

PPK aeroPOS software SkyLines



INTRODUCTION

Transforming more tough fieldwork, like GCP (Ground Control Point) measurements, into fast processing is always enjoyable to surveyors. As a specialized GNSS data software kit, SkyLines is engineered to deal with the flight lines and compute precise aerial positional information of drones equipped with an airborne PPK module (eg. DJI Phantom4RTK, etc.). Corrected with base observations by post differential algorithm, the high-precision aerial positioning data is just a few mouse clicks away, which makes it more productive in the drone mapping workflow. By using this powerful tool, drone users can obtain highly accurate POS (Positioning & Orientation System) data at centimeter level via post processing and may be independent of ground control points for further adjustment in aerial triangulation.

WORKFLOW

CAPTURE & IMPORT



Phantom 4RTK or other drone models (with GNSS module)

aerial positioning records
geo-tagged imagery (.exif/.jpg)
timestamp details
base observations
ephemeris data

GEO-REFERENCING & EXPORT



centimeter-level POS data
geo-referenced imagery

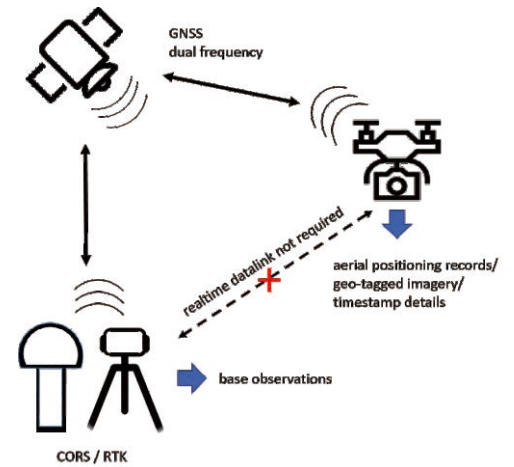
PROCESSING & MAPPING



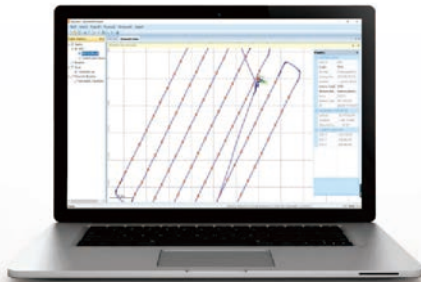
digital surface model
digital orthophoto map
digital elevation model
vector line map
oblique 3D model

WHY PPK ?

PPK, short for Post Processed Kinematic, is a GNSS positioning technique that obtains post differential corrections with carrier phases. Compared with RTK technology, PPK enjoys datalink transmission free, as base station and rover device would just individually store their data records that are post processed after the survey has been completed. This is utilized to improve the aerial positioning accuracy of drones which might find it difficult to obtain RTK fixed solutions during missions especially in case of poor satellite signals or weak datalink transmission.



FEATURES



- Applicable for DJI Phantom4RTK or any other drone equipped with GNSS module
- Intuitive interfaces and optimized algorithm ready for fast processing
- Full constellation options with more operational flexibilities
- Observation file timeline display available
- Suited to post process both static and kinematic GPS data
- Centimeter grade outputs, more reliable than simply aerial RTK positioning results
- Supports WGS84 and local coordinate systems both
- Simplifies drone survey fieldwork by effectively eliminating GCP measurements
- Dongle-free version available for trial use upon request

SPECIFICATION

Satellite System	GPS, GLONASS, Beidou, Galileo
PPK Accuracy	Horizontal down to 1 cm + 1 ppm Vertical down to 1 cm + 1 ppm
Input Format	RINEX, STH, SP3
Output Format	TXT
OS	Windows 7 or above
RAM	4GB
GPU	not required
Recommended Base Station	Galaxy G1/G1plus/G6, etc.



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