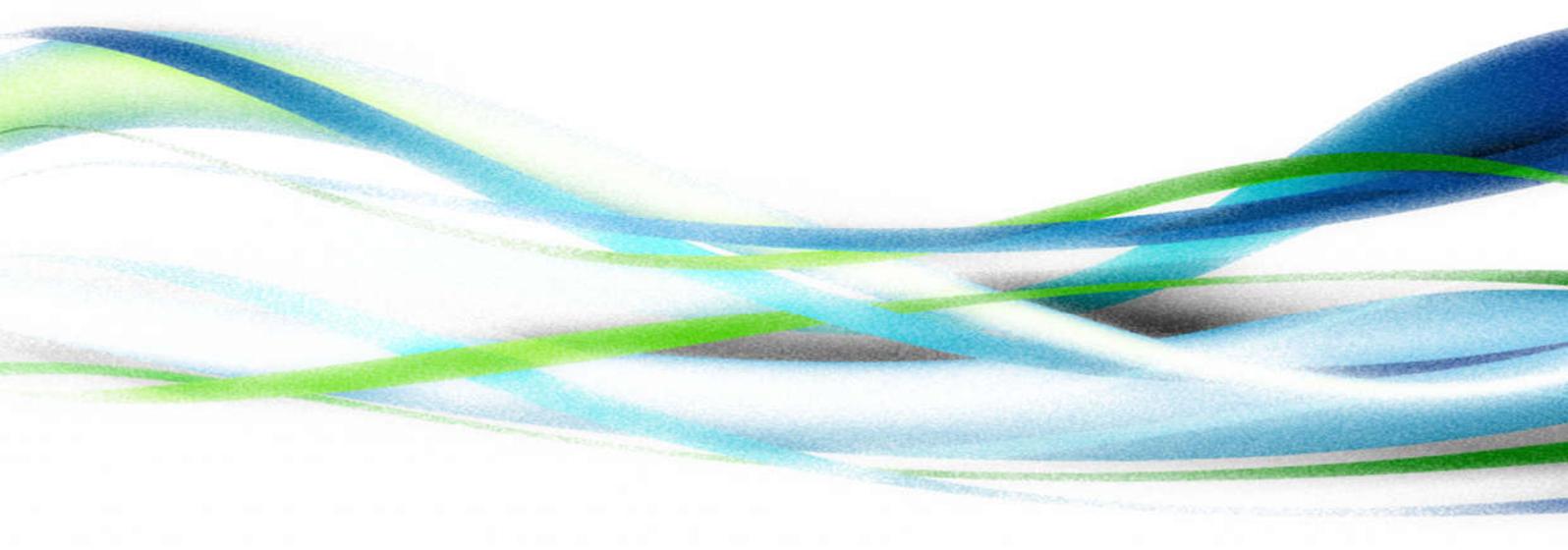
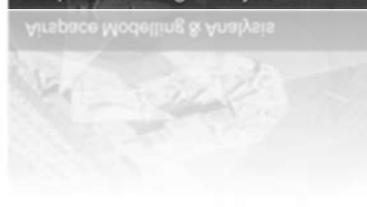
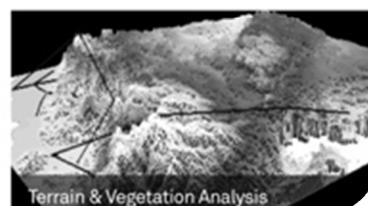
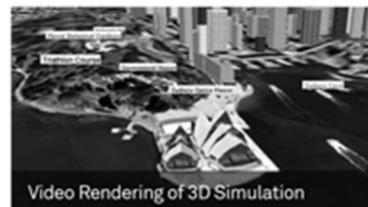
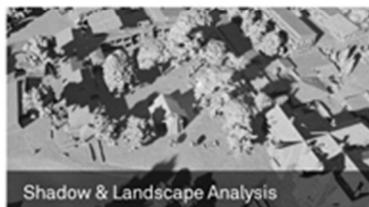
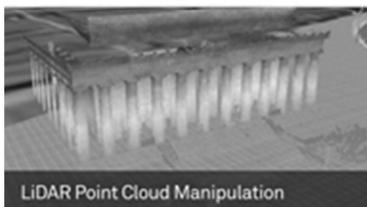
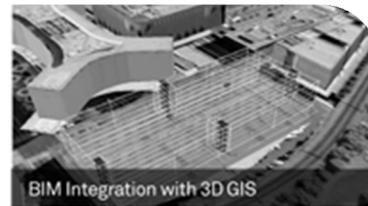
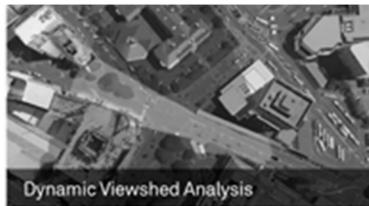




