



# GENERAL LASER

Cm-precise positioning, 3D scanning, and  
autonomous robotics, accessible to anyone

Vienna, Austria

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[general-laser.at](http://general-laser.at)

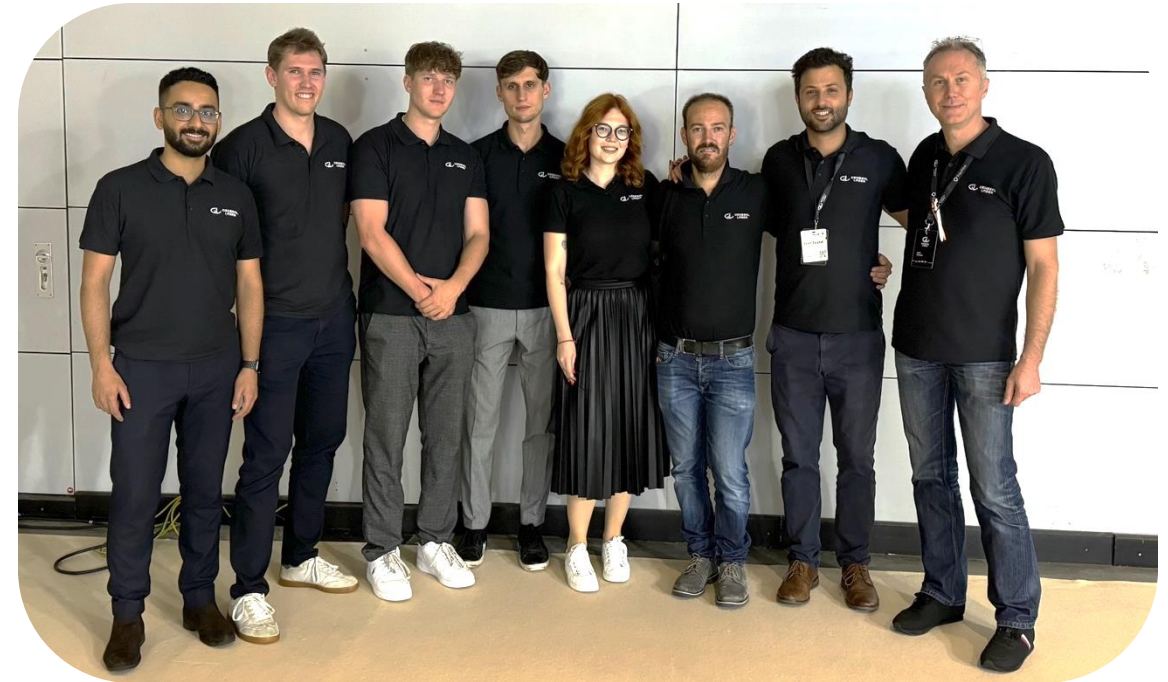
## ABOUT US

General Laser is an **innovation hub**, based in Vienna.

Our **vision** is a personal robot in every home and an industrial robot at every production site. We work towards this by making sophisticated technologies accessible to users of any background, simplifying lives and optimizing processes.

Our **philosophy** has always been to offer solutions as simple and elegant as possible, even for the most complicated technical tasks.

We **develop and deliver** innovative integrated solutions in hardware and software.



## FIELDS OF EXPERTISE



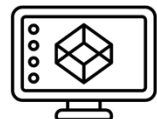
**LiDAR sensors  
& scanners**



**autonomous  
navigation**



**RTK GNSS  
positioning**



**model building  
& prototyping**



**inspection  
robots**



**software & hardware  
development**



## PRESENT

We transferred the European Distributor role to Emlid to focus on our own RTK GNSS solutions. Now, using 25 years of development expertise and management experience, we are about to transform the industry.

## PAST

General Laser was the first partner and exclusive distributor of Emlid in Europe and helped in development of their first receiver. We built a network of over 100 resellers and successfully managed the whole sales & distribution process.

