically fly back to its take- off location or designated home point helping in signal loss, low battery and pilot control loss scenarios.



Push, Plug & Perform

This allows the user to quickly deploy the Vedansh to its mission to get maximum awareness.

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Mapping Payload

This mapping payload includes a camera, a gimbal, and a GNSS receiver. The camera is responsible for capturing high-resolution images of the ground. The gimbal stabilizes the camera against platform vibrations, ensuring smooth and clear images. The GNSS receiver provides accurate positioning data for each image, which is used to create accurate and up-to-date maps and surveys.

Applications

It is used by a variety of professionals, including surveyors, engineers, and construction managers. They are also used by government agencies and research organizations.

Topographic Mapping by conducting high- resolution topographic maps for urban planning, land development, and infrastructure projects

Precision Agriculture by optimizing agricultural practices by utilizing UAVs for crop monitoring, soil analysis, and precision farming.

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Thank You!

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