SP-1 MK II



4 reasons to choose the SP-1



01. Mission Comes First, We Provide Total Aerial Mapping Solution not Just a UAV

The SP-1 is custom design from ground up for aerial mapping application. It equips with the best mission planning software in the world. Used the most accurate Ublox Neo-M8N series GPS chipset support GNSS GPS, GLONASS, Galileo, BeiDou, QZSS and SBAS engine.

02. No Flying Skills Required

The SP-1 is one of the easiest and safest UAVs on the market. To launch, just start its motor, it then flies, captures images and lands itself automatically.

03. Because R&D Matters

Started at 2007 from its first prototyping till now; this is a product that comes with 8 years of evolution and testing. Due to its carbon fiber construction it weights 2500g only which minimising its impact energy.

04. Made in Hong Kong with Platinum Warranty

We based on Hong Kong that's why we can provide immediate product supports including replacement, repairing and technical support service in next business day onsite basis.



SP – 1 MKII Product Images

Unmanned Aerial Vehicles (UAV) is a generic aircraft design to operate with no human pilot onboard. It has recently become commercially available at very reasonable cost for civil applications.

Through custom design and careful research, AMBIT is proudly presented this UAV solution to organization which is looking for professional grade digital photogrammetry services.

And it is a 100% made in Hong Kong product.



Sensors and your optional Choices

In order to cater for different engineering, planning and environmental applications, all our UAV are available with variety of sensors. From collecting normal RGB image for oblique photogrammetry 3D modelling to multispectral surface analysis as well as LiDAR point cloud scanning we are ready for it.

Included



This included **Sony DSC-QX30** digital camera. It brings the power and versatility of a 30x optical zoom lens to mobile photographers. Awesome zoom power is matched by lock-on AF and speedy continuous shooting at up to 10fps, letting photographers capture fast-moving action with an accurately focused burst of split-second images And the weighted only 193g.

Optional



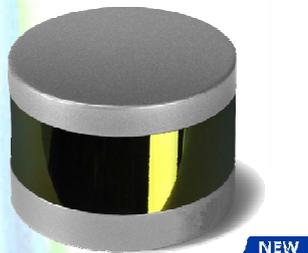
This optionally included digital camera **SONY Alpha QX1+Sony 16mm lens**. Compatible with Sony's growing range of E-mount lens offerings including zoom, portrait, wide-angle, macro and more, the new QX1 camera features a built-in 20.1 megapixel APS-C size Exmor CMOS sensor that grabs huge amounts of detail for landscape shots and beautiful 'bokeh' background defocus.

Optional



This is our rugged yet lightweight, professional-grade multispectral camera optimized to capture precise and repeatable information across five spectral bands. It can acquire RGB, Red Edge as well as NIR images. It is especially designed for user with remote sensing application doing supervised classification in GIS i.e. habitat mapping. It can take image with 8cm GSD in 120m above ground.

Optional



Our LiDAR sensor has a target range of 150-200 meters. The unit's low power consumption (<10W), light weight (about 600 grams), compact footprint (\varnothing 100mm x 65mm), and dual return option make it ideal for UAV application. It supports 16 channels, ~300,000 points/sec, a 360° horizontal field of view and a 30° vertical field of view, with $\pm 15^\circ$ up and down. This is a "must have" module for high resolution DTM and DSM generation work.

Included



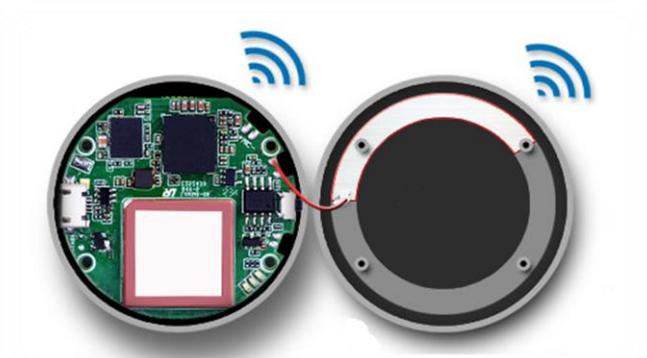
If you are planning to fly our UAV in extreme situations, such as those with high winds, in mountainous areas, out of line of sight, or over very large areas, this accessory is a useful final safeguard against unexpected aircraft loss. It comprises dual locational tracking technologies by GPS and GSM mobile network; users can keep track location of UAV by mobile app or from our website.