# OUR HISTORY IN RTK GNSS

## FUTURE

We strive to enable both beginners and professionals use RTK GNSS technology in their daily tasks. We want to make the RTK GNSS technologies accessible, affordable and completely intuitive to use.

## INDUSTRIES & APPLICATIONS

Our solutions can be easily integrated into diverse workflows.



survey &  
stakeout



pipe & cable  
mapping



GIS &  
mapping



archeology



construction  
management



forest  
inventory



utilities  
inspection



precision  
farming



infrastructure  
documentation



autonomous  
navigation





## **COMPACT. MOBILE. MAGNETIC.**

Multi-band RTK receiver with tilt compensation.

GLRM revolutionizes efficiency, accessibility, and speed of point collection and stakeout, GIS mapping, and georeferenced LiDAR scanning, photogrammetry and videogrammetry.

Made in Austria.

## GLRM MOBILE RECEIVER

Turn your mobile device into a cm-precise surveying tool!

“Built for  
Tilt!”



- Ultra-compact and lightweight
- Multi-band RTK receiver with tilt compensation
- Wireless charging, long-range BLE
- Magnetically attached to the mobile device or its case
- Supports all GNSS constellations & frequencies
- Highest grade triple frequency helix antenna

Pole/ tripod mount adapter is available as an extra.



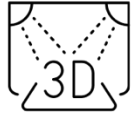
## IDEAL FOR GEOREFERENCED 3D SCANNING WITH IPHONE

Just magnetically attach it to your phone, set up a 3D scanning app, and off you go, no additional equipment needed.

Compatible with iOS devices with 3D LiDAR scanning applications, offering a range of 4-5 meters for detailed surveys.

Comes with an optimally tilted antenna to ace lidar scanning tasks.

# GLRM + GIS AUGMENTED REALITY SCANNING SOFTWARE



make a LiDAR scan  
with your iPhone Pro



geo-reference the scan with  
cm-precise RTK



ready for 3D dimensions to  
be measured



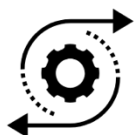
project the results  
in Augmented Reality



process and export the  
project in 10 formats



create a digital database  
of key project data



do fast & target repairs,  
no infrastructure damage



Pairing GLRM hardware with Geo Ace, the cutting-edge GIS Augmented Reality and visual stakeout app from our partner ITS Geo Solutions, delivers a powerful combination to scan and georeference infrastructure underground.

No hidden costs, no extra hardware or software—just precise performance and convenience in the field.



3D Model & Dimensions



GIS Mapping



Digital Database

# SUCCESS STORIES

Deutsche Telekom uses georeferenced scanning with GeoAce to digitalise its entire optic fiber infrastructure.



Construction



Utilities



Infrastructure Support



Proprietary and Confidential Information

GLRM  
GeoAce

survey  
stakeout

geotag  
scans

make  
scans

processing

## COMPLETE BUNDLE

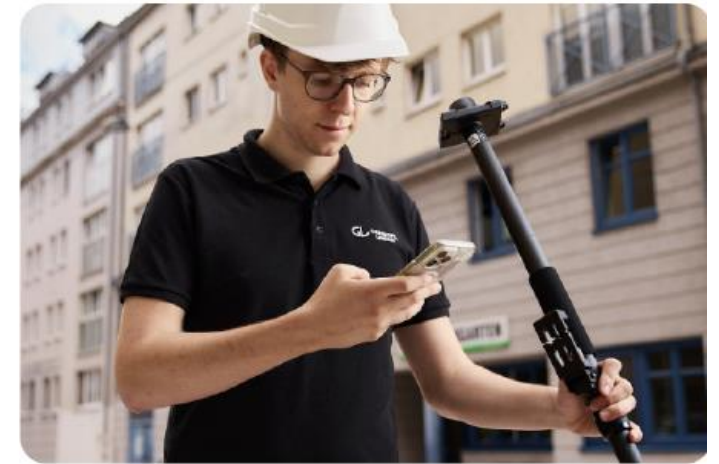
Turn your mobile device into a cm-precise surveying and 3D scanning tool.

