Applanix DGaaS

DIRECT GEOREFERENCING-AS-A-SERVICE (DGAAS) - FREQUENTLY ASKED QUESTIONS

1) WHAT IS APPLANIX DGAAS FOR UAVS?

Applanix Direct Georeferencing-as-a-Service (DGaaS™) for UAVs is a Hardware and Software-as-a-Service product for OEMs for Direct Georeferencing (DG) of imaging sensor data collected with an Unmanned Aerial Vehicle (UAV). The imaging sensors can be cameras, LIDAR, multispectral or hyperspectral imagers, or any combination of these. Direct Georeferencing (DG) enables the data to be produced into map products (Orthophotos, DTM, Point clouds) without the need for extensive and costly Ground Control Points (GCP's) and with minimal processing time.

The DGaaS product is comprised of an APX UAV GNSS-Inertial DGaaS board that is mounted in the UAV and a Cloud-based software-as-a-service for processing the data collected by the DGaaS board on a pay-per-use basis. The interface to the Cloud service is via an Application Programmer Interface (API).

2) WHAT IS THE DIFFERENCE BETWEEN THE APX UAV DGAAS HARDWARE AND THE STANDARD APX UAV HARDWARE?

The APX UAV DGaaS GNSS-Inertial board is identical to the standard APX UAV board. However, it has a special firmware license that limits its functionality to real-time L1 GNSS position/orientation output and data logging for POSPac UAV Cloud DGaaS processing only.

3) WHAT APX UAV PRODUCTS ARE AVAILABLE AS DGAAS?

The APX-15, APX-15-EI, APX-18, and APX-20 UAV products are all available as DGaaS.

4) CAN THE LOGGED DATA BY DGAAS HW BE PROCESSED BY POSPAC DESKTOP SOFTWARE?

No, the data logged by DGaaS HW can only be processed through the POSPac UAV Cloud, and only with a set of credentials unique to the OEM for DGaaS processing.

5) CAN THE DGAAS DATA BE PROCESSED THROUGH OTHER POSPAC UAV CLOUD CREDENTIALS?

No. The DGaaS HW is given a unique code tied to one set of POSPac UAV Cloud credentials.

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6) HOW ARE THE DGAAS DATA PROCESSED BY POSPAC UAV CLOUD?

Data logged from the DGaaS HW are processed through POSPac UAV Cloud using its API. The API is integrated by the OEM into their own cloud or desktop-based application. The OEM is provided a set of unique credentials that allows them to send the data to the cloud service along with information such as dedicated GNSS base station data and how to run the data. The API is controlled through a series of HTML commands, which use the same protocol as the POSPac Windows Desktop Command Line application (POSPacBatch.exe).

7) WHAT TYPES OF TRAJECTORY PROCESSING ARE AVAILABLE IN POSPAC UAV CLOUD?

POSPac UAV Cloud supports the following processing modes:

PPK Single Base:	Differential GNSS processing with Single Base station
PPK SmartBase:	Differential GNSS processing with Applanix SmartBase Virtual Reference station
PPK PP-RTX:	GNSS Precise Point Position processing with Trimble Centerpoint RTX correction service
DG Single Base:	Differential GNSS-Aided Inertial processing with Single Base station
DG SmartBase:	Differential GNSS-Aided Inertial processing with Applanix SmartBase Virtual Reference station
DG PP-RTX:	GNSS-Aided Inertial Precise Point Position processing with Trimble Centerpoint RTX correction service

8) HOW IS DGAAS FOR UAVS PRICED?

The APX DGaaS GNSS-Inertial HW board and external IMU's are sold at a nominal price based upon quantity. The processing in POSPac UAV Cloud is priced per minute of non-zero velocity trajectory and type of processing mode. Price per minute is set by Tiers of total minutes processed per year.

9) WHAT DATA IS RETURNED FROM THE POSPAC UAV SAAS?

POSPac UAV Cloud returns the following data:

▶ Processing QC report (PDF)
▶ Processing logs
▶ Batch defined Export files (target format)
▶ Binary trajectory file
▶ Binary estimated RMS error file

10) CAN I HAVE A DEMO LICENSE?

Yes, demo credentials are available to qualified OEMs. Please contact Applanix sales.

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