Titan Environmental Surveys Limited
A GARDLINE COMPANY

Unmanned Aerial Surveys

Aerial Surveys

3D Point Cloud and Mesh created in Pix4D

Titan can offer high resolution Unmanned Aerial Surveys for a variety of survey requirements. Our UAV technology will be applied to our existing areas of expertise conducting surveys in the nearshore, intertidal and coastal environments.

UAV data acquisition and processing is more efficient, less labour intensive, equipment intensive, and cost intensive for our clients, while ensuring the data we produce is of the highest quality.

Applications of Unmanned Aerial Surveys

Cable/Pipeline Surveys

By integrating data from our vessels at high water and our UAV at low water, continuous high resolution coverage of a cable/pipeline route can be achieved at reduced risk to both vessel and personnel.

Environmental Surveys

By utilising the interchangeable camera system within our UAV, we have the capability to conduct photogrammetric or thermal video and imaging surveys for a number of applications including environmental monitoring of thermal surface plumes from power station outfalls.

Topographic Surveys

UAV photogrammetry surveys are considerably quicker and have a far higher resolution than traditional topographic survey techniques, allowing the production of 3D point clouds and georeferenced orthomosaics

Coastal Engineering/Beach Management

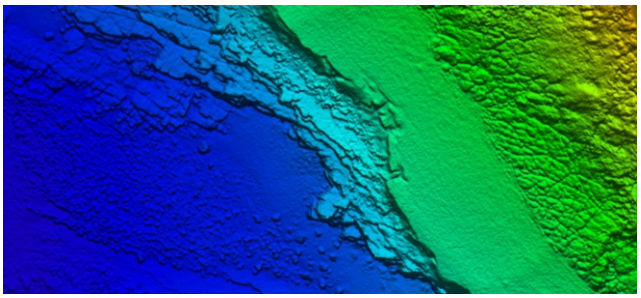
Beach morphology and volumetric analysis can be montiored through succesive flights over a section of coastline.

Titan's RTK/PPK Equipped UAV in flight

Launching the UAV

Photogrammetric Surveys

- 20MP high resolution camera capable of Ground Sampling Distance of 1cm/pixel
- Ground Resolution at 122m of 2.9cm/pixel (Optimal Coverage)
- Absolute XYZ positional accuracy down to 3cm
- Production of high resolution 3D point clouds, DSMs and orthmosaics for the purposes of topographic mapping, volumetric analysis and inspections.
- 2.2km2 nominal coverage in a single flight with possibility for multiple flights in quick succession



Elevation data collected by Titan's UAV and processed in Pix4D

Raw image from UAV 20MP RGB camera

Thermal Imaging Surveys

- Operational temperature range of -40 ° C to +160°C
- Temperature resolution of 0.1°C
- Tiff and Mp4 output formats

Sensefly Ebee Plus UAV

- Built-in RTK and PPK functionality with vertical positioning accuracy of 3cm
- 40km2 maximum single flight photogrammetry coverage
- Pix4D mapping software allowing rapid data processing and production of high resolution georeferenced data sets
- Cruising Speed of 40-110km/h
- Maximum flight time on single battery 59mins
- Built-in RTK and PPK functionality
- Wind resistance up to 45km/h
- Weight: 1.1kg
- Wingspan: 1.1m
- Pix4D mapping software for rapid data processing and production of high resolution georeferenced data sets

Raw Image from UAV 20MP RGB Camera

Benefits of Aerial Surveys

Reduced Risk:

- By removing the need for vessels and personnel to enter hazardous shallow tidal areas.
- Fully autonomous flight with automatic fail safes

Reduced Cost:

- More rapid data acquisition and processing reduces site and office time.

Increased Efficiency:

- Significantly greater coverage can be achieved compared to a vessel in shallow waters

Environmental Protection

- No impact on ecologically sensitive sites and a 100% electric motor

Titan Environmental Surveys Limited
A GARDLINE COMPANY

For more details please contact:
Email: enquiries@titansurveys.com

Orion House, Parc Crescent, Waterton
Industrial Estate, Bridgend. CF31 3BQ.
Tel: +44 (0)1656 673673

www.titansurveys.com