THE FUTURE IS TRK

Leica Pegasus TRK Evo

Brochure

Autonomous. Intelligent. Simplified.

- when it has to be right

Leica Geosystems

leica-geosystems.com

Evolut

ion

The Leica Pegasus TRK500/700 Evo Mobile Mapping System is robust and reliable so you can map even the most demanding environments, delivering top-notch performance for real-time results. The Pegasus TRK delivers greater levels of precision for critical transportation infrastructure maintenance faster and clearer, helping you unlock new business opportunities.

The Future is Autonomous	Transforming mobile mapping with autonomous data collection for project completeness.
The Future is Intelligent	Delivering intelligence with advanced positioning, data-efficient sensors and adaptive imagery systems for rich, immersive detail to expand use cases.
The Future is Simplified	Simplifying set-up, operation and application to expand opportunities while reducing personnel resource requirements.

Main Unit

*Pegasus TRK700 Evo displayed above

Pegasus TRK500 Evo	The data-efficient single scanner option, capturing up to 2 million points per second.
Pegasus TRK700 Evo	Pegasus TRK700 Evo - with dual scanners for when greater point cloud density is required, capturing up to 4 million points per second.

Simplicity in design
Simple in use

Battery Unit
Expand when you need

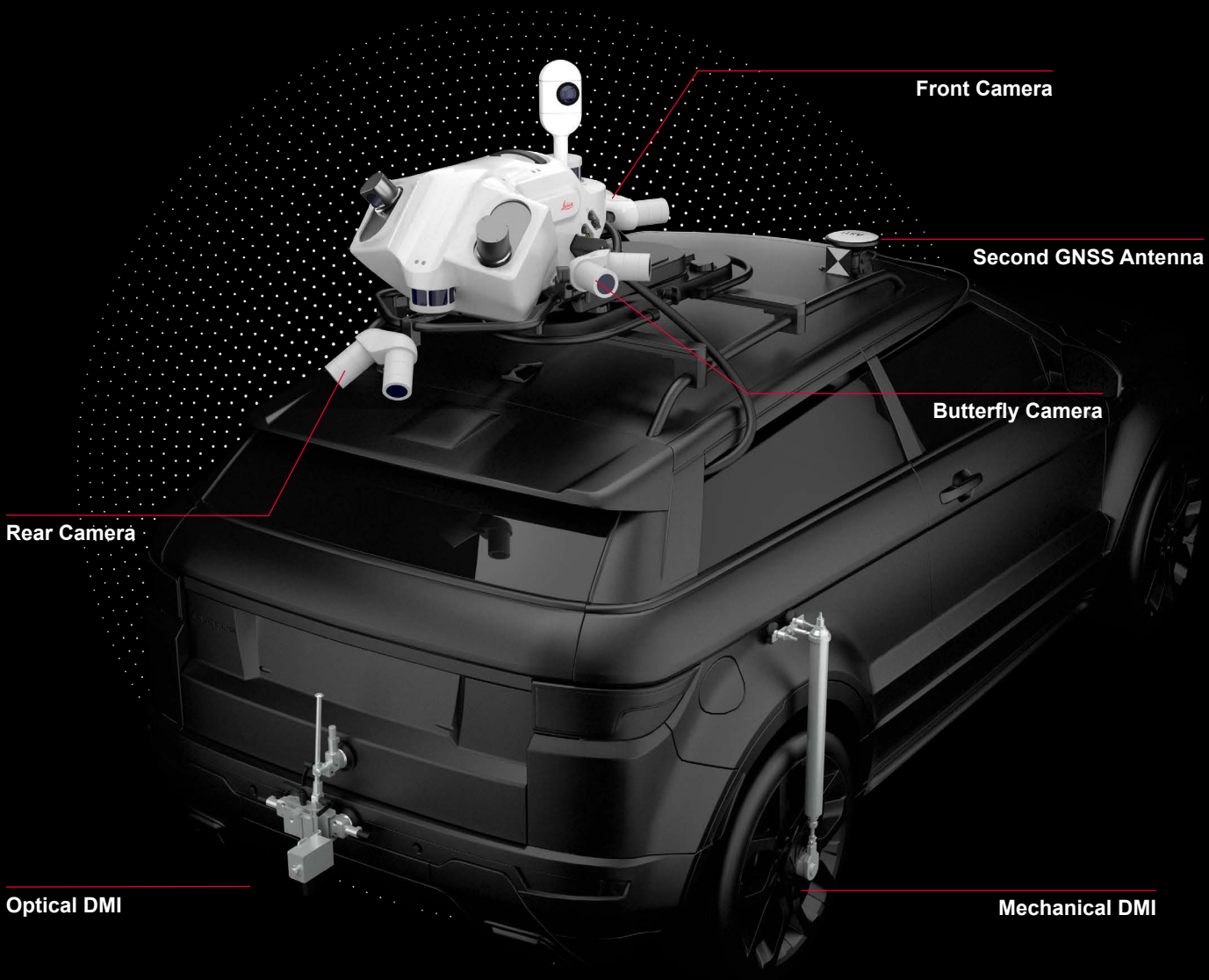
With safe transport mode, the Li-Ion batteries can be shipped safely so you can travel the world at ease. Expandable with up to three batteries for up to 12 hours of operation or hot-swap for continuous power, the Pegasus TRK power system keeps you moving.

