JAWESO

High Resolution Mobile Mapping Systems

Advanced imaging, LiDAR, and positioning technology for precise, efficient, and reliable geospatial data capture.

- Ultra-high image resolution
- Easy system operation
- Efficient data processing
- DoubleSLAM technology

Our Hardware Portfolio

Panora Pro PL

All-in-one 200-megapixel Mobile Mapping System with two rugged LiDAR sensors and accurate positioning – supported by RTK-GNSS, IMU and SLAM technology.

Panora PL

All-in-one 134-megapixel Mobile Mapping System with two rugged LiDAR sensors and accurate positioning – supported by RTK-GNSS, IMU and SLAM technology.

Panora

134-megapixel panoramic camera. Can be used as a stand-alone device or easily integrated with Mobile Mapping Systems such as Trimble, Riegl and Leica.

Planar

One device with up to six 24.4-megapixel cameras. Easy integration into Mobile Mapping Systems, e.g. JAWESO, Trimble, Riegl and Leica.

	Panora Pro PL	Panora PL	Panora	Planar
Stitched Panorama	200 megapixel / 20k	134 megapixel / 16k	134 megapixel / 16k	6 x 24.4 megapixel each
Shutter type	Global	Global	Global	Global
Pixel size	3.45 µm	2.74 µm	2.74 µm	2.74 µm
Field of view	360° x 180°	360° x 135°	360° x 135°	63.8° x 79.2° or 46.9° x 60°
Max FPS	8 FPS	15 FPS	15 FPS	15 FPS
Max vehicle speed	110 km/h 68.4 mph	110 km/h 68.4 mph	110 km/h 68.4 mph	110 km/h 68.4 mph
IP rating	IP65	IP65	IP65	IP65
Temp. Range	-10°C to 45°C 14°F to 113°F	-10°C to 45°C 14°F to 113°F	-10°C to 45°C 14°F to 113°F	-10°C to 45°C 14°F to 113°F
Storage	4 TB internal + 4 TB ext. SSD (swappable)	4 TB internal + 4 TB ext. SSD (swappable)	1 TB internal + 4 TB ext. SSD (swappable)	1 TB internal + 4 TB ext. SSD (swappable)
LiDAR	2 x 640000 Points per sec. Accuracy: 1 – 2 cm	2 x 640000 Points per sec. Accuracy: 1 – 2 cm	System can be integrated into LiDAR systems	System can be integrated into LiDAR systems.
Real-time output	Imagery, LAS, raw LiDAR and IMU data, trajectory, trigger positions with timestamps and orientation	Imagery, LAS, raw LiDAR and IMU data, trajectory, trigger positions with timestamps and orientation	Imagery, trajectory, trigger positions with timestamps and orientation	Imagery, trajectory, trigger positions with timestamps and orientation
JAWESO-Office output	Stitched and anonymized panoramas, SLAM-optimized LAS/LAZ, trajectory, and trigger positions	Stitched and anonymized panoramas, SLAM-optimized LAS/LAZ, trajectory, and trigger positions	Stitched and anonymized panoramas, synchonized trajectory, and trigger positions	Anonymized images, synchonized trajectory, and trigger positions
Weight	24 kg / 52 Lbs	19 kg / 41 Lbs	13 kg / 28 Lbs	2 kg / 4,5 Lbs
Position	SBG Quanta Plus	SBG Quanta Plus	Standard: Trimble BX992, Fixposition, or additional external sensors	Standard: Trimble BX992, Fixposition, or additional external sensors

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Use Cases

Infrastructure Inspection and Maintenance

Our Mobile Mapping Systems are ideal for inspecting and maintaining infrastructure. High-resolution imagery and accurate point clouds data enable detailed assessment of roads, bridges, tunnels, and related assets. This helps identify wear, structural damage, and potential hazards early, supporting timely maintenance and improving safety, reliability, and long-term asset performance.

Urban Planning and Development

Urban planners and developers can use our Mobile Mapping Systems to create detailed digital twins of urban environments. High-resolution imagery combined with accurate point clouds supports comprehensive planning, design, and visualization workflows. This helps optimize land use, improve transportation systems, and enhance public spaces with reliable, up-to-date spatial data.

