HERON® MS Twin

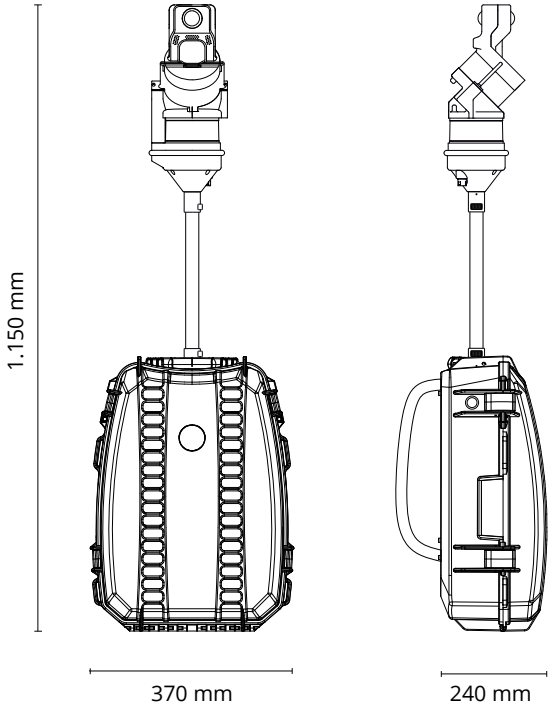
Product Specifications

MAIN FEATURES

Suitable environment	indoor/outdoor
Handheld	no (1)
Wearable	yes
Mountable on various mobile platforms (auto, trolley, bike, quad, boat)	yes
No. LiDAR sensors	2
Panoramic camera	yes
IMU	yes
SLAM post-processing software (HERON® Desktop)	yes
Point cloud advanced processing software (Reconstructor®)	yes
Free tool for 2D map measuring (GoBlueprint®)	yes
Output data	.e57, .las, .ply, export in ReCap™
Points per second	600.000
Local accuracy	~ 3 cm
Max survey resolution	~ 2 cm
Global accuracy	~ 5 cm in short close rings (2)
Loop closure	not mandatory
Usable in every light conditions	yes
Initialization and calibration procedures	not required
Single operator	yes
Data storage	256 GB
Working hours (in continuous acquisition)	~ 1.5 h
Real-time 3D point cloud visualization	yes
Real-time RGB image visualization	yes
Real-time change detection & automatic self-localization	yes
Operating temperature	-10° ; +45°
Storage temperature	-40° ; +60°
Storage and transport case	yes

CAMERA

Panoramic camera	yes
Continuous 15 hz acquisition and visualization (1920x1080 pixel full HD)	yes
On demand image acquisition at 5K (5640x2820 pixel)	yes
FOV	360° x 360°
Depth of focus	from 40 cm to ∞
Focal length	35 mm ≡ 1.036 mm
Automatic color and light balance	yes
Automatic exposure control	yes



CAPTURE HEAD (REMOVABLE)

Laser sensor brand and type	Velodyne Puck™
No. of sensors	2
Laser safety classification	class 1
Laser wave length	903 nm
Laser max range	80-100 m
FOV	360° x 360°
Panoramic camera	yes
IMU	yes
Head weight	2035 g
Head dimension	145 x 146 x 395 mm

TOUCHSCREEN CONTROL UNIT

Processor	i7
Weight	1200 g
Dimension	277 x 195 x 24 mm
Waterproof protection	IP65
Shoulder harness	282 g
Screen dimension	10,1" IPS FHD LuminiBond 2.0

BATTERY

Model	Lithium Ion 12V 4Ah
Weight	450 g
Dimension	176 x 78 x 22 mm

HERON® MS Twin

Product Specifications

RUGGED BACKPACK

Wearable	yes
Weight	4400 g
Dimension	540 x 400 x 220 mm

ACCESSORIES

Telescopic pole with cables (retracted 90 cm - extended 200 cm)	available
Car mount	available

SOFTWARE EQUIPMENT

Reconstructor®	included
Reconstructor® HERON add-on	included
Automatic scans registration	yes
Direct data import	colorized .fls, .zfs, .rxp, .3dd, .x3s, .x3m, .clr, .cl3, .dp, .ixf, .nctri, .txt, .las, .laz, .e57, .ptx, .pts, .asc, .ply, .csv
Point cloud filtering, managing and classifying	yes
Import .ifc BIM format	yes
Import terrestrial laser scanner data	yes
Import UAV data	yes
Import mobile mapping data	yes
Import projects from third parties LiDAR software	FARO Scene, RIEGL RiSCAN PRO, TOPCON, Z+F LaserControl (thermal camera included)
ReCap™ export	yes
Cross sections and profiles extraction (.dxf)	yes
Orthophoto & x-ray orthophoto (direct export to AutoCAD™)	yes
Volumes and areas calculation	yes
Mesh creation and manipulation	yes
Verification tool	yes

HERON® Desktop	included
Drift effect reducing (global optimization)	yes
3D local maps algorithm	yes
Use of GNSS coordinates for geolocalization	yes
Split/merge trajectories and point clouds	yes
Automatic post-processing mode	yes
Noise cleaning (attenuation)	yes
Mobile objects removing	yes

GoBlueprint®	FREE TOOL
Volume calculation based on 2D map	yes
2D map measures (linear, angular, area)	yes
Onsite 2D map navigation *(it works on every Windows-based device)*	yes
Deliverables easy to manage and share	yes

HERON® Clouds Constraints add-on	optional
HERON® Tracking add-on	optional
Reconstructor® MINING add-on	optional
Reconstructor® COLOR add-on	optional
Reconstructor® 3D Viewer	FREE TOOL
Orbit® 3D Mapping Cloud	optional
Orbit® Feature Extraction Suite	optional

(1) When needed, it is possible to use the capture head with the pole, to easily map hidden areas as holes, ravines, manholes, etc.

(2) The global accuracy depends on the effectiveness of the SLAM registration algorithm, which can be influenced by the geometry of the surveyed environment. Long trajectories in absence of loop closures and cross paths, as narrow tunnels or narrow stairs, can downgrade the global accuracy to 20-50 cm. The patented and unique algorithms present in HERON® Desktop and the use of control scans as constraints can dramatically improve the quality of the result. Gexcel support team is ready to provide more detailed information on this topic.