

ATMOS UAV

Meet Marlyn,

The go-anywhere
mapping and land
surveying solution
made by surveyors
for surveyors.

www.atmosuav.com





**Robust
performance.**

**Save time &
reduce costs.**

MEET MARLYN

Vertical Take-off & landing

Take-off from anywhere, all you need is a 2x2 m space! Belly landings, nets and parachutes belong to the past, Marlyn lands gently right on the spot where she took off.

Efficient mapping: cover area

Marlyn allows you to map 2 km² with a GSD of 1.6 cm in 40 minutes.

High wind resistance

Marlyn is the only drone in her class that allows you to take-off, cruise and land in harsh wind conditions up to 45km/h (28mph).

PPK survey grade geotagging

GPS augmentation by post-processed Kinematics for high precision and efficiency.

In-house developed autopilot

Enjoy the hands-off experience of a fully autonomous flight from take-off to landing.

Smart battery system

In-house developed battery system with two batteries for redundancy, one functions as a failsafe for the other. Each smart battery can be accurately monitored for remaining energy, voltage and cell temperature.

Intuitive flight planning software

With MarLynk, planning missions is now straightforward and key surveying parameters can be changed at a glance.

Swappable payloads

Choose from our broad collection of sensor options which enable you to conquer any project, ranging from thermal & multispectral to premium 42MP RGB, which gives you GSD levels as low as 0.85cm/px.

Portability

Protect your Marlyn, and travel safely with your one of a kind VTOL drone. Atmos UAV offers the protection you need, by providing you with Marlyn's dedicated backpack and flight case for your projects abroad.

HOW IT WORKS



1 | PLAN

Choose your map, specify your survey area, image parameters and safety features, and the flight is planned automatically!



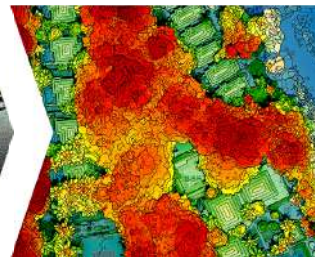
2 | CAPTURE

Take Marlyn out of her protective case, attach the wings, follow the pre-flight checklist, and take off with a push of a button! After the mid-air transition to forward flight, Marlyn gathers the required images before returning for a controlled landing.



3 | PROCESS

Use your preferred post processing software to transform geo-tagged images into point clouds, orthophotos, DEM, and more. Atmos UAV also offers post processing software on request.



4 | ANALYZE

Use the generated (3D) models to provide actionable insights by measuring distances, performing volumetric analyses, taking cross-sections and more.

BUNDLE COMPONENTS

Let's get in touch and choose together the best **Marlyn** configuration tailored to your needs and wants

- **Marlyn** main body, with electronics and autopilot
- Pair of detachable **Marlyn** wings
- **MarLynk** planning & ground control software and **MarLynk** modem
- Your preferred sensor including lens and other accessories such as SD card, USB cable and charger.
- Protective transportation backpack or flight case
- Two sets of flight batteries and dual battery charger including balancer boards
- Remote control & accessories
- Maintenance kit

UPGRADES

- Septentrio Post Processed Kinematics (PPK) module
- Extra sensor module
- Panasonic toughbook
- Septentrio PPK base station
- Photogrammetry software
- Extra batteries
- Flight case
- and more



scan for more
product information

APPLICATIONS

Conquer
Any
Project



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**

Marlyn improves operational efficiency, reduces downtime, and improves safety for surveyors and their equipment.

With PPK you can achieve absolute X, Y, Z accuracies down to 1cm (0.4 in), with fewer to no Ground Control Points needed.



OPEN PIT MINING

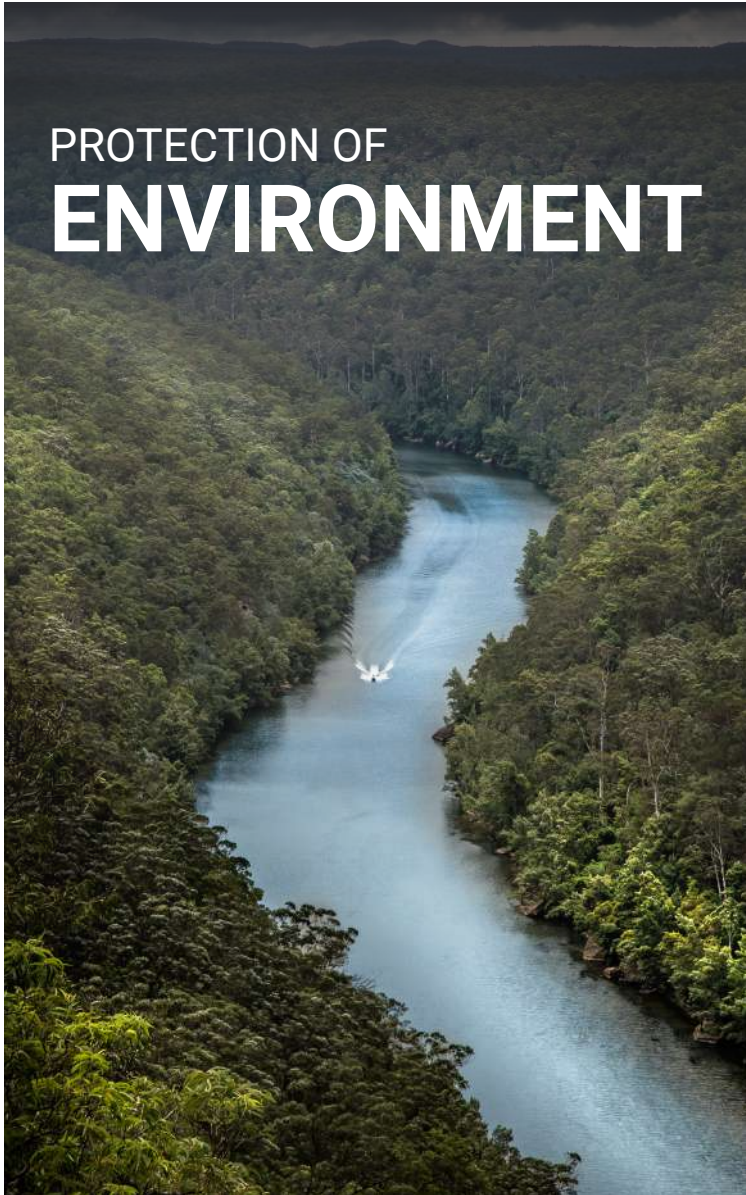
- **Cliff and Rock Formations**
- **Keep Track of Production and Inventory**
- **Contour Maps**
- **Improve Site Planning and Management**
- **Slope Analysis**

