

# Applanix and Brican Form Industry Solution for Direct Georeferencing on Unmanned Aircraft for Civilian Mapping Applications



capture everything. precisely.



*The TD100 Unmanned Aircraft System™ (small class UAS) equipped with the Applanix Direct Mapping Solution (DMS) – A professional airborne mapping solution*



The TD100 is a fully autonomous unmanned aerial system from launch to recovery. It comes with a proven mobile aircraft launcher and a rugged

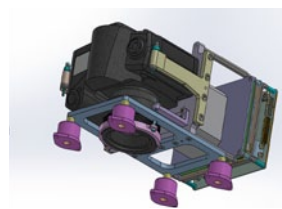
aircraft recovery system that can be deployed in minutes. State of the art structural and aerodynamic design principles ensure superior performance of the UAV. This along with superior quality materials result in an airframe that delivers consistent operation characteristics over a wide range of flight requirements.

## Applanix Direct Mapping Solution:

Working with Brican, Applanix has combined its latest low-power Direct Georeferencing technology and workflow solutions with the Brican TD100.

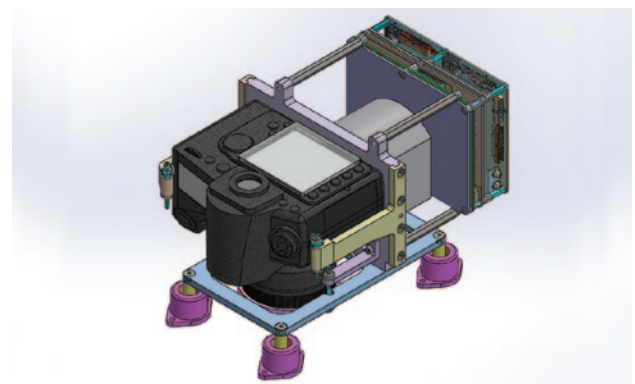
State-of-the-art imaging sensors provide a professional-grade mapping payload. The combination of Brican's powerful and versatile airframe with Applanix' industry-leading technology offers cost and time efficiencies for many airborne mapping tasks. The new platform brings within reach mapping tasks that were previously difficult or expensive.

In the traditional world of aerial photogrammetry, the process of surveying in a network of ground control points



(GCPs) to align images and perform triangulation has largely been rendered obsolete by high-end camera systems using Direct Georeferencing.

This technique relies on knowing the position and orientation of the sensor payload to a very high degree of accuracy and precision, so that the location of individual pixels on the ground can be computed directly. For manned aircraft, the relative size, weight and cost of GNSS-aided inertial navigation systems – and the attendant computing equipment required to process the data – do not represent a significant obstacle to the capability of the aircraft.



## DMS IS DESIGNED AND BUILT FOR DIRECT GEOREFERENCING ON THE BRICAN PLATFORM

In a small unmanned system, the physical and financial constraints present a different set of challenges. On the one hand, the size, weight and power (SWaP) limitations – and the financial cost model of a UAV airframe – render high-end Direct Georeferencing systems impossible or uneconomic until now.

Applanix has brought together all of its experience in positioning, orientation, multi-sensor integration and Direct Georeferencing, along with the very best in small-form-factor hardware and powerful software, to produce a Direct Georeferencing solution for professional aerial mapping.

DMS is purpose built for the unmanned aerial environment. It is rugged yet lightweight; it is powerful but not power-hungry. The components have been custom designed and engineered to tightly integrate all of the enabling technologies that make up the system.



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## Applanix and Brican improve productivity with:

- Ultra-fast image delivery: map-ready orthophotos produced within hours of flying a mission
- Rugged and powerful UAV platform
- Direct georeferencing capability: no need to survey ground control points
- Delivers consistent, reliable, highly accurate mapping-grade results
- Powerful post-processing software: unsurpassed performance from lightweight solution
- Multiple options: specific cameras, sensors and lenses can be deployed for different tasks

## Applications

- Fly a mapping-grade solution wherever you fly a UAV!



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