



INDONESIA UAV

The RQ-84Z AreoHawk

The RQ-84Z AreoHawk has been designed expressly for the optimal acquisition of aerial imaging. With the benefit of many years of both military and commercial UAV operation and much investment in Research and Development, we have settled on a system design that satisfies requirements.

Conceived to be a rugged, easy to operate system, our emphasis is placed on the quality of the product, where the UAV is simply the acquisition tool. As such, the AreoHawk system is market driven, and operates under the business imperatives to save clients and operators both time and money.

The aircraft is readily transportable, quick to be assembled and easily and safely hand launched. No heavy, failure-prone or complicated launcher is required. The glider-style shape of the AreoHawk and its overpowered nature allow it to comfortably climb to safe operating altitude post takeoff in even the most adverse conditions.

Designed using unique fluid dynamics the fuselage gives both volume and extremely good aircraft stability. This allows for high precision camera and lens packages and highly efficient imaging runs. The modular nature of the payloads allows for quick sensor interchange and easy upgrade as better technology becomes available. A history with skid landings has firmly taught us that parachute recovery is the best option for commercial UAV operations.

Customers cannot be expected to factor in launch and recovery criteria for you and the real world is full of obstacles and rough surfaces. In addition to landing safely and with minimal impact under parachute, the AreoHawk autopilot will also recover consistently to a preselected point. The system constantly assesses windspeed and direction to compute the optimal release point, thereby drifting down to your desired location.

RQ-84Z AreoHawk Miniature UAV Specifications:

- | | |
|--|--|
|  90min+ Endurance |  24/36MP Camera with Wide Angle Survey lens |
|  5.5kg (12lbs) Maximum All Up Weight |  Hand Launched / Parachute Recovery |
|  2.6m (8'6") Wingspan |  Fully Automated Flight Operations |
|  Cruise Speed 55-60km/h (37mph) |  Independent Flight Monitoring Systems |
|  Electric motor + Lithium Polymer Batteries |  Return on Link Failure |



RQ-84Z2 with Dual Camera Multispectral UAV

The technology is equipped with specially mounting modified twin Sony NEX cameras, the RQ-84Z2 simultaneously captures both RGB and Near IR imagery in high resolution.

Hawkeye UAV Ltd also uniquely processes both RGB and NIR imagery simultaneously with a pixel to pixel matched process for true 4-band multispectral output.

A range of specific NIR spectra can be filtered for, depending on user requirements. Applications include Normalised Difference Vegetation Index (NDVI) filtering for vegetation, crop and other agricultural monitoring.

Key Benefit :

Orthorectified Imagery



Routine operations comfortably capture high resolution coverage of 4-6 square km per flight. Task areas anywhere from 12-30 km² are routinely viable within one operating day.

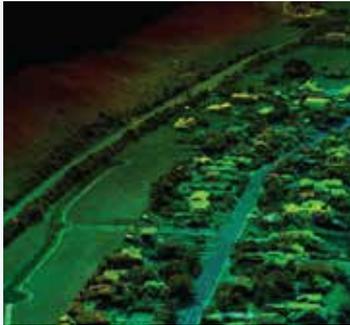
Ortho images are GIS or CAD ready. The AreoHawk UAV processing pipeline delivers consistent ortho images to the

The AreoHawk UAV processing pipeline delivers consistent ortho images to the following standard

- 1 km² tiled GeoTiffs in desired map projection
- Superior colour and tone balancing. Impossible to discern individual images
- Only most NADIR pixels are promoted producing true orthos and eliminating parallax
- High resolution sub-4cm and a standard 50cm summary image provided
- Integration of survey ground control markers for high accuracy (x,y <5cm, z <10cm)
- Multiple delivery options
- New Zealand operations under CAA endorsement including urban and built up areas



Point Cloud Generation



A genuine LIDAR alternative and our premium product. Ideal for survey, volumetric analysis and digital surface model generation.

Our systems acquire a large amount of overlapping imagery ideal for generating high resolution 3D Point clouds.

Taking advantage of the high quality wide angle lenses and stereography at low altitude, ultra high density data is acquired for 3D volume and digital surface model purposes.

This is our premier product and main advantage in using our systems. High resolution orthos are also generated to help with break-line determination and other normal imagery benefits.

Full Motion Video



Full motion video acquisition is routine for this miniature UAV. Our primary sensor setups are configured for survey acquisition, but can be readily adapted to effect a standoff surveillance capability.

FLIR system stabilized using direct drive technology for high quality and smooth acquisition.

Live feed to ground station for instant analysis.

Video data can be GeoReferenced* on the fly to derive mosaic for geospatial analysis.

Multiple sensors including FLIR, low light and conventional HD video options are available.





GIS & Remote Sensing Solution

Remote Sensing

Remote sensors collect data by detecting the energy that is reflected from Earth. These sensors can be on satellites or mounted on aircraft and UAV

Remote sensors can be either passive or active. Passive sensors respond to external stimuli. They record radiation that is reflected from Earth's surface, usually from the sun. Because of this, passive sensors can only be used to collect data during daylight hours.

Nowadays remote sensing technologies has been used in many applications. The integrated of remote sensing imagery data with attribute data has been used not only for businesses but also in the daily life such as car navigation and other applications.

With all the facts, remote sensing imagery data become one of the important information and very useful not only for produce a map, but also with the range of wave length of the sensor, the data can be used for more analysts such as vegetation index, land use classification, oil spill and other analysis.