Rail Corridor Mapping

Our Mobile Mapping Systems are perfectly suited for rail corridor mapping. By capturing high-resolution imagery, dense point clouds, and accurate positioning data along railway tracks and surrounding infrastructure, operators can monitor track conditions, vegetation encroachment, clearances, and structures such as bridges and tunnels. This supports efficient maintenance planning and improves overall rail safety.

Disaster Response and Recovery

Our Mobile Mapping Systems are highly valuable in disaster response and recovery. By rapidly capturing high-resolution imagery, point clouds, and georeferenced data of affected areas, authorities can assess damage, prioritize response measures, and plan reconstruction activities more effectively. This supports better resource allocation and helps accelerate recovery for impacted communities.

Autonomous Driving

Our Mobile Mapping Systems support the development and deployment of autonomous driving technologies. By delivering high-resolution imagery, accurate point clouds, and precise geospatial data, they provide the detailed and reliable mapping foundation required for advanced driver assistance and self-driving applications. This enables safer navigation and smoother integration into existing transportation networks.

Smart City Applications

In smart city projects, our Mobile Mapping Systems play a key role in creating and updating digital models of urban areas. Combining panoramic imagery, point clouds, and accurate positioning, they support applications such as traffic management, public safety, infrastructure monitoring, and urban analysis. This helps cities become more efficient, sustainable, and responsive to residents' needs.

Construction Progress Monitoring

Construction companies can use our Systems to monitor project progress with high accuracy. High-resolution imagery, point clouds, and digital twins provide a reliable record of construction stages, helping teams track progress, verify work, and compare site conditions over time. This improves coordination, transparency, and communication across all project stakeholders.

Utility Management

Utility companies can use our Mobile Mapping Systems to manage networks more effectively. Detailed imagery, accurate point clouds, and precise positioning data support asset documentation and analysis for power lines, pipelines, water networks, and other utility infrastructure. This enables better fault detection, maintenance planning, and decision-making while reducing downtime and improving service reliability.

"As a publicly appointed expert office we use the JAWESO Panora for inspections and documentation in various sectors. The system is extremely reliable and delivers high-quality 360° images even under tough conditions. The GNSS-supported archiving makes it easy for clients to access and view the images much like StreetView."

Thomas Buskasper, Field Measurement Specialist at SÜHLING Sachverständigenbüro GmbH

