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Long Flight Time | Easy Operation | Compact

QH4

Surveying UAV

HORIZON[®]

MEASURE RIGHT

QH4

Surveying UAV

The Horizon QH4 is a multi-rotor aerial quadcopter drone. The compact and light frame, coupled with the efficient engine and rigorously designed flight control systems allow for easy, high-precision manual controlled flights. Designed to cover areas up to 6 km², the QH4 is also equipped with fully autonomous flight functions, which allow it to be deployed for use for various missions such as aerial survey work, surveillance, environmental monitoring, agriculture use, and a lot of other applications. The QH4 is designed as compact, versatile and user-friendly drone for use across multiple industries, in a wide and varying spectrum of missions. It is integrated with technologies which will allow it to carry out high-precision positioning or survey work, possess an efficient flight time, and above all, work with its operator in a reliable, responsive and safe manner.

The Horizon QH4 is designed to be more than a drone in many ways, and is built on multi-front technological effectiveness, user-friendliness, reliability, portability and safety. It is the essential companion in modern aerial survey work, whichever industry the operator is from, or his level of experience.



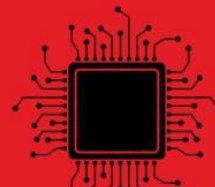
**Aerial surveying
the fast, accurate, safe
and
precise way**