Control Unit
Works while you rest

Created to transform the workflow for reality capture professionals, the control unit allows you to go straight from data capture to processing on-the-fly, right when you need it. No more time-consuming transcoding, storage overhead or errors during data transfer.

Expand for more possibilities

Pegasus TRK puts mobile mapping in the hands of more people than ever before. Simple to operate, the Pegasus TRK requires less training so you can cut costs but not performance. Weighing in at just 21 kg with a unique rotating-tilting mounting platform and ergonomic design, Pegasus TRK can safely be set up and operated by just one person. Intuitive software guides you from project planning to project delivery.



Accessories

Carrier platform

The platform rotates into three positions (30°/0°/+30°) which allows data collection from the TRK500 on the diagonal and a cross point cloud pattern from multi-pass acquisitions, usually only achievable with a dual scanner.

Modular camera system

Seamlessly integrate up to four additional 24MP pairs of cameras - to capture front, side, and pavement angles for texture analysis and intrinsic calibration for stitching-free panorama imagery.

Butterfly side cameras

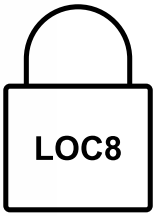
The butterfly side cameras have a dual position, vertical and horizontal, enabling the capture of vertical arches in high-resolution for texturing and damage analysis or horizontal features like traffic signs or civic numbers.

Optical DMI

The optical DMI is absent from the standard slip error of wheel-based DMI and complies with traffic safety regulations by being mountable on the car’s backside and not exceeding the car silhouette.

Second GNSS antenna

The second GNSS antenna improves the initialisation for rail and marine applications. The lever arm is automatically calculated, improving the overall accuracy results.