With tilt compensation.

No additional hardware or software needed.

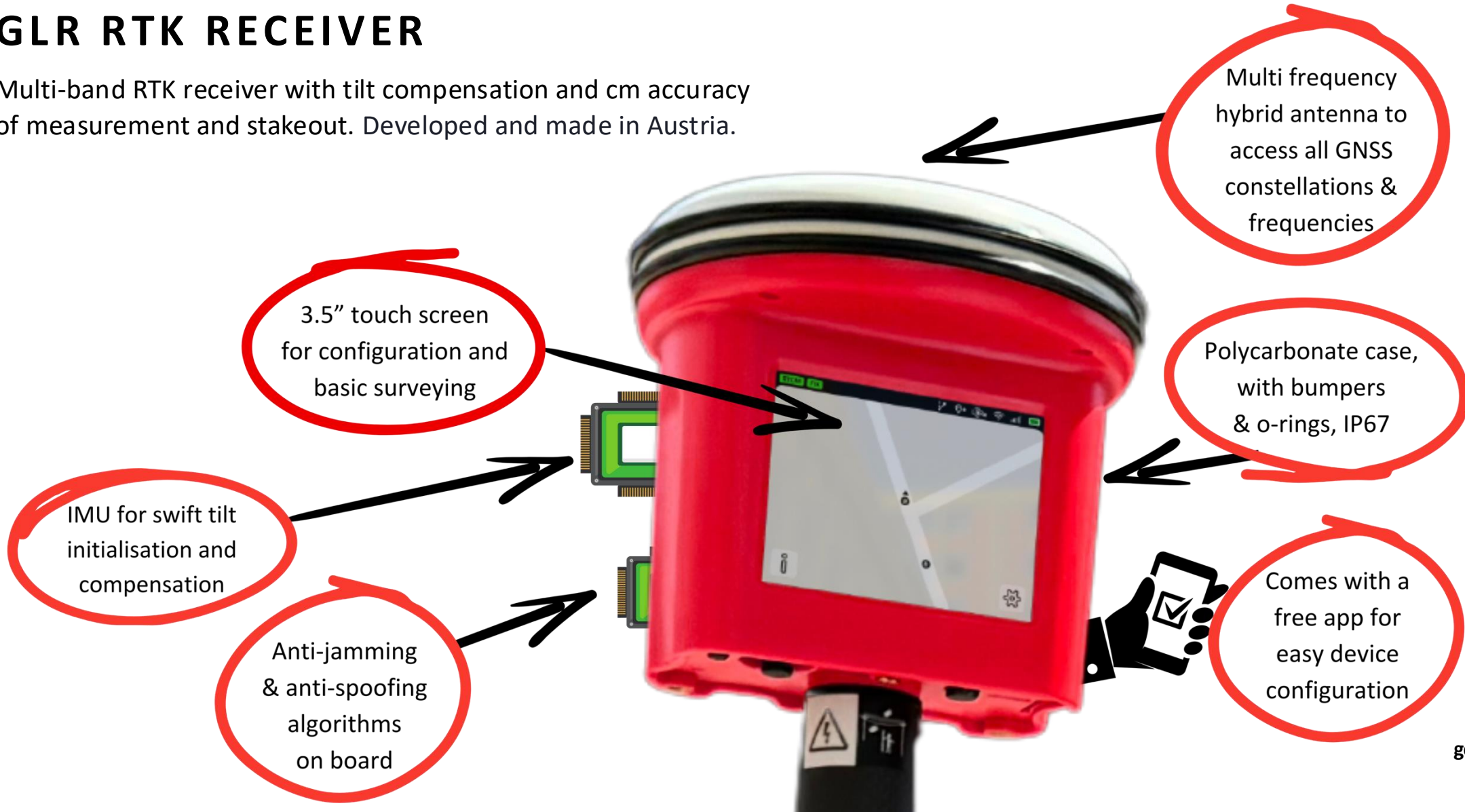
GLRM is a truly versatile tool, customisable to your fieldwork needs. It comes with a mini pole for ultra precise surveying. A mount adaptor for pole or tripod is available as an extra.

