HERON® MS TWIN

32 +32 Channels | 300 m Max Range

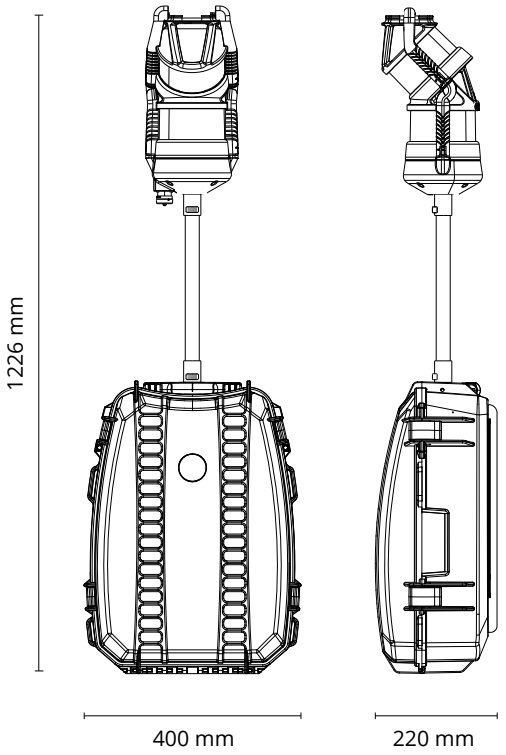
TECH SHEET

MAIN FEATURES

Suitable environment	indoor/outdoor
Handheld	possible (1)
Wearable	yes
Mountable on various mobile platforms (car, trolley, bike, quad, boat, robot)	yes
SLAM post-processing software included (HERON Desktop)	yes
Point cloud advanced processing software included (Reconstructor)	yes
Free software for x-ray maps visualization and measuring included (GoBlueprint)	yes
Output data	.e57, .las, .ply, export to ReCap
Points per second	1,280,000
Local accuracy	±4 mm
Max survey resolution	1 cm
Global accuracy	±2 cm in short close rings (2)
Control points acquisition	yes
Global accuracy with control points	±1 cm
Loop closure	not mandatory
Usable in every light conditions	yes
Initialization and calibration procedures	not required
Single operator	yes
Sensors working time (in continuous acquisition)	~ 2 h (more with extra batteries)
Change detection & Automatic self-localization	yes (optional add-on)
Operating temperature	-10° ; +45°
Storage temperature	-40° ; +60°
Rugged transport case	yes

SYSTEM CONTROLLER

Weight | Dimensions	1085 g | 160 x 209 x 59 mm
Processor	Intel® 11th Gen Core™ (4.1 GHz)
• **PENDRIVE** for data storage	USB 3.1 Gen 1
Memory size	256 GB
Max read speed	up to 300 MB/sec
Max write speed	up to 100 MB/sec
• **INTERNAL BATTERY**	Li-ion battery
Capacity	6700 mAh | 80.4 Wh
Output	12 V
Working time	~ 2 h (more with extra "plug&go" batteries)



CAPTURE HEAD (DETACHABLE)

Weight | Dimensions	2380 g | 338 x 141 x 153 mm
COMPONENTS:	
• **LASER SENSORS**	32+32 chs | Class 1 Eye Safe
Laser wavelength	905 nm
Minimum laser range	0.05 m
Maximum laser range	300 m
FOV	360° x 360° (3)
• **IMU**	yes

PDA CONTROL UNIT

Personal Digital Assistant

Weight | Dimensions	560 g | 167 x 81.4 x 15.5 mm
Processor	Helio G95 Octa Core 2.1 GHz
Display	6.22" LCD HD + waterdrop screen
Battery	Li-ion | 6350 mAh
Battery charging	24 W Type-C fast charge
Battery working time	15 ÷ 24 h (depending on the display intensity)

HERON® MS TWIN

32 +32 Channels | 300 m Max Range

TECH SHEET

RUGGED BACKPACK

Weight | Dimensions	4850 g | 540 x 400 x 220 mm
Internally cabled	Controller and Capture Head connection
For mapping use	yes
For storage and transport use	yes

OPTIONAL TOOLKITS

Extra batteries	standard | "plug&go" | ~ 1h 20min | 445 g
Telescopic pole	from 560 to 1800 mm | 1000 g
Centering tip	150 mm | 12 g
Ring LED Light	Ø126 x 184 mm | 700 g | 4000 lm | 36 W
Car mount	(with case) 547 x 427 x 251 mm | 9000 g