The Most Reliable UAV that Won't Lose



The SP-1 package is included with highly sophisticated UAV tracking system. It equips with GPS + GSM electronic module that provide dual locational tracking capabilities.

- Provided is an activated phone SIM card with dual phone numbers for Hong Kong and mainland China application
- Within 5m of locational accuracy
- Data subscription plan of the mobile SIM can be recharged in any Circle-K or 7-11 shops.
- 5 days of battery life (self-powered)
- Use GPS satellite network to locate itself
- Also use A-GPS technology from mobile phone network to delineate its location

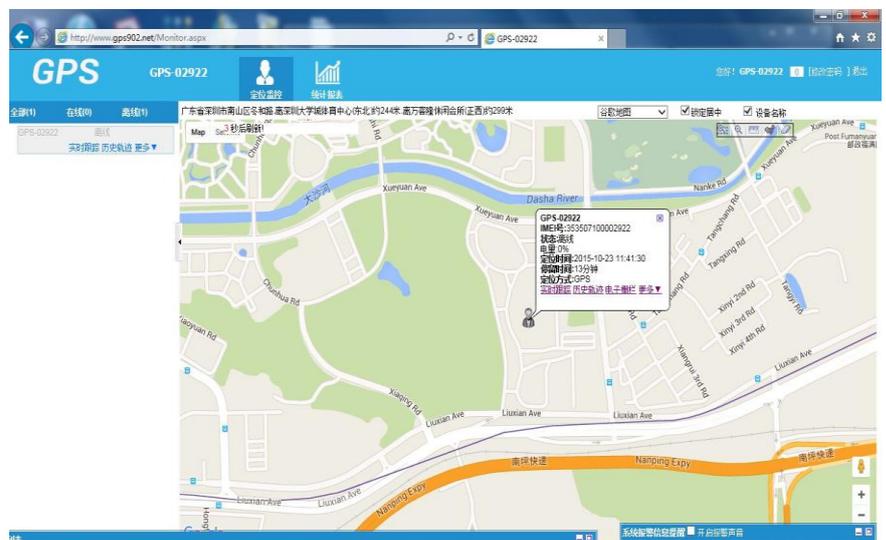


Mobile App for Tracking UAV Location



The free mobile app for Android and iOS is available to user. The recovered UAV onsite location information is transferred in either SMS message or online map URL to any mobile phone which has installed the app.

Online UAV Tracking Webpage



Also user can access our online mapping server to retrieve the live location of the UAV. Data will be refreshed once for every 10 seconds.

Ground Station Computer

The SP-1 package is included with a laptop computer, preloaded all the necessary software in its optimum setting for auto pilot application.

Product Name: Acer Aspire V11 NoteBook.

- **Processor Type:** Intel Celeron quad core processor N2930(up to 2.16GHz)
- **Standard Memory:** 4 GB DDR3 SDRAM
- **Hard Drive Capacity:** 500 GB
- **Battery Capacity:** 6-cell Lithium Ion, 4400 mAh, 8 Hours
- **Screen Spec:** WXGA, 11.6", 1366 x 768
- **Window OS:** Windows 8 Starter



2 Days Training Course

The SP-1 package is included a comprehensive 2 days both onsite and classroom training course. The course will cover all the necessary knowledge about new generation aerial photogrammetry application. Started with basic principle of digital photogrammetry, data requirements for oblique photogrammetry application, to UAV auto pilot application as well as data post processing in software like PhotoMesh, Agisoft or Acute3D, trainee will be able to acquire all these related knowledge of the technology in the course.

Platinum Warranty Service

The SP-1 package is included with platinum grade global warranty service for 12 months period since product delivered. We are committed to our UAV product, that's why we provide the best warranty service.