## UTTER FLEXIBILITY



## GLR RTK RECEIVER

Multi-band RTK receiver with tilt compensation and cm accuracy of measurement and stakeout. Developed and made in Austria.



Multi frequency hybrid antenna to access all GNSS constellations & frequencies

Polycarbonate case, with bumpers & o-rings, IP67

Comes with a free app for easy device configuration

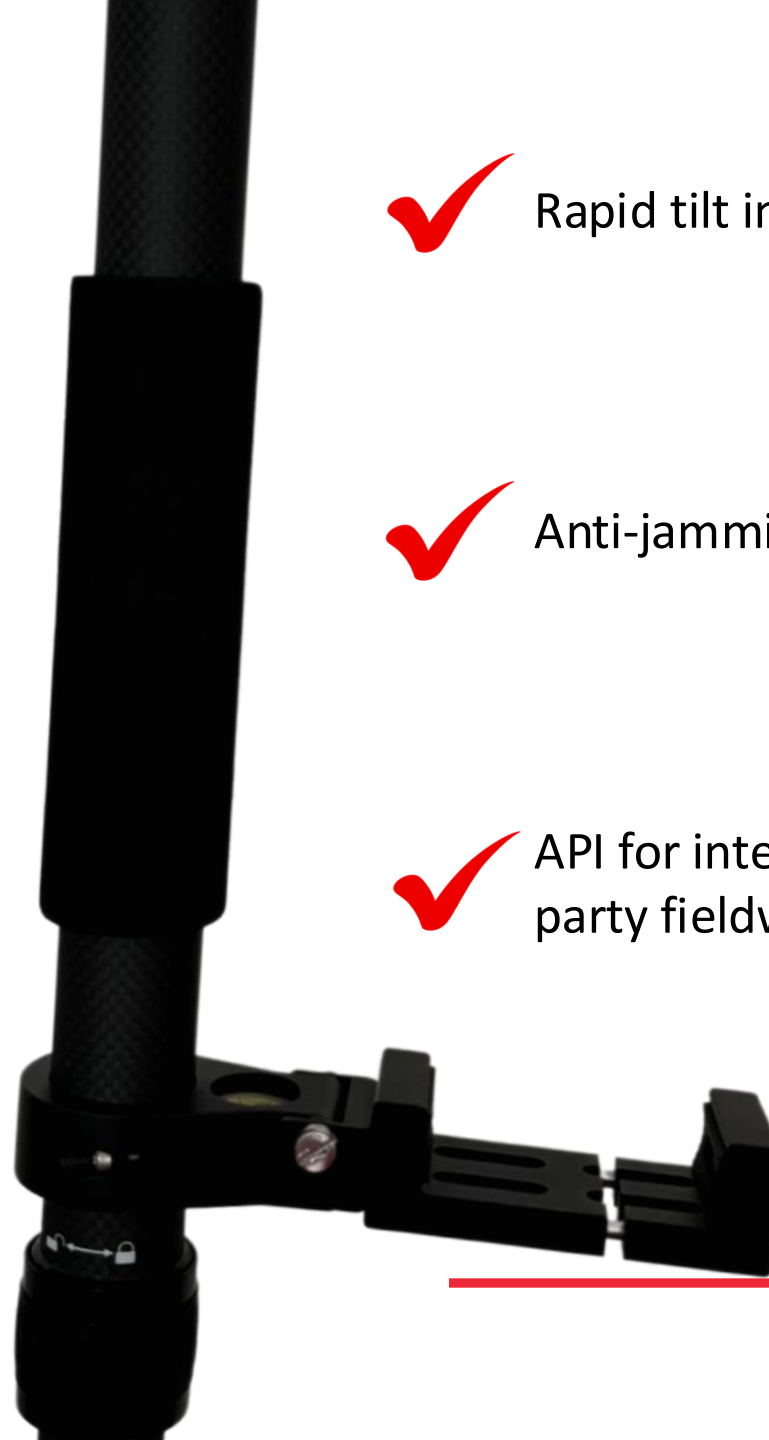
3.5" touch screen for configuration and basic surveying