LOC8 theft deterrence & location solution

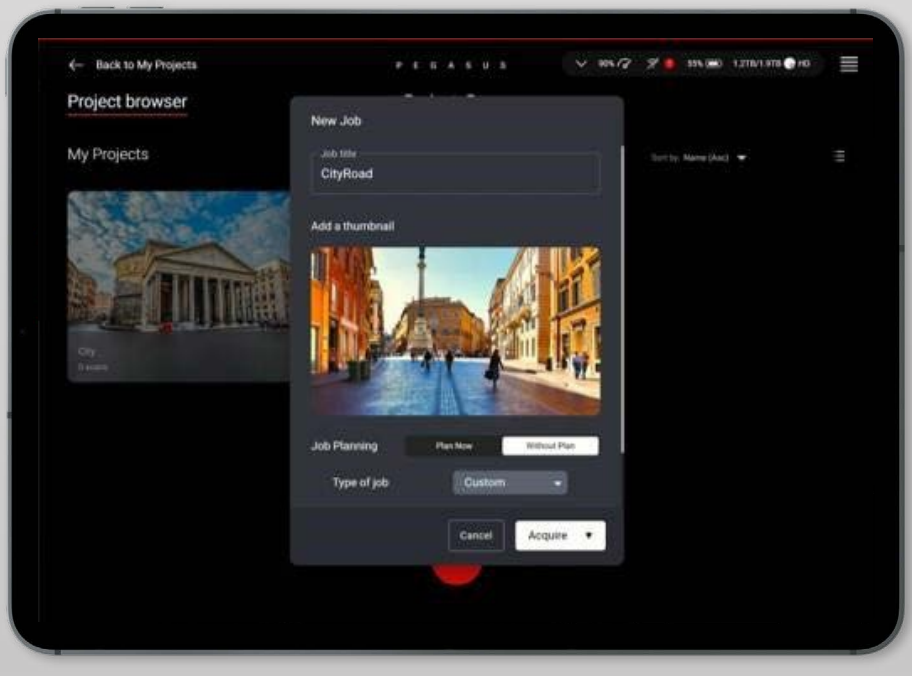
Keep your Pegasus TRK safe with LOC8 - Leica Geosystems’ theft deterrence feature and GPS tracker. Use LOC8 as a fleet management tool to keep track of your assets when they are out on the road to make sure your system is secure wherever and whenever you are mapping.

Softwa

All-new powerful software Leica Pegasus FIELD and Leica Pegasus OFFICE for a field-to-finished workflow – from data capture to processing and final deliverable.

Leica Pegasus FIELD

The Leica Pegasus FIELD software brings autonomy to data collection. Plan routes and set goals for each project from the office or out in the field. With edge computing and on-the-fly processing, data is collected and enhanced in real-time – at the speed of the traffic – and streamed to the cloud as you drive back to the office. This powerful field software will guide you through project set-up and plan projects based on your accuracy requirements and the environment - whether you're on city roads or railroads. Use predefined profiles to achieve the best possible results. Live feedback from audio and visual guidance removes uncertainties to plan and acquire data with confidence.



