



## ONPOZ - A SOLUTION FOR PRECISE DRONE POSITIONING

OnPOZ GNSS EZSurv post-processing software features a functionality to calculate drones' in-flight positions through GNSS observations. With these drone trajectory positions, this new functionality can precisely interpolate every image position (or any other events). Using EZSurv and following an appropriate procedure in the field, the captured images can be georeferenced at +/- 1 cm with respect to your reference datum.

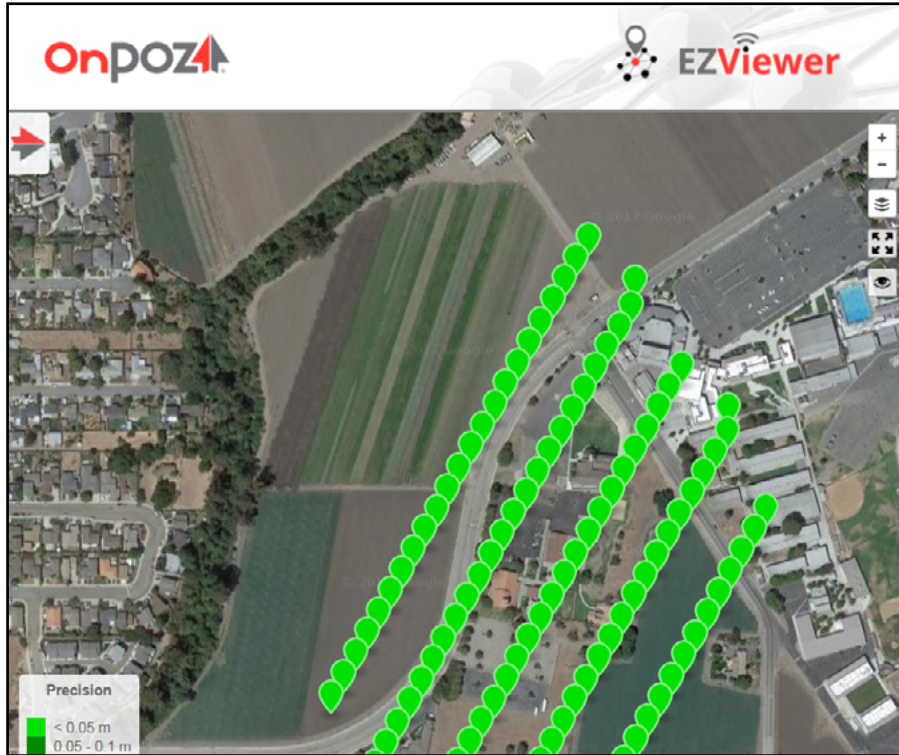
### **Background**

Today, drones that are equipped with the appropriate sensors are able to create various products to adequately represent the territory. This technology is becoming more commonly used in various sectors of professional activity such as engineering, public works, agriculture etc.

Equipped with a GPS receiver that allows its operator to pre-establish a route according to the sector to be studied, the drone can follow a precise course and take quality images that can be assembled to create all kinds of cartographic products.

In order to achieve an appropriate accuracy, an aerotriangulation process is required to correctly assemble images captured by the drone. Furthermore, in order to properly geo-reference all these images into the user's reference system (Datum), it is possible to use the center perspective's geographic position for each of the in-flight images.

To achieve this, drones are usually equipped with quality GPS receivers. Once they are in flight, these receivers record the GNSS observations at a high data rate (10-20 Hz). Moreover, every time an image is captured, the exact data capture time is also recorded. This data can then be imported to EZSurv to calculate accurate drone positions and interpolate precise position for each event recorded such as camera shots.



Example of image positions as captured by a drone and post-processed by EZSurv.