IMU for swift tilt initialisation and compensation

Anti-jamming & anti-spoofing algorithms on board

## WHY CHOOSE GLR?

- ✓ Set up and configure on the go
- ✓ Built-in multi-frequency hybrid patch antenna
- ✓ Corrects in real-time for more than 60 degrees of tilt



- ✓ Rapid tilt initialisation algorithm
- ✓ Anti-jamming and anti-spoofing
- ✓ API for integration with third-party fieldwork apps

“We strive to create solutions that are accessible to users of any experience and skill.”



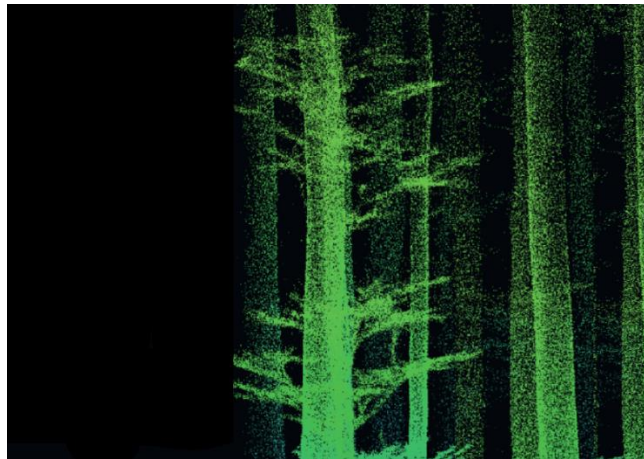
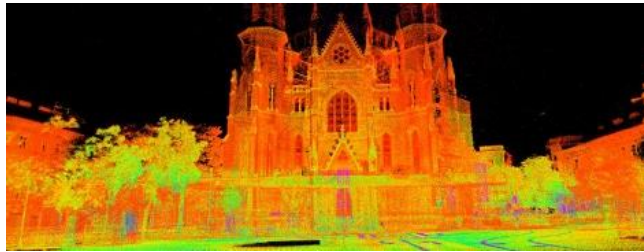
**Ivan Tochev, CEO**

