

# Applanix LiDAR QC Tools

## Frequently asked questions

### 1. What are Applanix LiDAR QC Tools?

Applanix® LiDAR QC Tools are a set of Applanix POSPac™ software tools designed to achieve the highest level of georeferencing accuracy with LiDAR sensors. They support boresight calibration between IMU and LiDAR sensors, trajectory adjustment and LAS file point cloud generation. We recently introduced beta support for ground control points (GCPs) in land mobile mapping within **POSPac Complete 2025.10**.

### 2. Which applications are supported?

Applanix LiDAR QC tools support Uncrewed Airborne Vehicles (UAVs) and land mobile mapping applications.

### 3. What can I do with them?

The Applanix LiDAR QC tools precisely estimate the boresight misalignment angles between the IMU and the LiDAR frames. In addition, the tools can perform corrections to the trajectory (position and orientation, SBET) used to generate the point cloud based on a global point cloud adjustment. A point cloud generator is also included in the package and could be used to create LAS files for further data analysis and visualization.

### 4. How does it work?

Please refer to the [White Paper](#) for further details.

### 5. Are there any limitations?

There are no limitations, but optimal accuracy is subject to LiDAR noise, captured features in the scenery and integration quality. Although, for boresight missions, a specific pattern needs to be collected. For more information, please read the [Applanix LiDAR QC Tools Technical Note](#). To view it, please sign in to the [Applanix Support Hub](#). If you have further questions, please contact [techsupport@applanix.com](mailto:techsupport@applanix.com).

Support for ground control points is currently limited to vertical checkerboard targets, which is available as a beta feature in POSPac Complete 2025.10.

### 6. Does Applanix LiDAR QC Tools support more than one LiDAR?

Yes, starting with Applanix POSPac version 9.2, Applanix LiDAR QC Tools supports two scanners (dual) from the same platform. Many mobile mapping systems have two scanners integrated (left/right). All data can be loaded into LiDAR QC tools and are treated in a single adjustment process.

### 7. Do I need a license for Applanix LiDAR QC Tools?

A term license is indeed offered, covering all three components of the Applanix LiDAR QC Tools—Boresight Calibration, Trajectory Adjustment, and LAS Generator—for both uncrewed airborne (UAV) and land mobile mapping applications.

### 8. Are Applanix LiDAR QC Tools supported in batch mode?

Applanix LiDAR QC tools are fully supported by Applanix POSPac batch command line mode as well as in our POSPac Cloud API.

### 9. What data do I need to provide to use Applanix LiDAR QC Tools?

For more information, please read the [Applanix LiDAR QC Tools Technical Note](#). To view it, please sign in to the [Applanix Support Hub](#). If you have further questions, please contact [techsupport@applanix.com](mailto:techsupport@applanix.com).

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## 10. What are the minimal computer requirements?

The computer used for Applanix LiDAR QC Tools processing should ideally be equipped with the maximum amount of physical RAM. We suggest at least 256 GB RAM when dealing with land mobile mapping data, but large projects with vast amounts of LiDAR data may require even more RAM. Post-processing data from an uncrewed airborne payload may require a minimum RAM of 32 GB since data mapping-space volume is typically less than from a land mobile mapping platform. It is also recommended to use a Core i7 or i9 CPU. For more information, please read the [Applanix LiDAR QC Tools Technical Note](#). To view it, please sign in to the [Applanix Support Hub](#). If you have further questions, please contact [techsupport@applanix.com](mailto:techsupport@applanix.com).

## 11. How can I purchase Applanix LiDAR QC Tools?

Applanix LiDAR QC tools are available through the Trimble Applanix distribution channels. Please contact your regional sales manager for more information:

<https://www.applanix.com/contact.htm>

## 12. Are there any Case Studies published?

Yes, there is a Case Study for Mobile Mapping applications in urban environments. Please see [here](#).

## 13. Are Ground Control Points (GCPs) needed for LiDAR QC

Ground Control Points (GCPs) are not mandatory for LiDAR Quality Control (QC). While GCPs can enhance absolute accuracy, especially in challenging Global Navigation Satellite System (GNSS) conditions, and help correct for datum shifts, they are not necessary for the relative adjustment of scan scenes.

## 14. What are the requirements for checkerboard targets (GCPs)?

The following requirements for the checkerboard apply:

- Size 40 x 40 cm or 50 x 50 cm
- Generic black/white pattern
- Reference coordinates at the center of the target
- High point density on the checkerboard targets
  - Line spacing < 2 - 3 cm
  - Point spacing < 1 cm

## 15. Can I have a Demo License?

Absolutely! You can obtain a demo license by contacting Trimble Applanix Customer Support, [techsupport@applanix.com](mailto:techsupport@applanix.com)

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