



Photogrammetry based mobile mapping device for outdoor infrastructure mapping

Dimensions of head unit:

325mm x 208mm x 138mm 2.7 kg

Dimensions with mount:

930mm x 435mm x 830 mm

Min temperature:

Operating: 0 - 50 °C

Stored: -20 - +60 °C (80% non condensed)

Survey speed:

Recommended: 36 km/h

Min: 10km/h Max: 90 km/h

(need at least 20 km/h to initialize; pay attention to road conditions!)

Positioning:

Dual RTK GNSS receiver:

Multi system-multi frequency high precision heading

Antennas: 2

Chanells: 432

Frequency: GPS L1/L2, GLONASS L1/L2, BDS B1/B2, GALILEO E1/E5b, QZSS L1/L2, SBAS L1

Update rate: 20 Hz

Data storage:

SSD: 1TB (= 250km of tracking)



Accuracy:

RTK (RMS): Horizontal: 1 cm + 1 ppm

Vertical: 1.5 cm + 1 ppm

DGPS (RMS): Horizontal: 0.4 m

Vertical: 0.8 m

Correction: RTCM 2.3/3.0/3.2

IMU:

6-axis MEMS chips and U-fusion INS algorithm

Dead reckoning error: < 5% of distance travelled during GPS denied conditions

Camera system:

Field of view:

Horizontal: 136°

Vertical: 63°

Resolution: 2 x 12 Mpixel (3.45 micron/pixel)

Global shutter

Sensor: 1.1"

Export formats: RAW (BAYER8), JPEG

PhoDar properties:

Exposition distance: 2-10 m (customizable, depending on speed and light conditions)

Image resolution: 2mm (in 5m distance)

Photogrammetrical properties:

with Agisoft Metashape

max. point density: high: 35.7 point/dm2

Accuracy (in case of adequate GPS and RTK fix signal):

relative: 3-15 cm (depending on distance measured)

absolute: with reference points: 5-15 cm RMS (depending of survey speed) without reference points: 15-70 cm RMS (depending on survey speed)



