

# Klau Geomatics Launches PPK Software for Phantom4 RTK UAV



Klau Geomatics, specialised in PPK hardware and post-processing software, recently announced its new PPK software for the DJI Phantom4 RTK drone. The software enables professional users to achieve the most accurate and reliable results with their P4RTK drone without running it in RTK mode. RTK requires continuous communication between the drone and base station, limiting the operational range and data quality. PPK does not require any real-time connection to the base.

Not only does this method save users the time and trouble of setting up a base station, but the data collected is complete, no losses due to communications links, and as it is post-processed the solution is more rigorous than a real-time RTK result with added efficiency, reliability and accuracy.

## Collecting ground control points

The Klau Geomatics PPK hardware and post-processing software has been in development for over 4 years and is regarded as a sophisticated, accurate and reliable solution in the industry. This is a survey product, beyond just GPS processing, the KlauPPK software gives serious attention to detail, applying 3D lever arm corrections and transforming data with published coordinate systems, geoids and site localisation.

DJI's P4 RTK requires at least 3 GCPs in the project area to achieve the best possible accuracy. The [KlauPPK](#) software offers users a proven, effective method to collect ground control points using just their drone, without any additional survey equipment, reducing the field time and operational cost of surveying control points.

## Integrated Base Station Data

For post-processing GPS data from P4 RTK drones, users need a base station rinex file from either a local GPS base station or CORS network. KlauPPK software has seamlessly integrated both free and commercial CORS data sources in most parts of the world. This enables users to process their PPK data without having to set up a base station or search for the right data.

This feature brings even more precision to the final computed results by correcting for the drone attitude (3 axis tilts). The 3D offset between the GPS antenna and the camera centre, or lever arm, changes as the drone tilts in different directions. The [KlauPPK](#) software accurately models this 3D offset to determine the exact camera centre position for each photo.

## Geoid and coordinate system support

[KlauPPK](#) software converts the default WGS84 geographic coordinates from the DJI P4RTK to any published coordinate system and applies the geoid separation. Users can also add a new coordinate system and perform datum transformations. Surveyors in engineering, construction and mining can use their P4RTK drone and KlauPPK software to perform a site localisation to calculate accurate camera positions in their local site frame of reference.

## Smart geotagging

Computed high-accuracy camera positions with their horizontal and vertical accuracy values can be written to the image EXIF data, or to a text file with other survey report information. The accuracy values are applied in photogrammetry processing software to weight the results, again helping to achieve the best possible results.

"We've brought all of the survey smarts required into an easy to use package, enabling drone operators to produce reliable, accurate survey data without running additional technical software," said Rob Klau, Director of Klau Geomatics. See [here](#) for more information.