POSPAC UAV

POST-PROCESSING SOFTWARE FOR DIRECT GEOREFERENCING ON UAVS

POSPac UAV is Applanix' industry-leading differential GNSS-aided inertial post-processing software for georeferencing data from the Trimble APX series of board sets flying on small UAVs. POSPac UAV turns your UAV into a low-cost, highly efficient, professional grade mapping solution compatible with cameras, LiDAR and other mapping sensors.

DIRECT GEOREFERENCING FOR UNMANNED AERIAL VEHICLES

POSPac UAV coupled with a Trimble APX UAV GNSS-inertial system delivers the benefits of Direct Georeferencing to aerial surveyors flying small UAVs:

- Achieve high accuracy position and orientation ready for map production, minutes after data collection
- Eliminate or reduce the need for Ground Control Points
- Fly less sidelap for greater effciency
- Map inaccessible and dangerous areas remotely with lower cost

WHY POST-PROCESSING?

POSPac UAV post-processing produces a higher accuracy and more robust georeferencing solution that can be generated in real-time, all within minutes of flying.

- It uses "gap-free" dedicated base station data or that from a CORS service instead of corrections over a radio link that can be jammed or interrupted.
- It uses the inertial data to bridge outages in the rover GNSS receiver data to ensure a continuous, gap free position and orientation solution.
- It improves the accuracy of both the position and orientation (especially heading), by running the data forward and reverse in time.

INDUSTRY LEADING SOFTWARE

- POSPac UAV is integrated with Applanix' industry leading IN-Fusion™ GNSS-Aided Inertial processing technology for:

  - robust, centimeter level position and orientation information worldwide without reference stations

  - maintaining full accuracy before and after GNSS outages

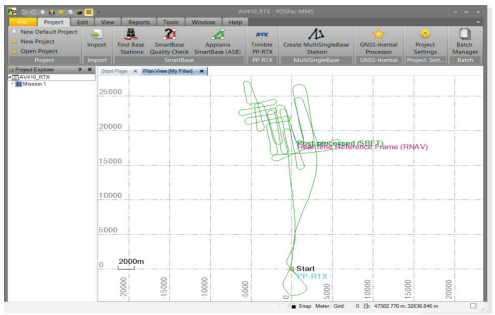
  - no restriction on minimum number of satellites

  - fly turns without limiting bank angles => faster turns

- POSPac UAV also includes Applanix SmartBase Cloud for generating a set of observations for a virtual base station exactly where and when you need it, and emails it to your inbox ready for Differential GNSS processing (where available)

YOUR BENEFITS

- Reduced acquisition costs
- Reduced re-work costs with "know before you go" in field quality control
- Faster production
- Better accuracy
- Increased utilization



Key Features

- Cm-level post-processed DGNSS position accuracy

  - removes the need for Ground Control Points in aero-triangulation (AT)

  - achieve cm level accuracy in LIDAR point cloud

- Accurate GNSS position translation from Antenna Phase Center (APC) to sensor origin

  - eliminates the need to estimate offset in AT which results in better accuracy

  - obtains cm level accuracy in LIDAR point cloud

- High accuracy orientation

  - strengthens the geometry in the AT block which reduces or eliminates sidelap

  - obtains cm level accuracy in LIDAR point cloud

- Speeds up processing time of AT by improving point matching success and blunder detection

- 200 Hz Georeferencing solution

  - filters out bad GNSS observables

  - improves heading accuracy

  - reduces interpolation errors to sensor sampling times

- Automatically survey in dedicated base stations direct from POSPac using Trimble Centerpoint™ RTX™

  - streamline map production workflow

- Full transformation support

  - user selectable datums and projections

  - transformation to camera Exterior Orientation