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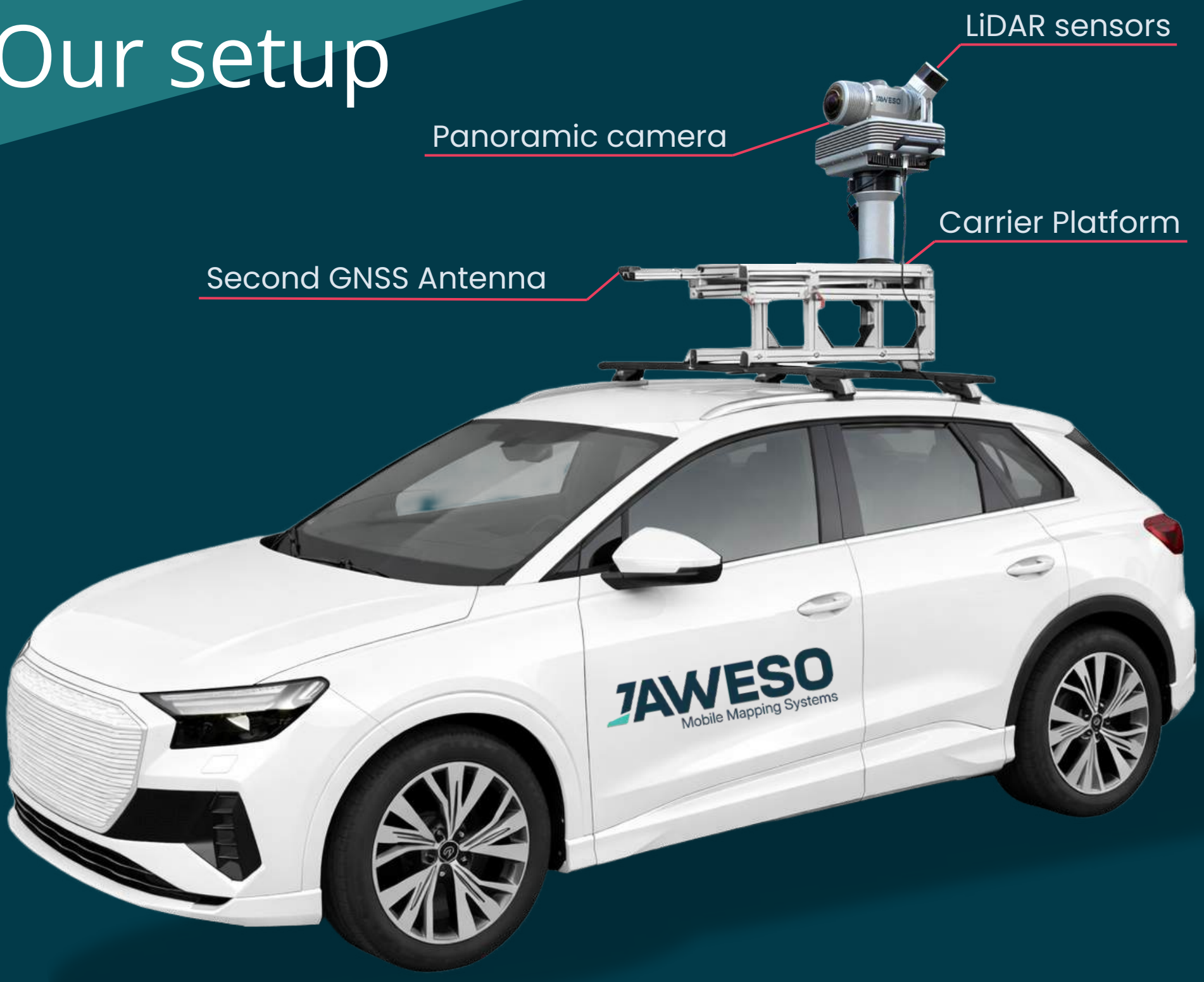
Our setup



Well-designed platform for easy operation

No separate in-vehicle processing hardware required. All processing is seamlessly integrated into the capture module, reducing installation effort to a single power cable.