SOFTWARE EQUIPMENT

Reconstructor	included
Reconstructor HERON add-on	included
3D navigation of point clouds and images	yes
Automatic scans registration	yes
Import	TLS data, .ifc BIM, point clouds from UAV, mobile mapping data
Direct import formats	.laz, .e57, .fls, .zfs, .rxp, .x3s, .x3m, .clr, .cl3, .dp, .ixf, .nctri, .txt, .las, .ptx, .pts, .ptg, .asc, .ply, .csv, DEM Ascii
Point cloud filtering, managing and classifying	yes
CAD/Mesh models	.3ds, .ifc, .obj, .dxf, .stl, .txt, .wrl, .vrml, .ply, .mvx, .dae
Mesh creation and manipulation	yes
Volumes and areas computation	yes
Cross sections and profiles (.dxf)	yes
Verification tool	yes
Orthophotos/x-Ray orthophotos (direct export to AutoCAD)	yes
Direct export of 3D point clouds and 2D maps	.las, .e57 with images, ReCap, AutoCAD
Cloud sharing	AtisCloud, Benaco, Cintoo Cloud, FARO Webshare, Geo-Plus,TopconCollageWeb

HERON Desktop	included
Drift effect reducing (global optimization)	yes
3D local maps patented algorithm	yes
Large coordinates for geolocalization	yes
Split/merge trajectories and point clouds	yes
Automatic post-processing mode	yes
Noise cleaning (attenuation)	yes
Moving objects removing	yes
Constraints tool (control points/control scans)	yes

GoBlueprint	free software
Measures on x-Ray maps directly (lines, angles, areas)	yes
Volume calculation based on x-Ray maps	yes
For any Windows-based PC and tablet (to easily bring your maps on-site too)	yes
Deliverables easy to manage and share	yes

Reconstructor 3D Viewer	free software
3D model navigation	yes

HERON Tracking add-on	optional
Reconstructor MINING add-on	optional
Reconstructor COLOR add-on	optional
ClearEdge3D EdgeWise | Verity | Rithm	optional
Cintoo Cloud	optional

(1) When needed, it is possible to use the capture head with telescopic poles, to easily map hidden areas such 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, such as narrow tunnels or narrow stairs, can downgrade the global accuracy to 2-3 cm. The patented and unique algorithms present in HERON Desktop and the use of control points or control scans as constraints can dramatically improve the quality of the global accuracy up to 1 cm. The Gexcel support team is always available to provide you with more detailed information on this topic.

(3) Final FOV guaranteed by walking with the system.

HERON, Reconstructor, and GoBlueprint are Gexcel trademarks. All rights reserved. Third-party software included in these pages are trademarks. All rights reserved to the companies that own the software. Gexcel is not affiliated with any of third-party software listed on these pages.

HERON is developed under a licence of the European Commission Joint Research Centre.

HERON® MS TWIN

32 +32 Channels | 120 m Max Range

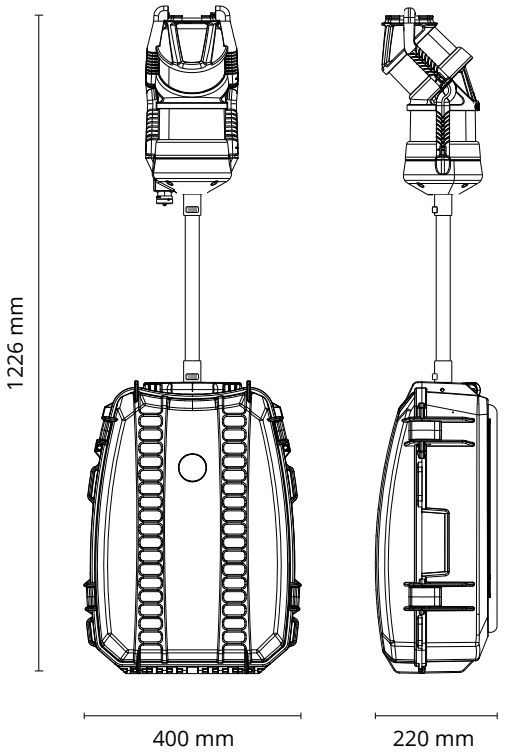
TECH SHEET

MAIN FEATURES

Suitable environment	indoor/outdoor
Handheld	possible (1)
Wearable	yes
Mountable on various mobile platforms (car, trolley, bike, quad, boat, robot)	yes
SLAM post-processing software included (HERON Desktop)	yes
Point cloud advanced processing software included (Reconstructor)	yes
Free software for x-ray maps visualization and measuring included (GoBlueprint)	yes
Output data	.e57, .las, .ply, export to ReCap
Points per second	1,280,000
Local accuracy	±4 mm
Max survey resolution	1 cm
Global accuracy	±2 cm in short close rings (2)
Control points acquisition	yes
Global accuracy with control points	±1 cm
Loop closure	not mandatory
Usable in every light conditions	yes
Initialization and calibration procedures	not required
Single operator	yes
Sensors working time (in continuous acquisition)	~ 2 h (more with extra batteries)
Change detection & Automatic self-localization	yes (optional add-on)
Operating temperature	-10° ; +45°
Storage temperature	-40° ; +60°
Rugged transport case	yes