Geographic Information System (GIS)

A geographic information system (GIS) integrates hardware, software, and data for capturing, managing, analysing, and displaying all forms of geographically referenced information.

GIS allows us to view, understand, question, interpret, and visualise data in many ways that reveal relationships, patterns, and trends in the form of maps, globes, reports, and charts.

A GIS helps you answering questions and solving the problems by looking at your data in a way that is quickly understood and easily shared. GIS technology can be integrated into any enterprise information system framework.

Key Benefits Implement GIS System

GIS benefits organisations of all sizes and in almost every industry. There is a growing awareness of the economic and strategic value of GIS. The key benefits are ; Cost Savings and Increased Efficiency, Better Decision Making, Improved Communication, Better Record Keeping.



What We Can Do For You in GIS Field

Our team accept the challenge to help you in the areas of :

1. Developing Desktop GIS Application to meet your requirement
2. Data dissemination using Web Gis technologies. This is not only publish the data but we will able to help you to change the vector data and attribute data live in into the web site
3. Developing GIS application in mobile phone with android and iPhone

All of our services will consider the needed of the customer and also with fully consideration of the available budget .Our capabilities in developing GIS desktop and web application using open source engine has been proven in the market. We have developed in many purposes from asset management, market analysis, Military and many others.

We are realise that the system will continue be operated and maintained in customers' primisses, and we want to develop and transfer our knowledge to our customers. For this propose we have the training that design specifically to help our customer team to manage the data, operation and do the maintenance. This will ensure your team ready to continue to operate and maintain the system.

Our Customers that had trusted us to developed their application :

Application for asset in oil and gas, Web GIS for Salt Production monitoring, Integrated island of attribute application into singe spatial data view, oil palm three counting and vegetation indexes classification, Forestry web GIS application that can integrated attributes and spatial data with Fleet Management System. Retail business system for best location recommendation for opening new store and others.

- Image Data Capture and Web GIS Mining
- Image Analysis and Web GIS for Oil Palm
- Web GIS for Market Research
- Image Analysis for Forestry
- Asset Managementy
- Infrastructure Mapping
- Harvesting Interpretations using Rapid Eye
- Web GIS for Oil and Gas



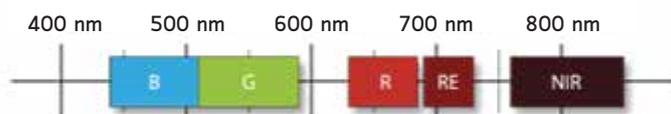
Remote Sensing Product

Black Bridge (RapidEye)

Integrasia Utama is a Sole Partner of Black Bridge in Indonesia, for more detail information please visit <http://www.blackbridge.com/rapideye/buy/distributors.html>.

Our passive satellite offering the largest collection data capacities and the quickest return time to any place on earth, BlackBridge's RapidEye constellation of 5 identical Earth Observation satellites allows us to reliably provide complete coverages of difficult-to-image areas and to fill our archive with large quantities of current data daily.

Our satellites can collect up to 5 million km² of imagery daily, which makes BlackBridge unique in providing large-area coverages in short periods of time.



Red Edge band is the specific spectral band for extracting plants chlorophyll value that is fitted for plantation, agriculture and forestry.

Digital Globe

As an authorised reseller of Digital Globe, we have the largest sub-meter constellation of satellites, **including QuickBird, WorldView-1, WorldView-2, IKONOS** and **GeoEye-1**.

IKONOS satellite can collect panchromatic and multispectral imagery which can be merged to create 0.82-meter colour pan-sharpened imagery. QuickBird is a 60 cm, 4-band colour satellite, and is capable of collecting multispectral and panchromatic imagery. WorldView-1 is a 50 cm TRUE*, panchromatic satellite and is also capable of collecting in-track stereo

GeoEye-1 acquires 50 cm TRUE* panchromatic and 2.0 meter multispectral imagery. WorldView-2 is a 50 cm TRUE*, 8-band colour satellite capable of collecting 2.0 meter multispectral, panchromatic, and in-track stereo imagery. Resolution better than 50 cm at nadir with 5m CE90 accuracy



ENVI Software

Integrasia Utama is a authorised reseller for ENVI. ENVI products provide the geospatial software foundation you need to analyse imagery so you have information necessary to

They are designed to be used on the desktop and in the cloud by everyone from GIS professionals to image scientist, regarding of prior experience with imagery.

All ENVI products integrate with ArcGISR from ESRI, re easily customised to meet your unique needs, and are backed by robust community of users that crosses disciplines.



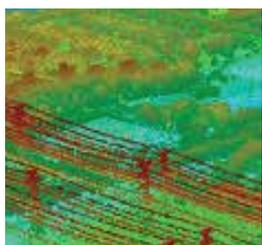
ENVI

ENVI uses proven scientific methods and automated processes to help you easily extract information from geospatial imagery, providing you with the knowledge you need to make more informed decisions.



ENVI Services Engine

ENVI Services Engine is a cloud-based image analysis solution that can be deployed on virtually any existing enterprise infrastructure to give your organization access to geospatial information from desktops, mobile devices, or web applications.



ENVI LiDAR

ENVI LiDAR is an interactive geospatial software environment that allows you to create powerful, realistic 3D visualizations and easily extract important features and products from LiDAR point cloud data.