# UNIQUELY RELIABLE, IN FUNCTIONALITY & DESIGN



# GLIDAR LASER SCANNER

Mobile scanner with real-time data processing



Delivers instant results

3D model generation and visualization

Modular design, customisable for fieldwork

Samples up to 5.2 Million points per second

Comes with a free web app

Developed and made in Austria

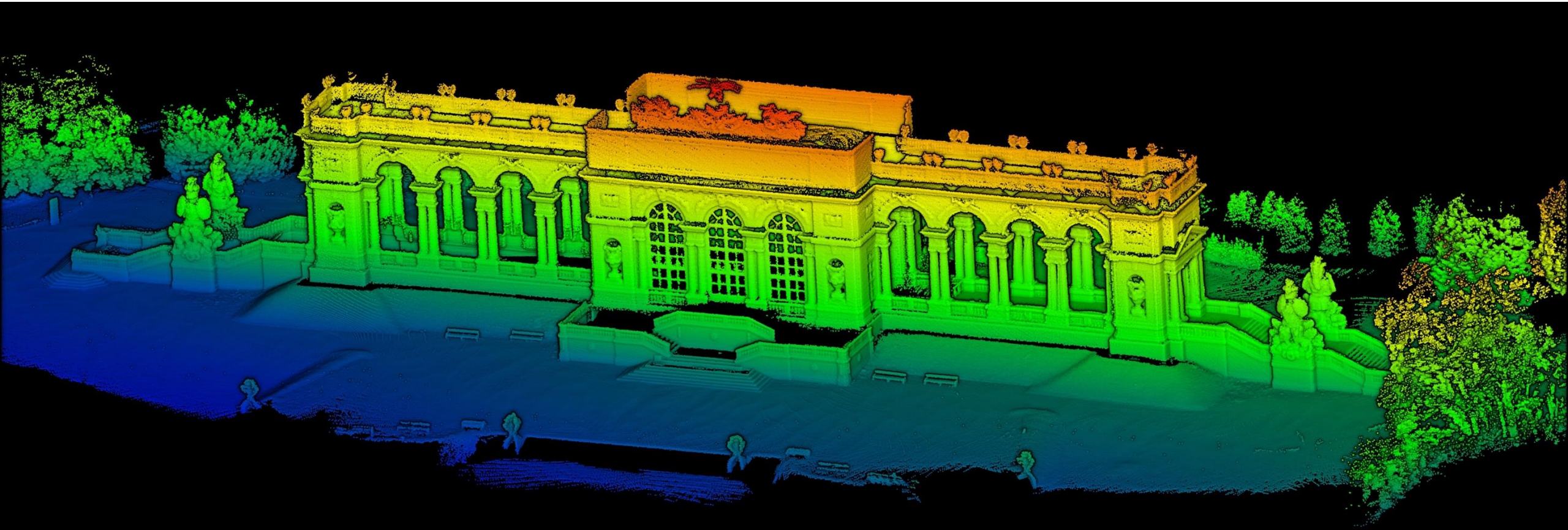
# A SOLUTION FOR ANYONE

- Turn the GLidar on by pressing the power-button
- Connect to a hotspot on a GLidar with your device
- Open a free web app developed by General Laser
- Choose the scanning parameters: for horizontal field of view, min/max distance, reflectivity
- Perform the scanning, check in the preview if you captured everything or redo if needed
- Have your point cloud on the screen
- Export the point cloud for further use



# ENABLES BOTH PORTABLE AND TERRESTRIAL SCANNING

Featuring unique flexibility due to its modular design and an interchangeable handle, GLidar offers an unmatched versatility of usage, providing opportunities for both portable and terrestrial lidar scanning.





- Light & Handheld
- Comes with a battery
- Ideal for handheld dynamic applications



- Stationary
- Comes with a battery
- Ideal for use on a moving platform such as vehicle, boat, or stationary positioned