SYSTEM CONTROLLER

Weight | Dimensions	1085 g | 160 x 209 x 59 mm
Processor	Intel® 11th Gen Core™ (4.1 GHz)
• **PENDRIVE** for data storage	USB 3.1 Gen 1
Memory size	256 GB
Max read speed	up to 300 MB/sec
Max write speed	up to 100 MB/sec
• **INTERNAL BATTERY**	Li-ion battery
Capacity	6700 mAh | 80.4 Wh
Output	12 V
Working time	~ 2 h (more with extra "plug&go" batteries)



CAPTURE HEAD (DETACHABLE)

Weight | Dimensions	2380 g | 338 x 141 x 153 mm
COMPONENTS:	
• **LASER SENSORS**	32+32 chs | Class 1 Eye Safe
Laser wavelength	905 nm
Laser range	0.05 - 120 m
FOV	360° x 360° (3)
• **IMU**	yes

PDA CONTROL UNIT

Personal Digital Assistant

Weight | Dimensions	560 g | 167 x 81.4 x 15.5 mm
Processor	Helio G95 Octa Core 2.1 GHz
Display	6.22" LCD HD + waterdrop screen
Battery	Li-ion | 6350 mAh
Battery charging	24 W Type-C fast charge
Battery working time	15 ÷ 24 h (depending on the display intensity)

HERON® MS TWIN

32 +32 Channels | 120 m Max Range

TECH SHEET

RUGGED BACKPACK

Weight | Dimensions	4850 g | 540 x 400 x 220 mm
Internally cabled	Controller and Capture Head connection
For mapping use	yes
For storage and transport use	yes

OPTIONAL TOOLKITS

Extra batteries	standard | "plug&go" | ~ 1h 20min | 445 g
Telescopic pole	from 560 to 1800 mm | 1000 g
Centering tip	150 mm | 12 g
Ring LED Light	Ø126 x 184 mm | 700 g | 4000 lm | 36 W
Car mount	(with case) 547 x 427 x 251 mm | 9000 g

SOFTWARE EQUIPMENT

Reconstructor	included
Reconstructor HERON add-on	included
3D navigation of point clouds and images	yes
Automatic scans registration	yes
Import	TLS data, .ifc BIM, point clouds from UAV, mobile mapping data
Direct import formats	.laz, .e57, .fls, .zfs, .rxp, .x3s, .x3m, .clr, .cl3, .dp, .ixf, .nctri, .txt, .las, .ptx, .pts, .ptg, .asc, .ply, .csv, DEM Ascii
Point cloud filtering, managing and classifying	yes
CAD/Mesh models	.3ds, .ifc, .obj, .dxf, .stl, .txt, .wrl, .vrml, .ply, .mvx, .dae
Mesh creation and manipulation	yes
Volumes and areas computation	yes
Cross sections and profiles (.dxf)	yes
Verification tool	yes
Orthophotos/x-Ray orthophotos (direct export to AutoCAD)	yes
Direct export of 3D point clouds and 2D maps	.las, .e57 with images, ReCap, AutoCAD
Cloud sharing	AtisCloud, Benaco, Cintoo Cloud, FARO Webshare, Geo-Plus, TopconCollageWeb

HERON Desktop	included
Drift effect reducing (global optimization)	yes
3D local maps patented algorithm	yes
Large coordinates for geolocalization	yes
Split/merge trajectories and point clouds	yes
Automatic post-processing mode	yes
Noise cleaning (attenuation)	yes
Moving objects removing	yes
Constraints tool (control points/control scans)	yes

GoBlueprint	free software
Measures on x-Ray maps directly (lines, angles, areas)	yes
Volume calculation based on x-Ray maps	yes
For any Windows-based PC and tablet (to easily bring your maps on-site too)	yes
Deliverables easy to manage and share	yes

Reconstructor 3D Viewer	free software
3D model navigation and immersive tour at 8K	yes

HERON Tracking add-on	optional
Reconstructor MINING add-on	optional
Reconstructor COLOR add-on	optional
ClearEdge3D EdgeWise | Verity | Rithm	optional
Cintoo Cloud	optional

(1) When needed, it is possible to use the capture head with telescopic poles, to easily map hidden areas such 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, such as narrow tunnels or narrow stairs, can downgrade the global accuracy to 2-3 cm. The patented and unique algorithms present in HERON Desktop and the use of control points or control scans as constraints can dramatically improve the quality of the global accuracy up to 1 cm. The Gexcel support team is always available to provide you with more detailed information on this topic.

(3) Final FOV guaranteed by walking with the system.

HERON, Reconstructor, and GoBlueprint are Gexcel trademarks. All rights reserved. Third-party software included in these pages are trademarks. All rights reserved to the companies that own the software. Gexcel is not affiliated with any of third-party software listed on these pages.

HERON is developed under a licence of the European Commission Joint Research Centre.