

# New GNSS-inertial Systems for Airborne Mapping

Applanix, based in Ontario, Canada, has introduced its POS AV and POSTrack 310, a new Position and Orientation System and Flight Management System (FMS) for airborne mapping.

POS AV and POSTrack 310, with an embedded Flight Management System (FMS), incorporate a high-performance 220 channel multi-frequency GNSS receiver and a custom-built Inertial Measurement Unit (IMU) based on commercial Micro Electromechanical Machined (MEMS) inertial sensors. The solution aims to improve the efficiency of entry-level airborne photogrammetric mapping and lower-altitude direct georeferencing applications.

The announcement was made at the International Society of Photogrammetry and Remote Sensing (ISPRS) 2012 Conference.

The POS AV is a hardware and software system specifically designed for directly georeferencing airborne sensor data. POSTrack consists of the POS AV system with a tightly integrated advanced FMS, which provides mission planning, pilot guidance and sensor control. Both are fully compatible with the industry-leading Applanix POSPac MMS office software for enhanced accuracy using network differential GNSS.

By taking advantage of next generation GNSS and commercial MEMS inertial sensor technology, Applanix has produced a highly cost-effective GNSS-inertial solution with accuracy sufficient to support many types of airborne mapping, said Joe Hutton, director of inertial technology and airborne products. He added that it is ideal for use at lower altitudes, with next generation low-cost digital frame cameras, multispectral scanners, or to support aerial triangulation in block photogrammetric applications.

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