**FLIGHT TIME
60 MIN**



**COMPACT FOOTPRINT
90*40cm**



**FULLY AUTOMATIC
OR MANUAL FLIGHT**



**WIND RESISTANCE
30 km/h**

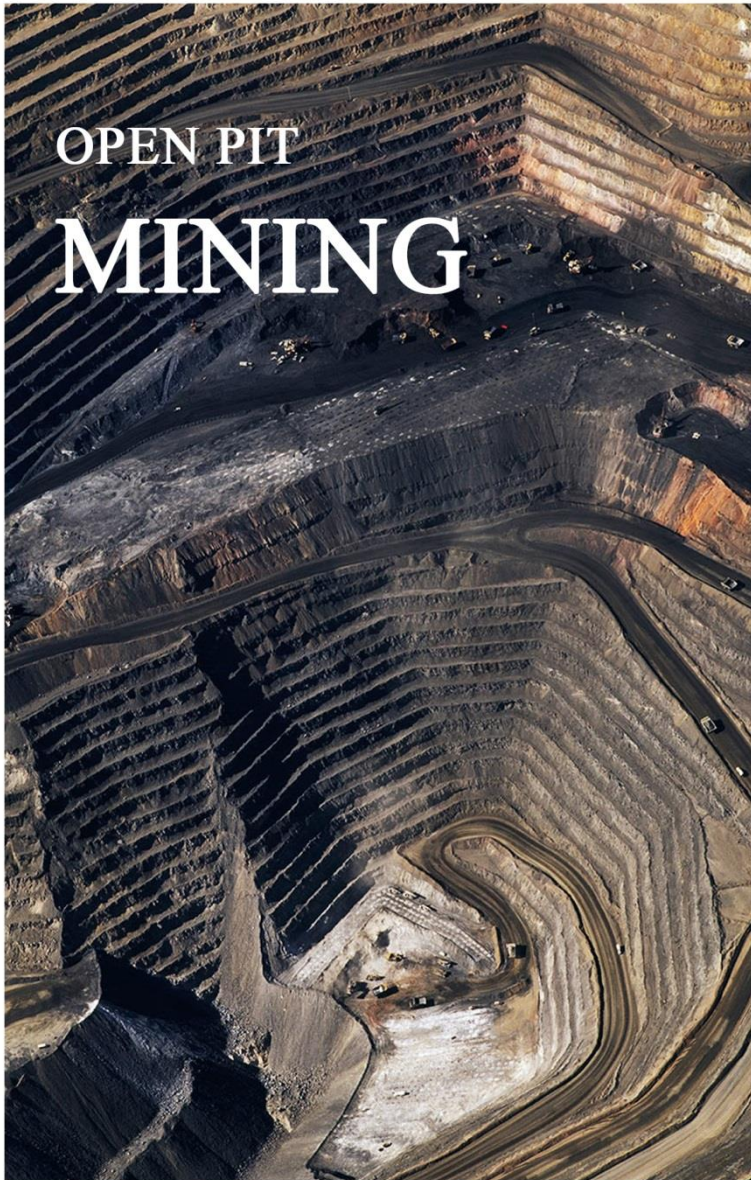


**PRECISE POSITIONING
USING RTK/PPK TECHNOLOGY**



**HIGH PRECISION
IMU**

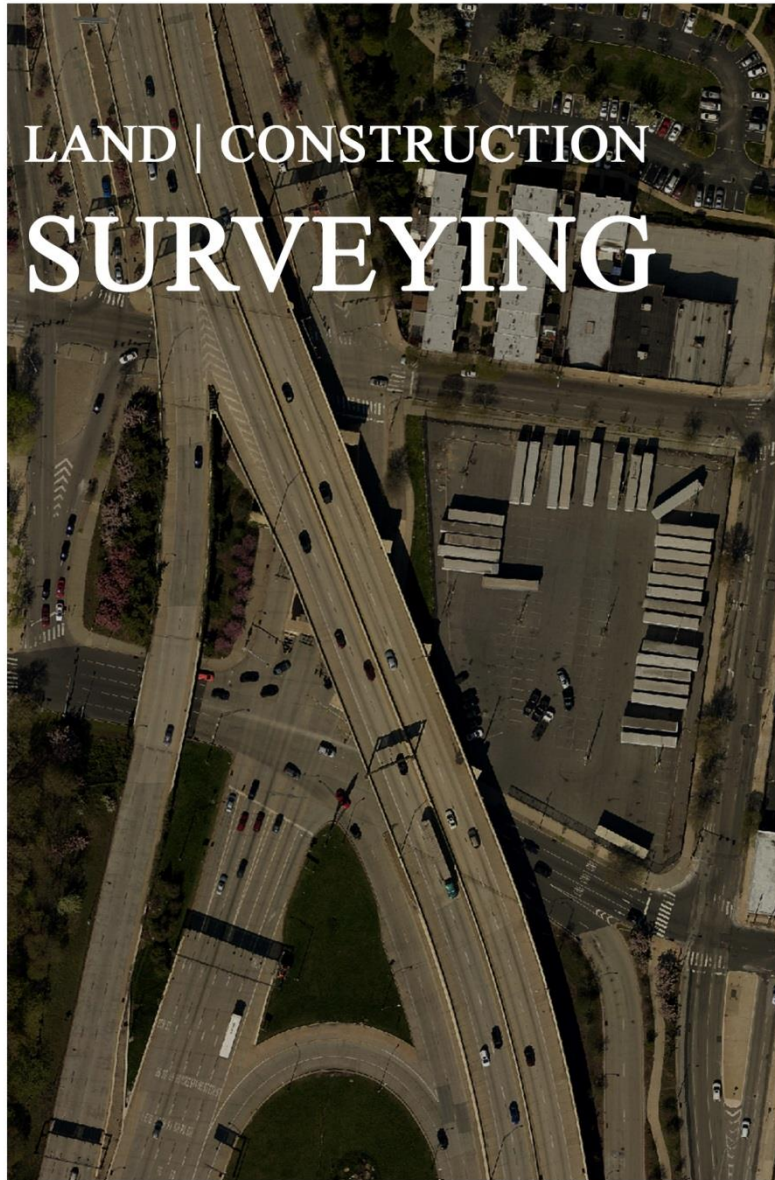
APPLICATION



OPEN PIT MINING

- Cliff and Rock Formations
- Keep Track of Production and Inventory
- Contour Maps
- Improve Site Planning and Management
- Slope Analysis

During open mine monitorings, the QH4 can facilitate computation of large data sets with ease and convenience, resulting in savings of manpower, man-hours, and also increases of productivity, effectiveness and safety.