Marlyn eliminates the need for surveyors to move around in the pit, minimising corresponding downtime and greatly improving the safety of surveyors.

Also, fewer man hours are needed to create larger and accurate data sets, resulting in reduced costs.

Marlyn can be easily deployed from any surface. This enables her to be used in a wide variety of surveying applications.

PROTECTION OF ENVIRONMENT



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

The quiet and energy-efficient electric motors are not only environmentally friendly but also reduce the impact of noise on humans and animals.

The combination of infrared, multispectral and thermal images, result in outputs that can be used to measure intrinsic tree characteristics related to plant health, growth and biomass.

PRECISION AGRICULTURE



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

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

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

OUTPUTS



ORTHOPHOTO

"I wanted a reliable solution with high wind resistance. That's why I chose Marlyn."

Joaquim Borges de Macedo

CJR Renewables | Coordinator of Topography

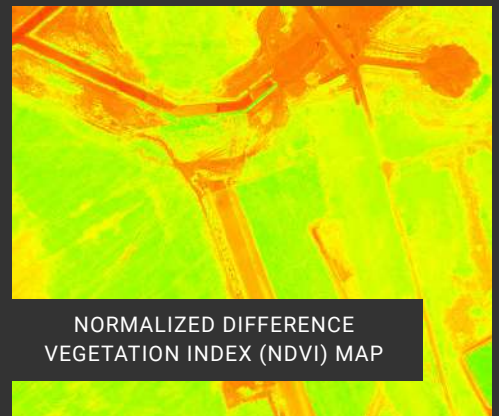


3D TEXTURED MODEL

"The images are amazing. Superb resolution and well geolocated!"

Luis Vilasa

CGI | Senior Software Engineer

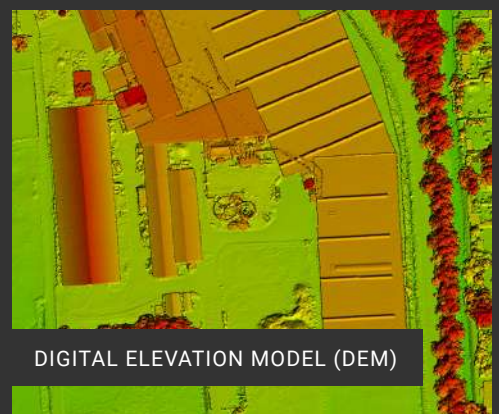


NORMALIZED DIFFERENCE
VEGETATION INDEX (NDVI) MAP

"Marlyn's flexibility cuts our operational time in half by providing us with a huge amount of savings in both resources and equipment!"

Pieter Franken

Terra Drone Europe | Managing Director



DIGITAL ELEVATION MODEL (DEM)

MEET THE TEAM



EMPOWERING PROFESSIONALS TO EFFORTLESSLY GATHER GEO-SPATIAL DATA

Atmos UAV is a Dutch industrial drone manufacturer based in Delft. We are a multidisciplinary team driven by passion about technology and innovation.

The company's vision is to disrupt the status quo of the geospatial industry by providing professional users with an unprecedented combination of efficiency, accuracy and speed for their mapping projects.



Timeline | Milestones

Its been more than 7 years already ...
Amongst multiple awards and
continuous research projects, these are
some of our major milestones



- 2012** First drone worldwide to combine VTOL with fixed-wing in a fully autonomous flight
- 2013** Company Foundation
- 2014** Atmos UAV is honored on the TU Delft Wall of Fame
- 2015** First time Marlyn is used by the Dutch Government for mapping applications
- 2016** Patented design approved for high wind resistance VTOL drone
- 2017** Being the first after 50 years to map part of the tropical Silhouette island
- 2018** First drone platform to partner with Naval group for marine applications
- 2019** Marlyn operates in 5 continents and establishes a global distribution network.



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MAXIMIZE YOUR SURVEYING CAPACITY

Please recycle.

