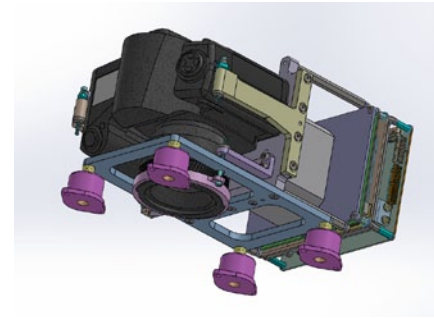


Applanix and American Aerospace Form Industry Solution for Direct Georeferencing on Unmanned Aircraft for Civilian Mapping Applications

The RS-16 Unmanned Aircraft System™ (UAS) equipped with the Applanix Direct Mapping Solution (DMS) - A professional airborne mapping solution



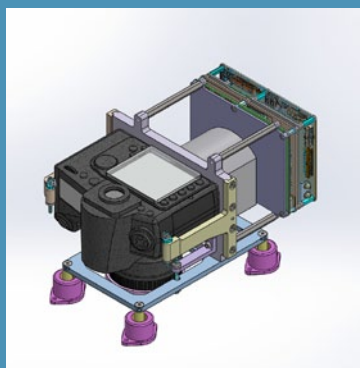
The RS-16 Unmanned Aircraft System™ (UAS) integrated with the Applanix Direct Mapping Solution (DMS) is the world's first professional grade long endurance UAS designed for civilian mapping applications. Ideal for missions where aircraft and crew safety are a factor, remote field deployments are inefficient and expensive, where surveying a network of ground control points is impractical, and/or when long endurance or long range operations are critical, the RS-16 coupled with DMS is a mapping-grade system with a 12+ hour endurance.

Performing safe and successful missions with long endurance aircraft in civilian airspace is a challenge that goes far beyond selecting the right aircraft and payload. American Aerospace Advisors, Inc. has integrated thousands of lessons learned into every system built. Capable of legally, safely and effectively mapping large areas and long corridors in civilian airspace, the RS-16 with integrated Applanix DMS is much more than a high performance unmanned aircraft. It's a complete mission system including an avionics suite designed for operation in civilian airspace, integrated DMS, mobile ground control stations, RF systems... everything needed

to conduct safe and effective field operations with long endurance aircraft. In addition, American Aerospace offers comprehensive support, assisting customers in setting up and maintaining unmanned aviation operations including mission planning, airspace approvals, training and field support. Applanix and American Aerospace have brought together a powerful, new, long-endurance, mapping-grade mission system – the RS-16 UAS with integrated DMS.

Applanix Direct Mapping Solution: Working with American Aerospace, Applanix has combined its latest low-power Direct Georeferencing technology and workflow solutions with the newest American Aerospace aircraft system.

State-of-the-art imaging sensors provide a professional-grade mapping payload for the RS-16. The combination of American Aerospace's powerful and versatile airframe with Applanix' industry-leading technology offers cost and time efficiencies for many mapping tasks. The new platform brings within reach mapping tasks that were previously difficult or expensive.



RS-16 UAS Specifications

Wingspan	in/m	12'11"	3.9
Max Gross Takeoff Weight	lbs/kg	85	39
Endurance	hrs	12 to 16	
Ceiling	ft/m	15000	4572
Max Speed	kts/kph	65	120
Best Cruise	kts.kph	55	101
Payload Mass (max)	lbs/kg	25	11

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 AMERICAN AEROSPACE 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 – rendered 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.

Whether you need an entry-level directly-georeferenced RGB mapping solution for low-altitude, small-area data collection, or are looking for a comprehensive medium format solution for MALE/HALE, beyond-line-of-sight platforms that can perform data collection tasks out of reach of manned platforms, DMS can be configured to meet your needs.

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Applanix and American Aerospace 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
- 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

DMS is designed to optimize your UAV's capabilities:

- Small, lightweight and low-power GNSS-inertial components
- Camera options to fit payload and task requirements
- Future-proof: modular design allows for flexible upgrades of sensor and platform
- Easy installation and deployment: more time in the field, less time in the workshop

Applications

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



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