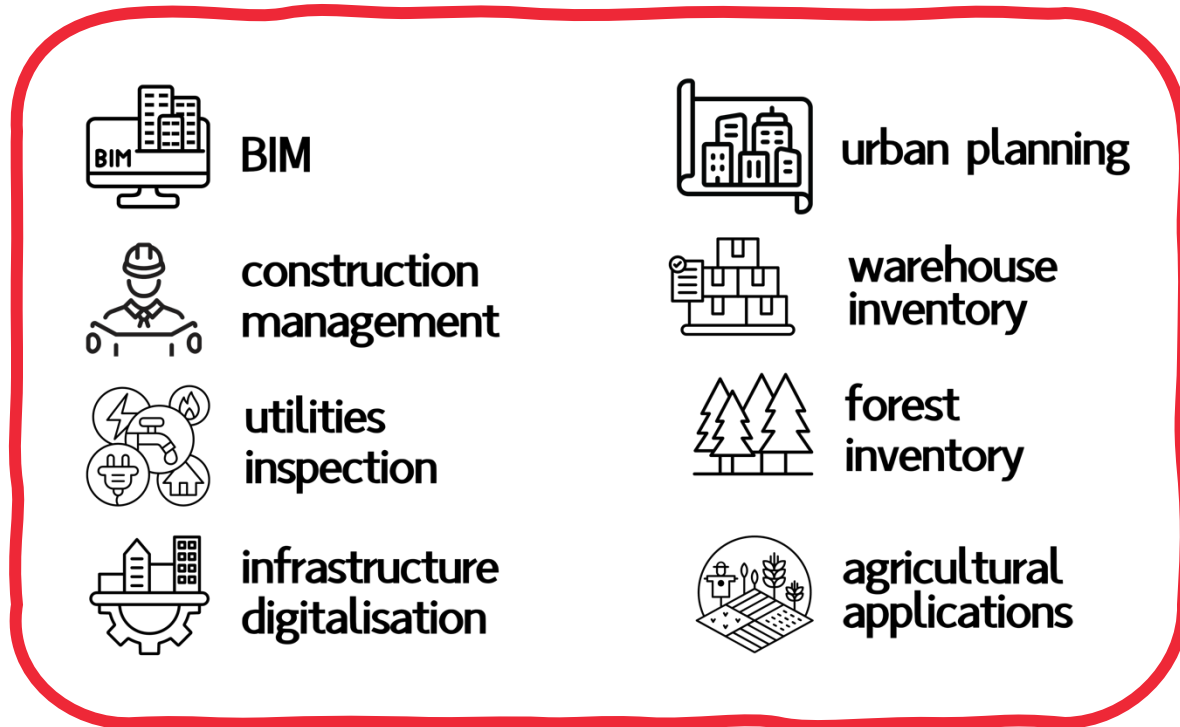







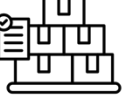


- Compact & Mobile
- Designed for backpack
- Integration
- Uses battery from the backpack setup



- Flat Bottom
- Stationary
- Designed for highly dynamic UAV and USV applications
- Uses battery from the backpack setup