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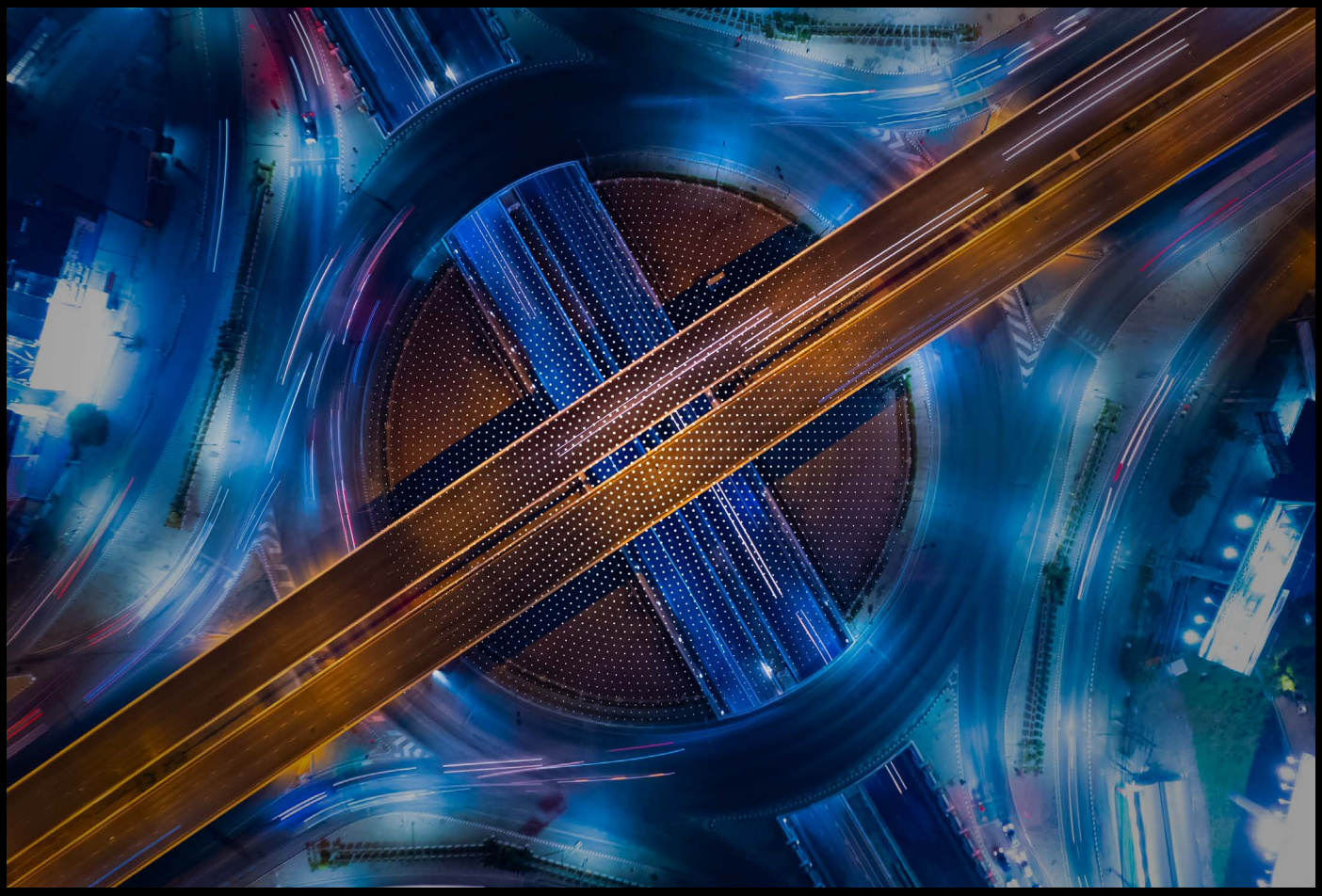
Leica Pegasus OFFICE

Leica Pegasus OFFICE provides a seamless data flow into post-processing and publishing workflows. Complete all your processing requirements in one solution. Refine data with precision geo-referencing and multi-pass trajectory adjustment and create colourised 3D point cloud data that is automatically privacy-compliant.

Your world in millimeters

Measure roads and railways with surgical precision at the speed of traffic. Critical infrastructure was never easier to maintain. Proven accuracy meets next level precision with the Leica Pegasus TRK Evo. Structural imperfections become evident in dense and crisp point clouds. High-definition scanning and dedicated high-resolution pavement cameras take road inspection to the next level.



The mastermind behind it all

Plan and execute projects with confidence. Spontaneous visual and audio feedback along the route makes data collection failure a thing of the past. Pegasus FIELD predicts the time required for planned missions and storage and battery capacity needed to perform the job. Throughout the journey, image previews, accuracy estimations, and live system feedback instill absolute confidence in the data acquisition process.

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Expand and Evolve

Your projects evolve – so does Pegasus TRK Evo. For more angles and greater detail, you can expand. Unique butterfly side cameras have a dual position - vertical and horizontal - to capture vertical arches in high resolution for texturing and damage analysis or horizontal features like signs or civic numbers. Traffic signs are documented by the front camera and adding a rear camera expands applications by focusing on the road surface for detailed pavement analysis.