Single-person installation

▶ Quick setup

▶ User-friendly handling

▶ Easy to transport

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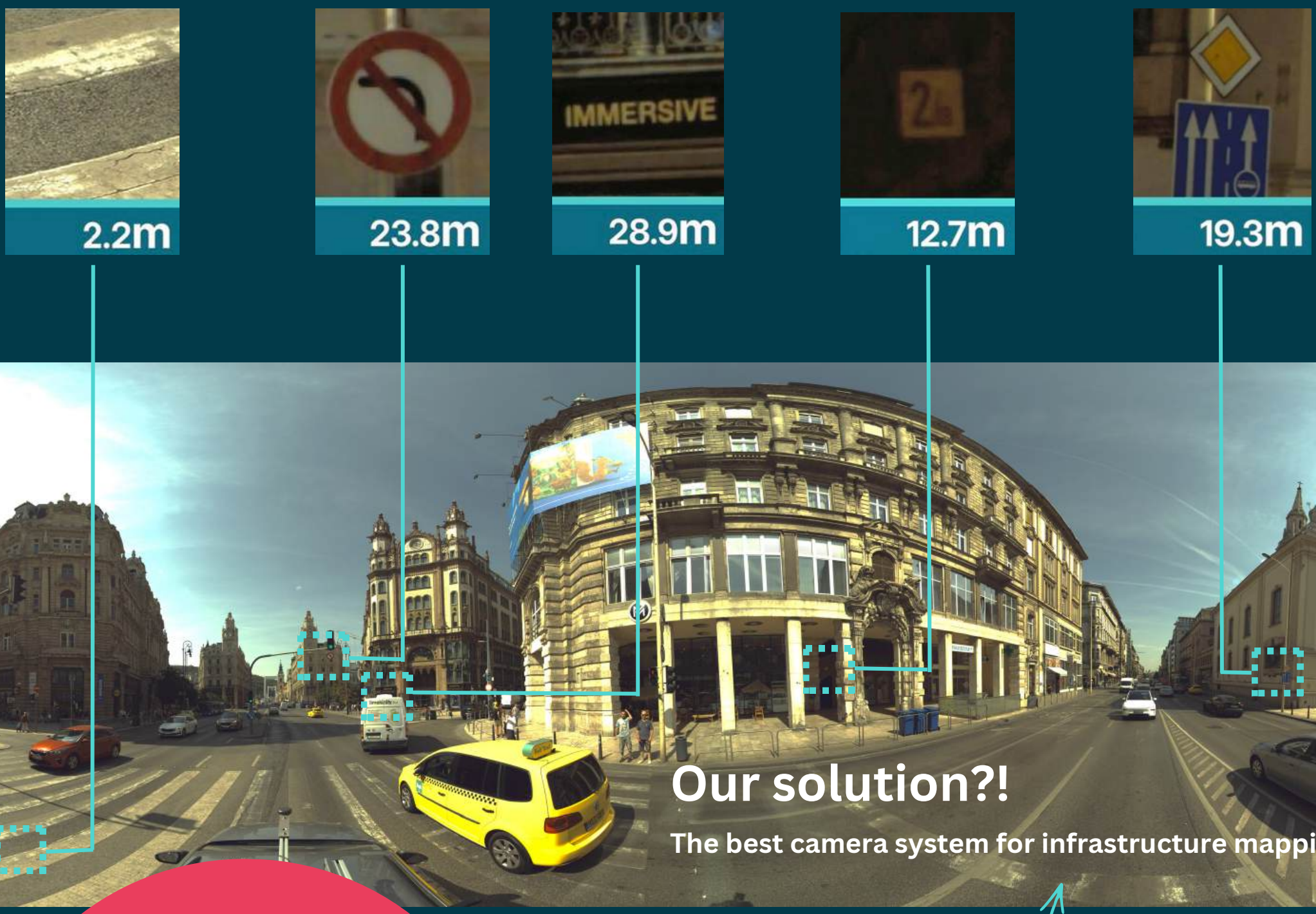
Best-in-class picture quality



"I am absolutely thrilled with Jaweso! From the first contact to the implementation, everything was just right: professional consulting, fast response times, and impressive quality. The team is not only technically excellent but also very pleasant on a personal level – friendly, solution-oriented, and reliable. You really feel understood and well taken care of by Jaweso. I can fully recommend the company and am already looking forward to future projects with them!"

