



# WingtraOne-Geomatica bundle

## Flexible and scalable solution to collect and process UAV imagery

Wingtra and PCI Geomatics are teaming up to offer flexible software solutions, easier ground control for repeated surveys, and DSM True Ortho high-quality image processing capability with the **WingtraOne-Geomatica bundle**.

In order to produce high-quality products, DSMs are generated at 1:1 resolution. This means that by capturing one-centimeter imagery with WingtraOne, DSMs can be generated at one-centimeter using Geomatica. The WingtraOne is a VTOL fixed-wing drone that carries high-quality payloads. Together, these features offer broad coverage along with high-resolution and accurate results. To learn more about WingtraOne visit [www.wingtra.com](http://www.wingtra.com).

For more than 35 years, PCI Geomatics has been providing academia, governments and commercial enterprises with mapping solutions for aerial imagery. The UAV market has evolved greatly over a few short years, customers now expect efficient data collection and high-quality results.

## Case Study

### Challenges

The UAV market has evolved greatly over a few short years. Customers expect efficient data collection and high-quality results.

### Solutions

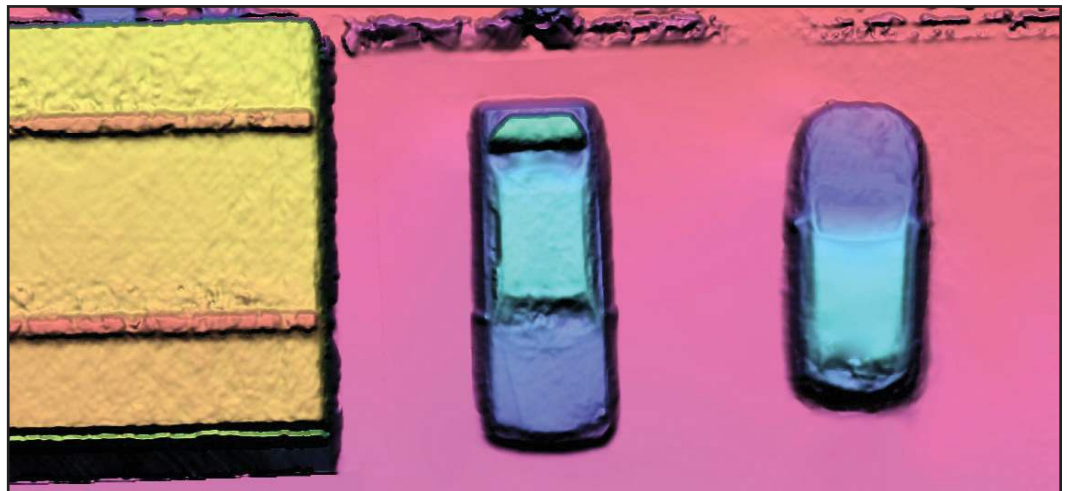
Wingtra offers efficient surveying through its innovative VTOL system; Geomatica provides professional tools that offer flexibility to control the output quality of products.

### Results

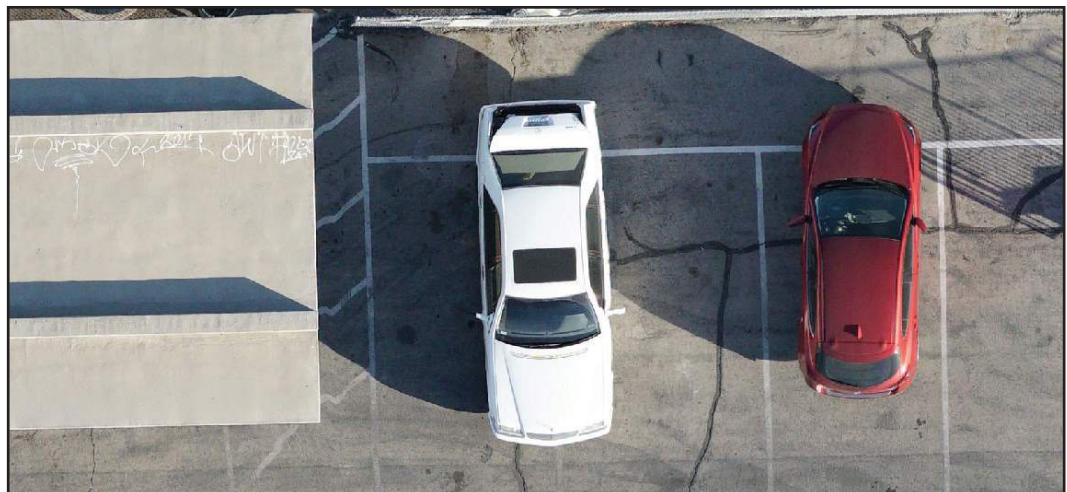
Very high-resolution Wingtra datasets (1-3 cms) have been processed by Geomatica, providing 1:1 resolution Digital Surface Models and True Ortho products.