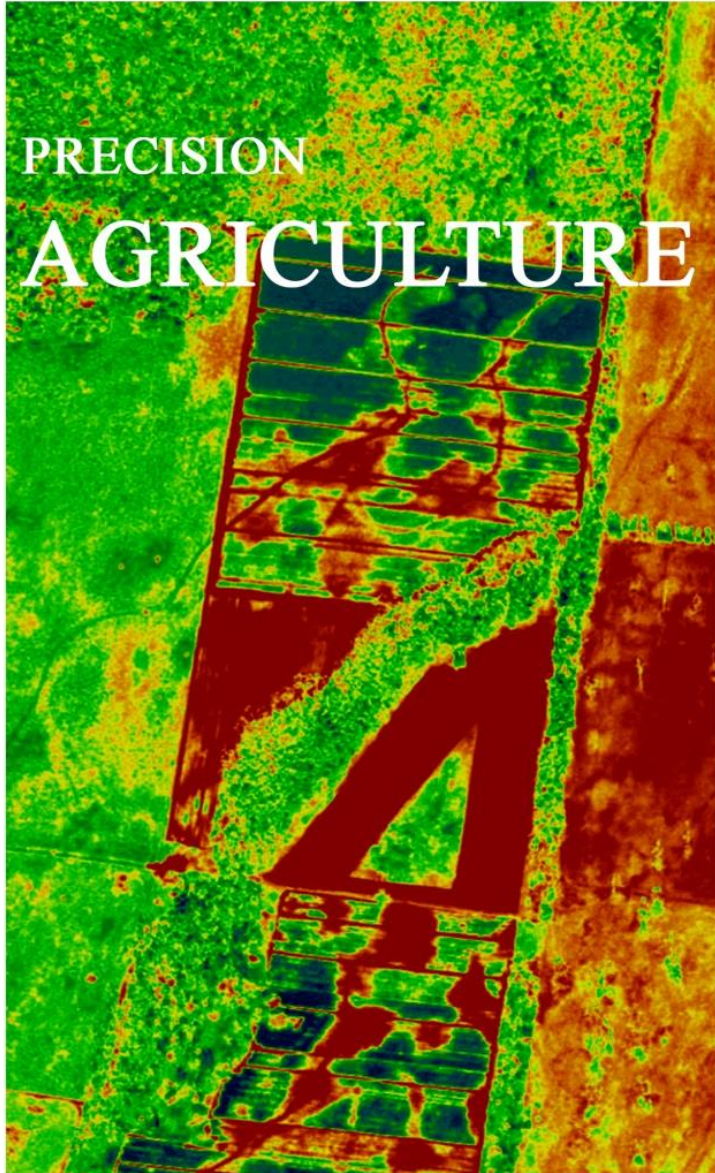


LAND | CONSTRUCTION SURVEYING

- Generate Orthmosaics & 3D Point Clouds
- Build Digital Elevation Models & Contour Maps
- Perform Boundary & Topographic Surveys
- Develop As-built Drawings
- Measure Distances and Volumes
- Monitor Site Development Progress

Using integrated RTK or PPK solutions, surveying can be done without GCP, or with fewer GCPs in larger areas. With the technology invested in the QH4, surveying can be done with high speed, accuracy and precision.