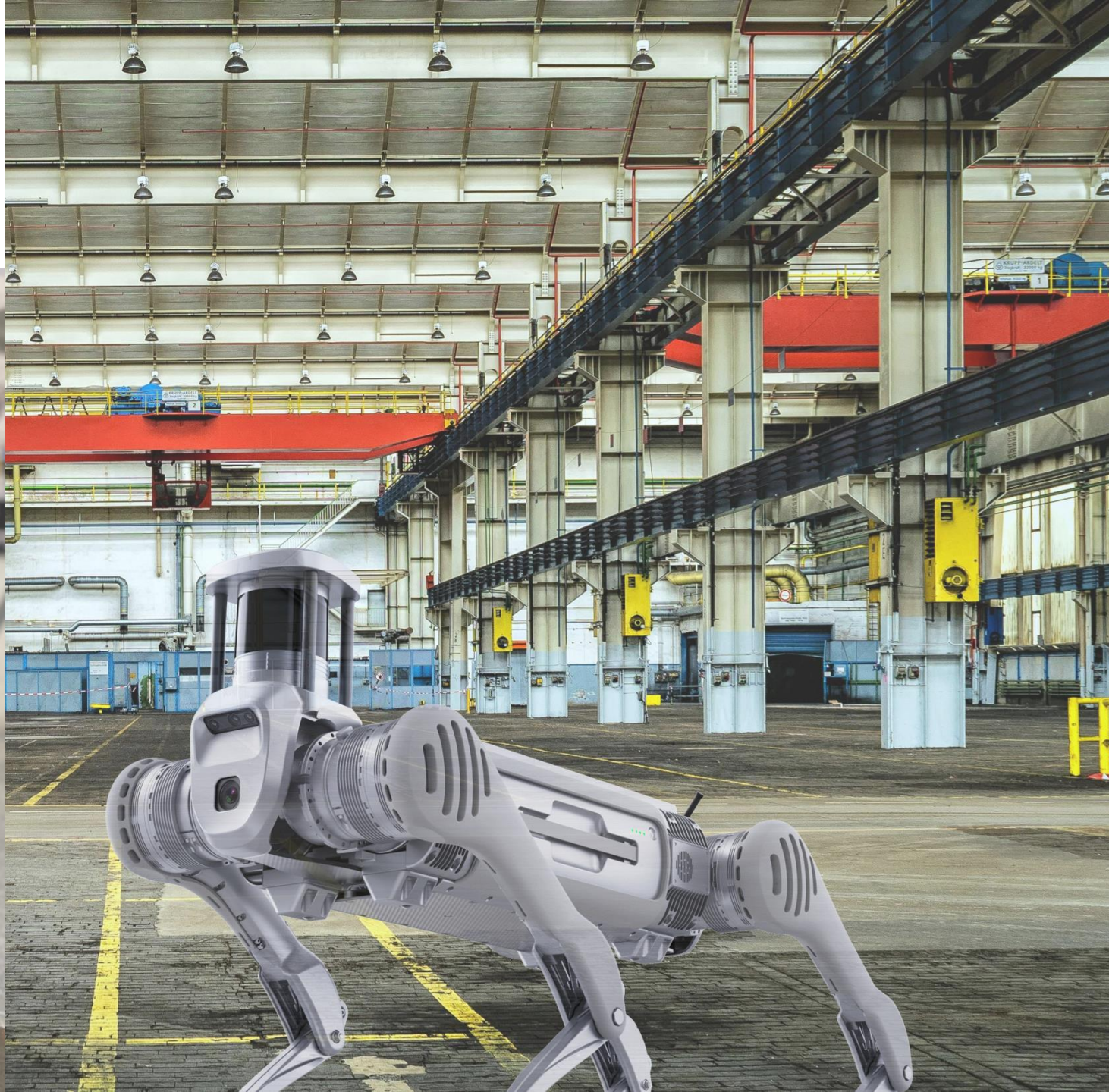
## INDUSTRIES & APPLICATIONS



-  **BIM**
-  **construction management**
-  **utilities inspection**
-  **infrastructure digitalisation**
-  **urban planning**
-  **warehouse inventory**
-  **forest inventory**
-  **agricultural applications**



# AUTONOMOUS MOBILE ROBOTS



# CUSTOMISED ROBOTIC PAYLOADS

We put together integrated robotic solutions for specific projects in autonomous inspection and documentation.

## Camera + Sensors

360° Camera, Infra-red camera, gas sensor, air quality sensor



**LiDAR Sensor (Ouster)**  
For indoor navigation



**RTK GNSS System (General Laser)**  
Cm-precise positioning for outdoor navigation  
**Dual Wifi and Dual LTE Modem**



## TracPilot (General Laser)

Control system for autonomous navigation and path planning for indoor and outdoor

## Robot Chassis (AgileX, Unitree Robotics, Hexmove)

Robotic platform selected for a specific application  
Chassis/ Tracked/ Quadruped



We have also built the world's first machine controller that enables any vehicle compatible with ISO-Bus or CAN-Bus protocol to navigate via both LiDAR SLAM and RTK.

- ➔ Affordable
- ➔ Mobile
- ➔ Highly accurate
- ➔ Reducing Risks to Human Lives
- ➔ Enhancing Efficiency

TRACPILOT AUTOPILOT

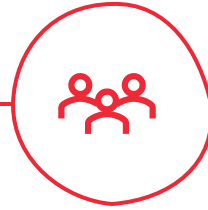


**Use case**  
an autopilot  
integrated  
with a fire  
extinguishing  
robot.



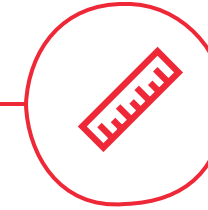
## INNOVATION

We offer high-performance positioning technology at a cost-effective price, making advanced functions accessible to everyone and everywhere.



## COMMUNITY

We have years of excellent track record in providing support and guidance to our dealers and customers. We are always here for your questions and feedback.



## INTEGRATION

We strive to provide nuanced and well-rounded solutions, constantly developing connections and fusions between all the many developments & tools we offer.



**Thank you for your attention.**

We will gladly address any questions you might have and are available at [office@general-laser.at](mailto:office@general-laser.at) or +43 1 890 20 02.

Vienna, Austria

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