

UAS Photogrammetric Sensor Package Launched at AUVSI Conference



Silent Falcon UAS Technologies has unveiled a fully integrated photogrammetric sensor package that flies aboard the solar-electric-powered Silent Falcon UAS. Incorporating the custom Falcon XCAM-A camera system, Pix4D processing software and LizardTech compression technology, the Silent Falcon photogrammetric package is designed to capture mapping-quality image data on long-endurance, extended-range UAS missions.

Silent Falcon introduced the new photogrammetric package at the AUVSI Unmanned Systems 2014 Conference in Orlando and will display the technology along with a full-scale Falcon UAS. The AUVSI Exhibit hall will be open from 13-15 May.

The Silent Falcon UAS can carry up to 11 different payloads and stay aloft for eight to 12 hours, said David Ward, Silent Falcon vice-president of sales and marketing. Silent Falcon's airborne stability, ultra-long endurance and interchangeable sensors make it ideal for diverse missions including photogrammetric mapping, search and rescue, and surveillance, he added.

Designed for commercial, public safety and defence applications previously served by much larger and more expensive aerial systems, Silent Falcon is an affordable and portable turnkey UAS. In the air, the high-efficiency electric engine and quiet six-blade propeller are powered by thin film photovoltaic cells embedded in the wing, supported by a lightweight carbon-fibre airframe. Each sensor package captures data that can be stored onboard or downlinked in real time via advanced communications to the ground where custom processing software generates a variety of imagery and mapping products.

Falcon

The new Silent Falcon photogrammetric sensor package includes the Falcon XCAM-A camera system developed by WaldoAir. Customised for Silent Falcon, this digital airborne camera system includes an integrated GPS/IMU for collection and production of georegistered imagery mosaics with 3D terrain elevation data. The Pix4D software has been optimized for production of photogrammetric imagery from the small-format XCAM-A camera, and the LizardTech software achieves a 700/1 compression to support collection of extremely large datasets on long missions.

The Falcon XCAM-A photogrammetric payload is designed for mapping applications in which horizontal and vertical data accuracy are critical.

In addition to the Silent Falcon XCAM-A photogrammetric system, two other sensor payloads are available for order now. The Silent Falcon Discoverer is a UAS payload incorporating a Mid-Wave Infrared (MWIR) camera capable of capturing still and video MWIR imagery. The Silent Falcon FalconVision is comprised of a high-definition dual colour/thermal imager with a gimbal mount capable of pointing and pivoting for surveillance and situational awareness applications. Custom multispectral, hyperspectral and aeromagnetic payloads are now under development.

Silent Falcon systems are delivered anywhere in the world. The systems are being manufactured at the assembly facility in Albuquerque and are supported by a global sales and service network.

Photo courtesy: Silent Falcon UAS Technologies.