Terms of Platinum Warranty:

- Guaranteed next business day replacement service; a substitute UAV package will be provided as the contingency plan; such that user can continue their mission; whereas broken UAV will be repaired at no cost*
- Free software upgrade for the auto pilot system
- Discounted rate for hardware upgrade when better kit is available i.e. sensor, camera, battery, ESC or motor etc..
- Mon – Fri office hour personal or onsite technical supports

** Not include camera and laptop computer*



Mission Planning and Auto Pilot Software

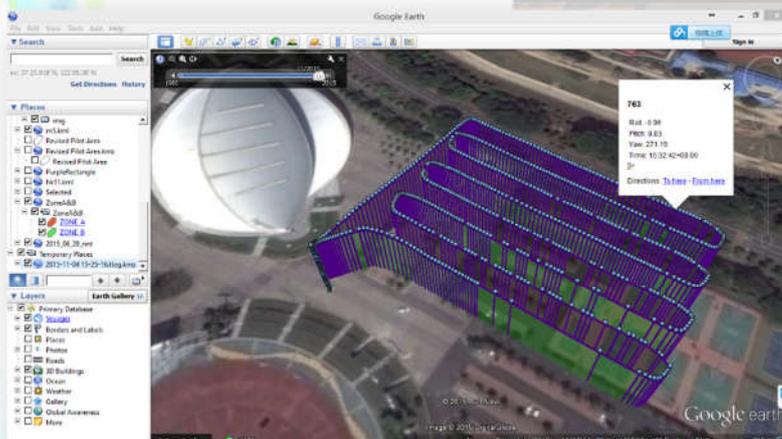
The SP-1 is equipped with our self-developed as well as award winning software for mission planning, flight monitoring and ground station application called FlyGuide™ version 2.0.

This is a professional grade UAV mission planning software. It targets for serious aerial photogrammetry mapping works. It comes with survey grid fly path auto setup function; aerial photo capturing location, GSD size and overlapping percentage can be pre-defined in the system.



Main Functions of the Software:

- Onboard Mission Monitoring:** Through the provided telemetry antenna, real time onboard signal from UAV is being transmitted to the packaged laptop for mission monitoring
- Camera Orientation Log File:** In the most professional digital photogrammetry modelling process, camera orientation parameters is a must to maintain the highest model accuracy. So orientation parameters including kappa, omega and Phi values are provided in our software.
- Geotagging Acquired Photos:** All the acquired photos are inter-linked with the coordinate readings of our surveying grade onboard GPS.



Technical specifications

Hardware

Talk Off Weight	Approx. 2900 g
Propeller Size	Four 15" x 5" propellers
Material	Carbon fiber structure & aluminum composite parts
Propulsion	Four 380KV brushless DC motors
Battery	One 6S, 22.2V 10000 mAh
Camera (supplied)	SONY DSC-QX30
Cameras (optional)	SONY QX1 Multispectral camera or LiDAR sensor
Carry case dimensions	54(L) x 49 (W)x 25 (H) cm

Operation

Maximum flight time	45 minutes
Suitable mapping extent	Up to 0.8 km ²
Nominal cruise speed	1 -7 m/s
Radio link range	Up to 2 km (Line of Sight)
Normal coverage (single flight)	1 km ² (at 200 m altitude AGL)
Wind endurance	Up to 8m/s
Ground Sampling Distance (GSD)	Down to 1 cm per pixel (relative to AGL)
Relative orthomosaic/3D model accuracy	2 times of its GSD*
Absolute horizontal/vertical accuracy (w/GCPs)	2 times of its GSD*
Absolute horizontal/vertical accuracy (no GCPs)	± 1-2 m
Automatic 3D flight planning	Yes
Linear landing accuracy	Approx. 3 m

** Achieved by using Acute3D CONTENTCAPTURE or Skyline PhotoMesh*

Package contents

- SP-1 body (inc. all electronics & built-in autopilot system)
- SONY DSC-QX30 still camera (inc. 32 GB Micro SD card, battery, USB cable & charger)
- GPS and GSM location tracker (inc activated data SIM card)
- 433 MHz USB telemetry antenna for data link (inc. USB cable)
- Two lithium-polymer UAV battery packs & charger
- Four spare propellers
- Carry case with foam protection
- FrSky Taranis X9D Plus 2.4Ghz remote control & receiver (for safety pilots)
- User manual
- Acer Aspire V11 laptop computer as ground control station
- Software included: FlyGuide™ for mission planning & control
- 2 days on-site training
- 1 year platinum warranty service



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