### Why DSM True Ortho?

WingtraOne images are orthorectified directly using the DSMs, therefore artifacts commonly seen in these datasets can be minimized. Often these appear as poorly reconstructed areas due to movement (trees, vehicles); other typical problem areas include water and building edges. Extraction of 1:1 DSMs, True Ortho generation combined with innovative editing tools eliminates these effects.



DSM extracted from 2 cm (0.8 in) Wingtra Data (Las Vegas, Nevada)



DSM True Ortho product generated from 2 cm (0.8 in) Wingtra Data (Las Vegas, Nevada)



Wingtra develops, produces and commercializes high-precision VTOL drones that collect survey-grade aerial data. [www.wingtra.com](http://www.wingtra.com)



PCI Geomatics, privately held and Canadian is a world leader in earth observation software; offering solutions to the space and geomatics communities in over 135 countries. [www.pcigeomatics.com](http://www.pcigeomatics.com)



**GEOMATICA**

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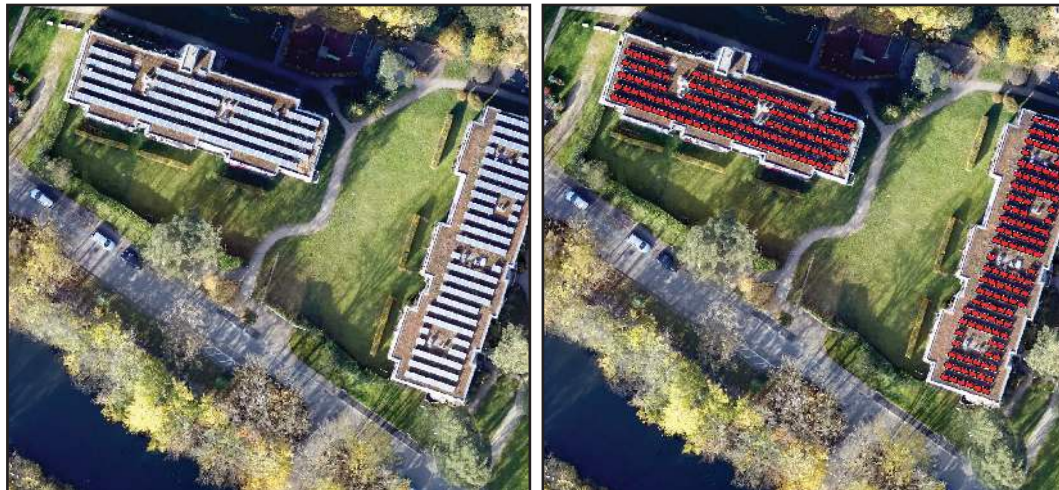
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Another benefit of the **Wingtra-Geomatica bundle** is the ability to automatically make use of ground control points (GCPs). Users have the option of setting GCPs manually for the first aerial survey, to then use the resulting ortho-mosaic for automatic ground control collection thereafter.

Users can also choose an existing ortho-mosaic to automatically collect and apply GCPs. This reduces manual labor, and increases the quality and consistency of results for repeat surveys of the same area. Accurate image co-registration technology (1/10th of a pixel) provides users the ability to perform change detection analysis.

### Customizable large-volume data processing

Clients that need to process large volumes of imagery can leverage scalable PCI Geomatics technology to keep up with the demand. The efficient processing is among the fastest in the market based on internal benchmark results.



Automated detection of solar panels using Geomatica

### The ideal match for UAV image processing

Wingtra provides the perfect solution for collection through its unique and proven VTOL technology. Geomatica provides automation, scalability, live editing, and a host of additional tools to extract information from UAV imagery and perform analysis.



Vertical take-off and landing (VTOL) capability allows the WingtraOne to move like a helicopter.

### Powerful and flexible processing speed

Wingtra Processing	GSD (cm)	Number of images	Area (ha)	Images per minute
Initial QA	12	615	115.9	14
Full Processing	3	615	115.9	3