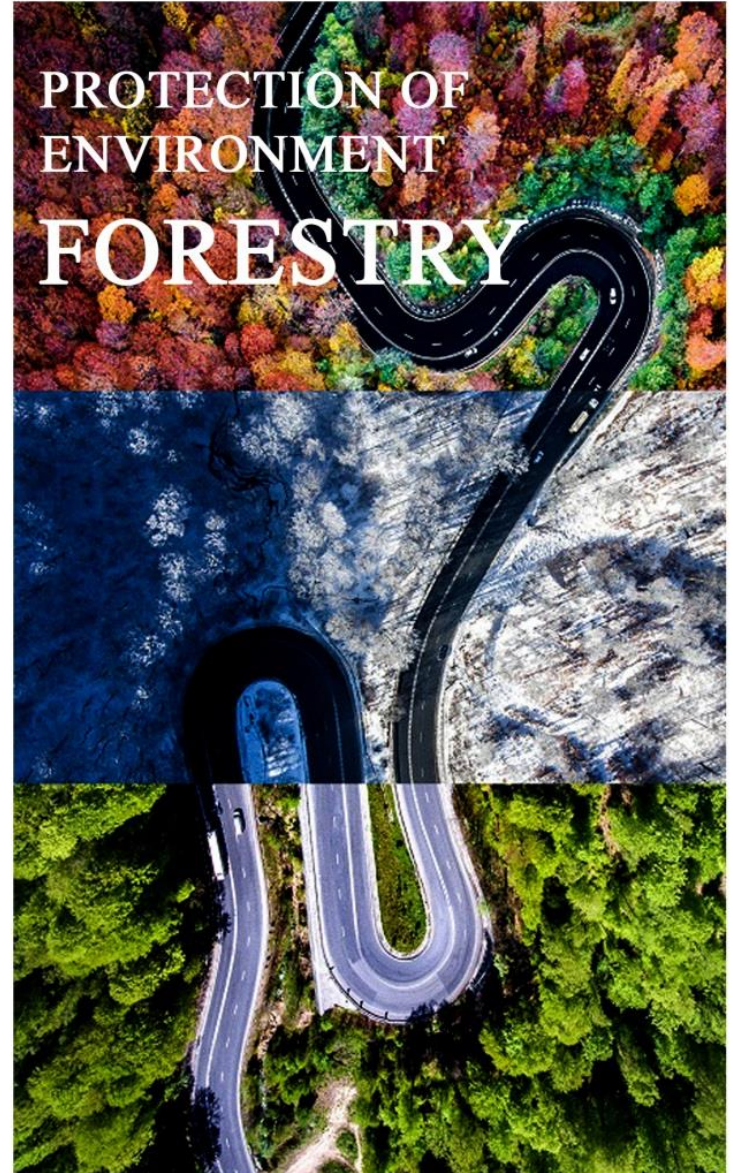
APPLICATION



- Identify Problem Areas in a Field
- Optimize Fertilization and Irrigation
- Minimize Pesticide Usage
- Estimate and Increase Crop Yield

Multispectral cameras can detect light reflectance in the visible and invisible spectrum that can be used to determine the plant stress on an individual level.

Combining Marlyn with a multispectral camera gives you the opportunity to visualize the crop health for a large terrain.



- Detect Pest Infestations
- Quantify Moisture Levels
- Analyze Tree Crown Condition & Wildlife Damage
- Plan Reforestation

With the QH4, you can have full control over the live monitoring of forest areas in a user-friendly way, and survey changes in the environments accurately. Forest conservation and protection work can be supported significantly and facilitated using the QH4 for aerial survey and surveillance.

HOW IT WORK



PLAN

FLIGHT

CAPTURE

PROCESS

Versatile sensor and payload choices

To fulfill the requirements of professionals across various industries, we have designed the QH4 to be versatile and in its set-up and functionality. Depending on the project or industrial requirements, different sensors (cameras) can be equipped to cater to and optimize the survey work.

After rigorous testing of multiple sensors and through our partnerships with Sony and MicaSense, we are able to offer you the best cameras in the industry so that you effortlessly gather geospatial data and make better-informed decisions.



RX1R ii

Take advantage of the ultra-high resolution of the 42.4 MP sensor with 35 mm lens, and achieve GSD and accuracy down to 5cm.

- 42MP Resolution
- 35mm Fixed Lens
- Full Frame Sensor



ALPHA A6300

This new all-round camera with multiple lens options is best for surveying, construction, mining, and citymapping (with fisheye lens).

- 24MP Resolution
- 30mm Fixed Lens
- APS-C Sensor



RED EDGE-M

The best solution for multispectral imagery. Generate plant health indexes and RGB images in a single flight!



Horizon QH4

STRUCTURE

Aircraft Dimensions	900mm*900mm*400mm (center of motor to motor)	
weight	7.400 Kg	
Flight Time	65min (without Gimbal)	50min (with Gimbal)
Operation Temperature	-10°C to +40°C	

PERFORMANCE

Hovering Mode Accuracy with GPS	Horizontal 50cm
Max Speed Of Ascent	Up to 3m/s
Max Speed Of Descent	Up to 2m/s
Max Wind Resistance	30km/h
Max Flight Altitude above Sea Level	300 AGL
Max Speed	Top 60 km/h

BATTERY AND CHARGER

Capacity	22000 mAh
Voltage	18v
Type	Lipo 5
Charge Time	2h
Charger Voltage Output	18v
Model	ISDT

REMOTE CONTROLLER

Operating Frequency	5.725 - 5.825 GHz
	2.400 - 2.483 GHz
Max Transmission Distance	5km
Mobile Device Holder	Support
Operating Temperature	-10°C to +40°C

AUTOPILOT SOFTWARE

Name	Q-Ground mission planner
Auto Start Auto Landing	Supported
Smart RTH	Supported
Failsafe RTH	Supported
Low Battery RTK	Supported
Android or windows	Compatible (RTK ability only on windows)

CAMERA SPECIFICATION

Camera Model	Sony A6300
Lens	Fix Prime lens with 30mm
Other camera(option)	Sony RX1R ii Sony A7000 Sony A6000 canon M3
Effective pixels	24MP (Sony A6000 or 6300)
Focus Range	Infinite
Sensor Size	APSC

POSITIONING

GNSS Antenna	GPS : L1 L2 L5 GLONASS : L1/L2 BDS : B1/B2/B3 Galileo E1/E5b/E5a L-Band
Positioning	RTK