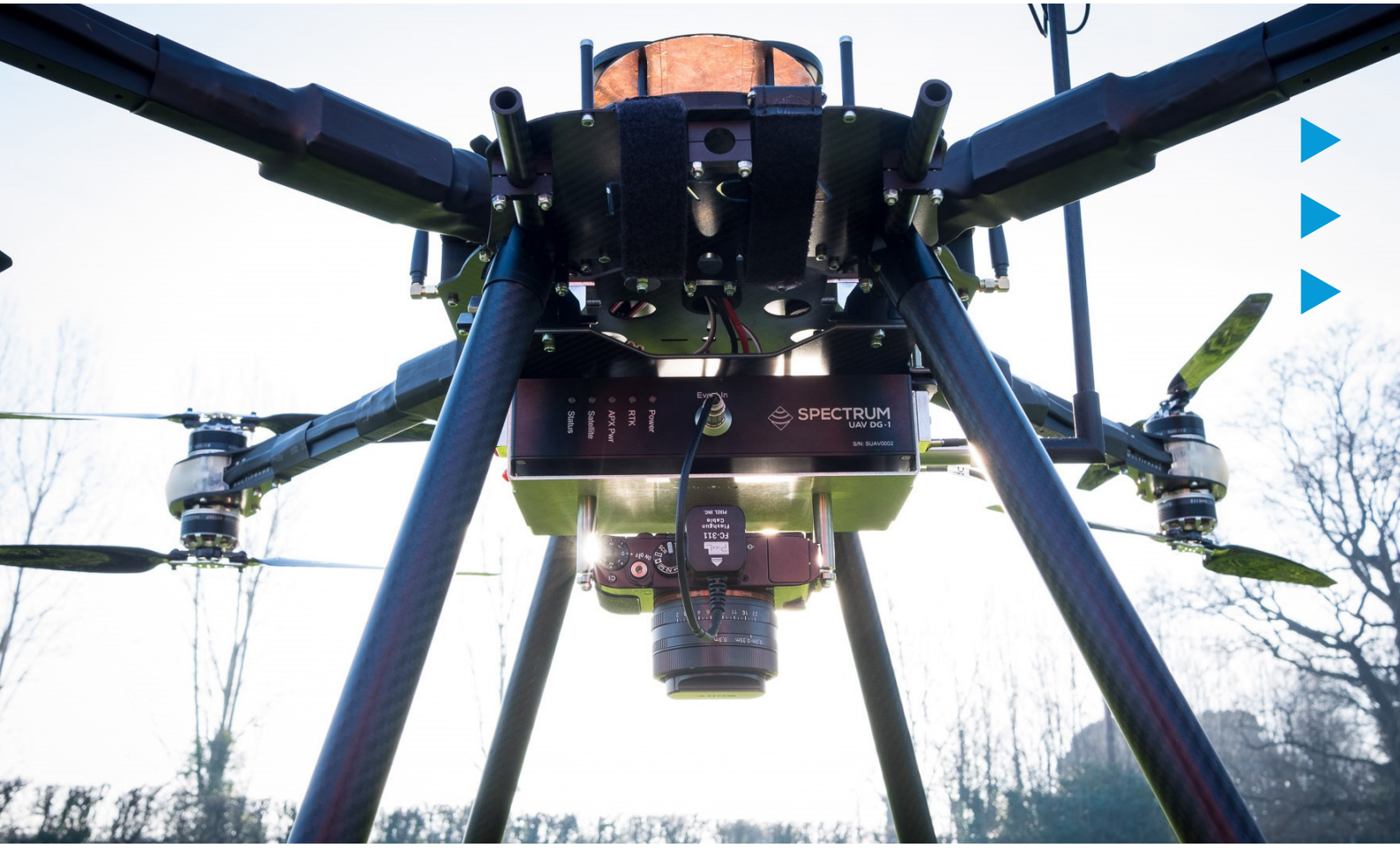
# Spectrum UAV and Applanix Develop the UAV DG-1 Photogrammetry System




## Spectrum UAV Creates a Self-Contained Survey-Grade Direct Georeferenced Photogrammetry System for Air and Marine Applications

*Spectrum has employed a unique design that enables this navigation solution to be easily swapped in and out and used for multiple purposes. Furthermore, the payload itself is bolt on / bolt off and can be mounted to any UAV, thus providing exceptional value and convenience.*

### THE CHALLENGE

Spectrum UAV wanted to build a survey-grade, high-specification Direct Georeferenced (DG) photogrammetry system that was self-contained, and could be bolted to any UAV airframe without having to change any offsets or recalibrate the system. The company also recognized the value of the Applanix DG technology, as projects were often conducted in regions where ground control points were either unavailable or difficult to acquire. Furthermore, given the cost savings and value of DG, Spectrum UAV was looking for ways to use the technology interchangeably with other sensors and platforms.

## Solution

### A Self Contained & Interchangeable Payload Module for UAVs

The Spectrum UAV DG-1 payload, containing a Trimble APX-15 GNSS Inertial board, furnishes a convenient solution by providing an enclosure for the Applanix GNSS/INS technology, which also facilitates an easy demount and remount capability for various sensor packages. Even more so, the Spectrum UAV DG-1 payload itself is bolt on / bolt off and can be mounted to any UAV providing exceptional value and convenience for sensor payload sharing between platforms.

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## APPLICATIONS

"We developed our payload for intertidal zone surveys, pre/post construction surveys, cable landing monitoring, topographic surveys, corridor mapping and coastal surveys where access maybe difficult or dangerous to personnel.

"As a survey company, we want to utilise the DG methodology so we do not have to put down ground control points (GCPs). To us, this is especially relevant in marine intertidal areas, but also relevant to other survey types such as quarries and terrestrial construction sites."

- Rob Penrose, Spectrum UAV

## KEY FEATURES OF SPECTRUM UAV DG-1

- Sensor can be easily demounted from the Spectrum UAV DG-1 GNSS/INS payload
- The payload itself is bolt on / bolt off and can be mounted to any UAV
- The APX-15 GNSS/INS board can easily be swapped out for an APX-18 or APX-20, thus supporting mission flexibility

## ABOUT SPECTRUM

Spectrum Offshore is an independent group that specialises in the provision of hydrographic, geophysical and aerial survey as well as vessel services to clients throughout NW Europe.

Our aim at Spectrum Offshore is to combine a client-centric emphasis to our activities with a focus on providing high quality service delivery both onshore and offshore.

Spectrum UAV who operate under the umbrella of Spectrum Offshore have an operational ethos to uphold the values of Spectrum Offshore in delivering the highest possible standards to our clients.

## ABOUT APPLANIX

Founded on defense and aerospace industry expertise, and a Trimble (TRMB on NASDAQ) company since 2003, our Position and Orientation Systems (POS™) have become the world's industry-standard for airborne, land, marine, and indoor mobile survey operations. With global reach, unequaled engineering excellence, and worldwide 24/7 customer support, Applanix leads the world in high-productivity in-motion surveying, direct data georeferencing, and robust mobile mapping.

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