Manfred Greve, Mobile Mapping Operator of Wasser- und Verkehrs-Kontor GmbH

JAWESO Panora Pro PL with 200 MPix

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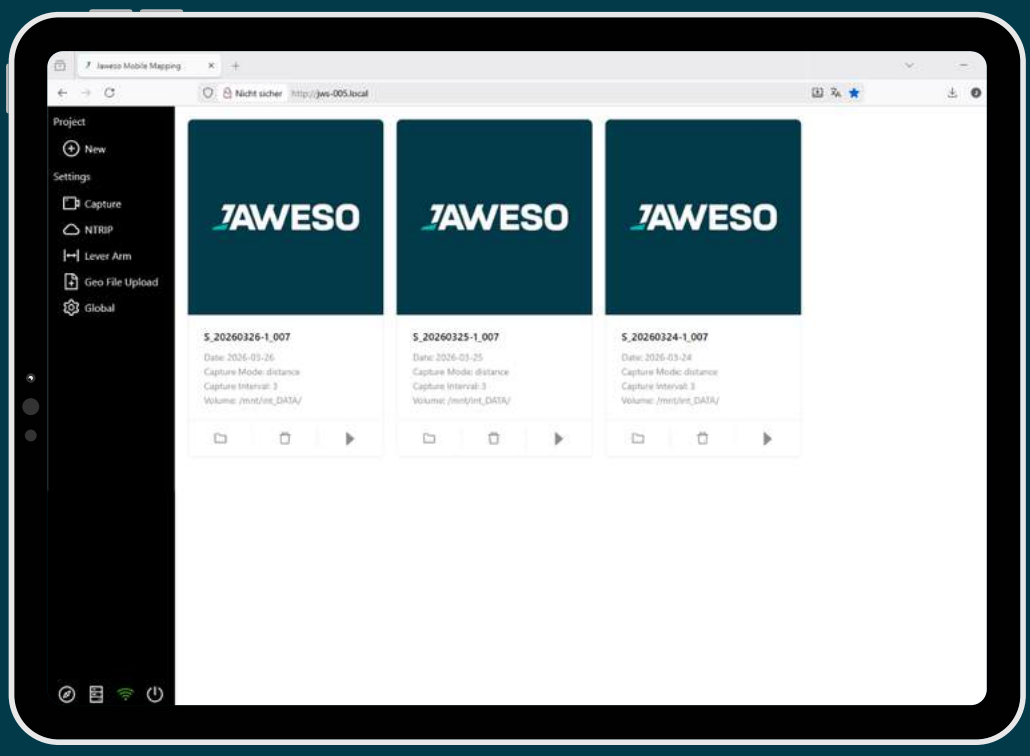
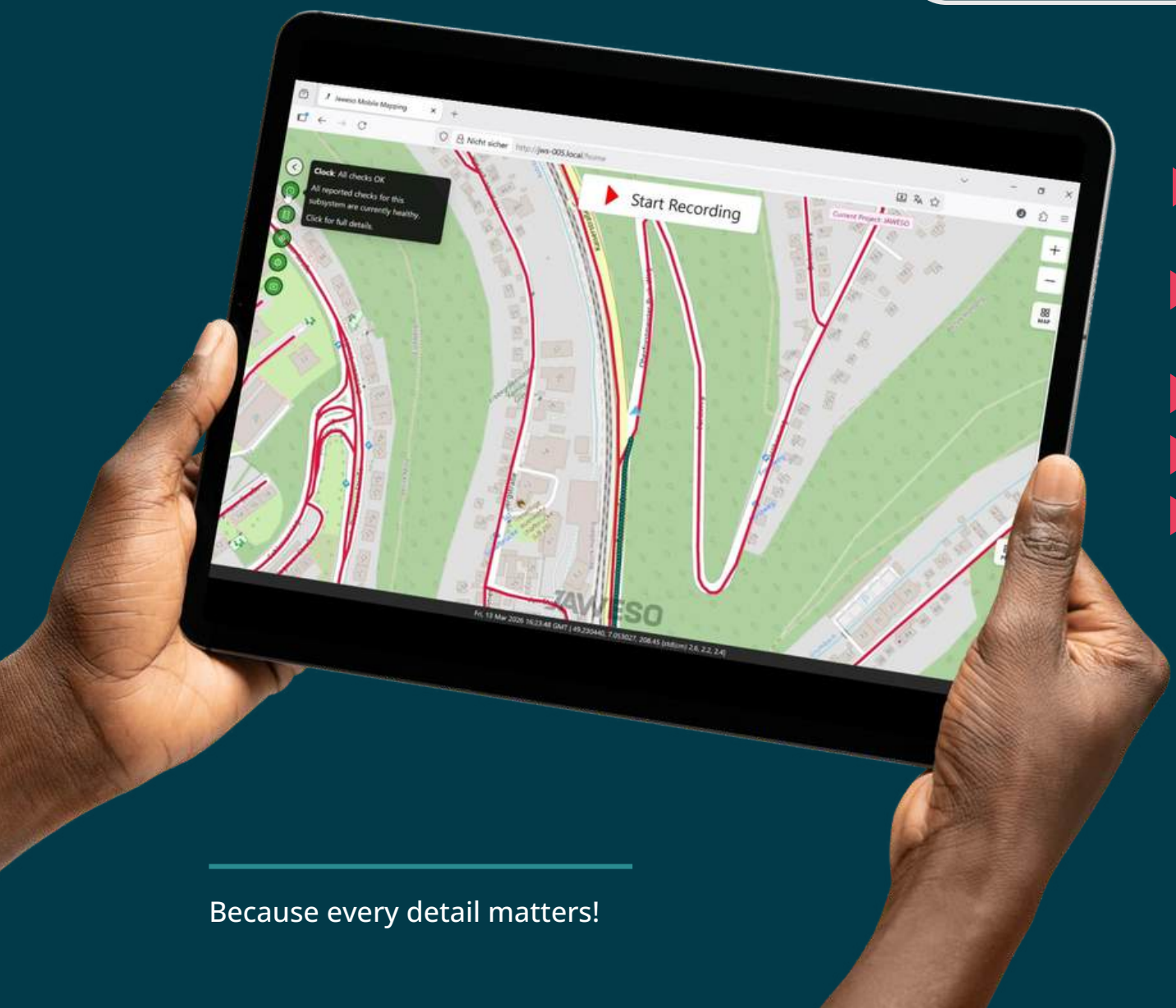
JAWESO Capture

