
Pegasus Two Ultimate vs. The Next “Leading” Competitor

There are several differences between the Leica Pegasus Two Ultimate and the Competition that makes the Leica unit a more capable and professional solution for high precision mobile mapping. But beyond the technical aspects contrasted below, it is important to note that there are more than 250 Leica Pegasus units in use globally today, however, based on analysis from our regional and global teams there are no more than 25 of the Competition’s units deployed globally.

The Leica Pegasus is the proven best-in-class solution for roadway, rail or marine mobile mapping applications.

Positional Accuracy



- The P2U uses a triple band, choke-ring style Novatel GNSS antenna that provides a survey class positioning solution.
- The P2U provides 2cm horizontal and 1.5cm vertical in open skies.

These lower accuracies with the Competition are achieved with the recommended use of a second antenna, but with the P2U a higher positional accuracy is achieved with just a single antenna. However Tronnes regularly utilizes a second antenna for even better accuracy and quicker orientation in the field.

Competition

- The Competition is equipped with a DGPS antenna that provides a lower accuracy.
- The Competition only provides 2cm horizontal and 5cm vertical

LiDAR Density



- The Z+F profiler on the P2U collects 1.016 mil\pps at 200 hz.

At these rates, the Z+F profiler can capture more points per square meter during a collection.

Competition

- The scan heads on the Competition collect data at 1 mil\pps at 250hz.

LiDAR Precision



- The Z+F 9012 on the P2U has a range noise of 1mm.

This results in the data from the P2U being the cleanest and most precise LiDAR available in mobile mapping.

Competition

- The scan heads on the Competition has a range noise of 3mm.

Spherical Cameras



- The P2U is equipped with a Leica-patented 360 camera that contains two 12MP fish-eyed lens cameras that produce a full 360-degree seamless 24MP image that contains no stitching distortion or error. It is the only solution of its kind on any mobile mapping solution.

Competition

- The Competition uses a 5-lens spherical camera for its spherical images. This results in spherical images that appear to be tiled or ‘honeycombed’ when processed and they contain stitching misalignment within the image.
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Side Cameras



- The P2U contains 4 fixed side cameras at 12MP each. These cameras cover the entire perimeter around the P2U and are not required to be calibrated by the user. The P2U cameras also have a wider field of view than those on the Competition.

Competition

- The Competition contains only 2 side cameras at 5MP each. These cameras must be positioned and calibrated by the user when set into position which takes extra field and office time.

Rear Cameras for Pavement/Tunnels



- The P2U has a camera kit that contains two 12MP cameras that can be mounted to the system pointing in any direction for pavement analysis, rail stamping, tunnel orthoimages, utility pole stamping, etc. It is very flexible and effective at capturing high resolution images for unique applications.

Competition

- The Competition has one 5MP rear camera that is fixed downward for pavement analysis only.

Processing



- With the P2U all mission planning, post-processing, viewing, adjusting, deliverables are done within one software - Pegasus Manager.

Competition

- The Competition data must be processed and reviewed in two separate software platforms.

Form Factor



- The P2U is completely self-contained except for the external battery. Just install it to a vehicle roof rack, run 1 cable to the battery, and go.
- 95lbs.

Competition

- The Competition has a custom rack system, the mapping unit itself, external battery, external controller unit that all must be installed and wired together.
- 120 lbs.

Service



- The P2U is serviced in Lawrenceville, Georgia. If the Z+F scanner (the only non-Leica component) needs serviced, it is easily removed and serviced in Pennsylvania at Z+F facility.

Competition

- The Competition having components from different companies in the US, Canada and Europe means that services them would require disassemble and shipment to as far away as Austria.