A browser-based interface for easy system control, live monitoring, and project-based workflows.

The JAWESO WebUI makes operating the Mobile Mapping System simple, efficient, and flexible. It can be accessed from a laptop or tablet via Wi-Fi, network cable, or optionally remotely. Users can create projects, continue them on later days, monitor system status live, preview images, manage map layers, upload external files and configure advanced positioning and trigger settings — all in one intuitive interface.

- WebUI access via Wi-Fi or Ethernet
- Project-based workflow
- Continue projects across multiple days
- Advanced positioning and trigger settings
- Remote support access by JAWESO when required





- Map view with optional satellite and Railway-Map layers
- Status bar for camera temp., system load, and storage
- Live image preview
- Upload KML, KMZ, and SHP files
- Display recorded trajectories

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JAWESO Office

Powerful post-processing for panoramas, point clouds, synchronization, and direct viewer upload.

JAWESO Office is a Windows-based post-processing software with a browser-based interface for efficient and intuitive data processing. It supports the complete workflow from panorama generation and point cloud optimization to data synchronization, colorization and direct viewer upload. All outputs are provided in standard formats for seamless integration into third-party software and downstream workflows.

- **Panorama generation:** Stitches single images into panoramas with optional GDPR-compliant anonymization of faces and license plates, plus advanced image adjustment and filtering options.
- **DoubleSLAM point cloud optimization:** Further improves the real-time point cloud based on raw data, with optional filters such as moving object removal.
- **Point cloud colorization:** Colors the point cloud using the generated panoramas.
- **Data synchronization:** Synchronizes all datasets, including trigger positions, optimized trajectories, external trajectories, lever arms, and angular offsets.
- **Direct viewer upload:** Uploads processed data directly to viewers such as MapTerra, with integration of other solutions also possible.

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Benefits of JAWESO

All-in-one efficiency

JAWESO combines capture, monitoring, and post-processing in one streamlined workflow. This reduces complexity in the field, minimizes setup effort, and helps teams work faster from acquisition to final output.

High-quality data

With high-resolution panoramic imaging, precise positioning, and optimized point cloud processing, JAWESO delivers data quality built for professional surveying and digital twin applications. The result is reliable, detailed output for demanding projects.

Intuitive operation in the field and office

The browser-based interfaces for both capture and post-processing make the system easy to use, even in complex projects. Project-based workflows, live system monitoring, and smart processing tools help operators stay efficient and in control at every stage.

Flexible integration into existing workflows

JAWESO outputs data in standard formats, making it easy to integrate with third-party software, viewers, and customer-specific environments. This gives users full flexibility for processing, visualization, and long-term data use.

Made in Germany

Because every detail matters!

Learn more about JAWESO

www.jaweso.com