Bring images and data to life

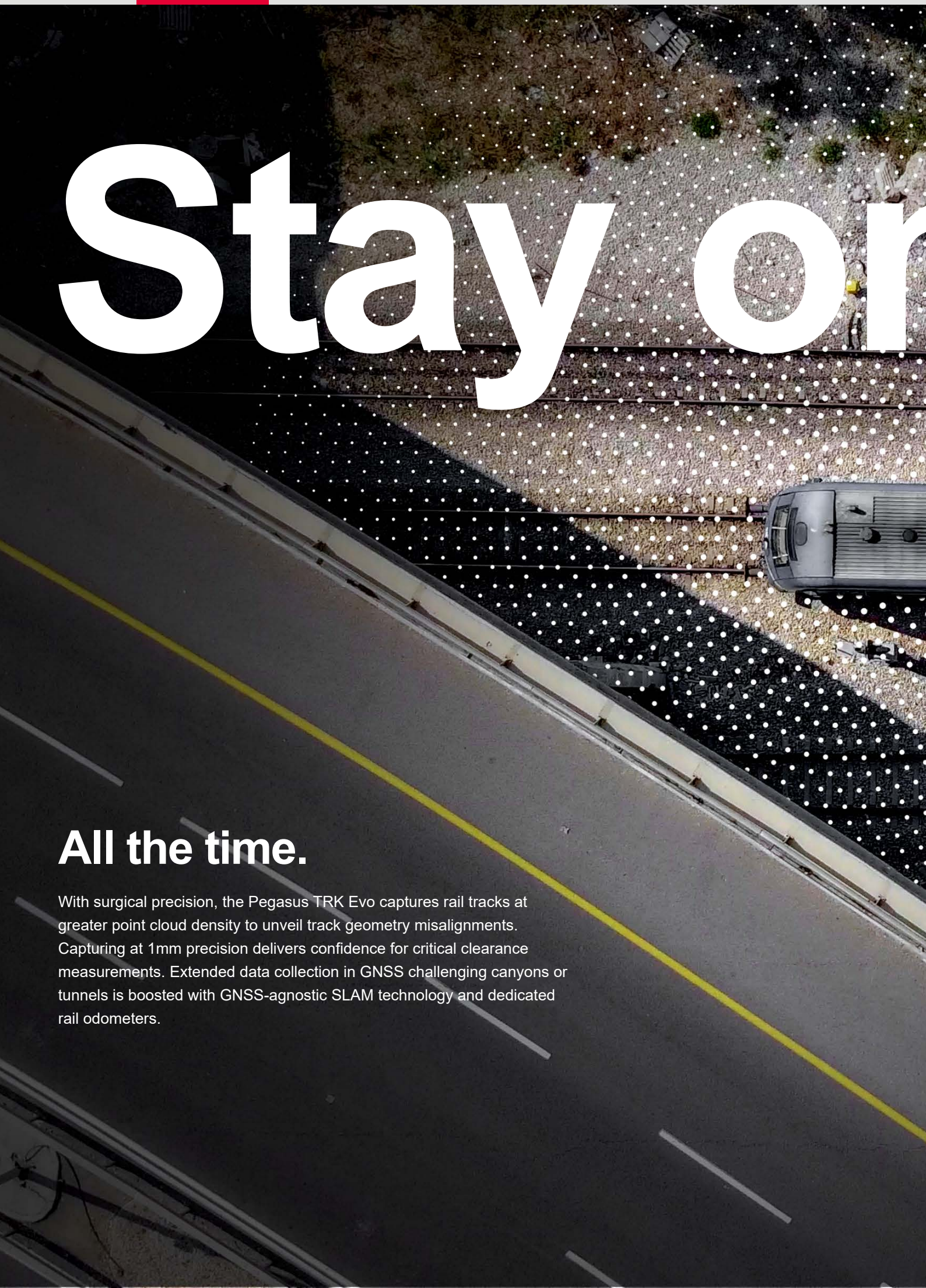
Best-in-class colour truth - brought to life as it is in reality. Pegasus TRK features a SmartFusion ‘butterfly’ camera system with up to 120MP integral view. Boosted with add-on front, side and rear pavement cameras, TRK is expandable with a click. The additional cameras multiply the resolution, creating data-rich imagery. Enhanced calibration delivers true colour imagery according to the CIEDE2000 colour difference formula.

A delta was never so small

The sophisticated integration of IMU and SLAM technology in Pegasus TRK’s sensor architecture enables geo referencing in challenging GNSS denied environments. Precision RTK positioning gives location accuracy down to the centimetre, in real-time. Trajectory is improved when optical DMI accessories are installed on the back of the vehicle to measure the travel distance in GNSS challenging conditions accurately, avoiding traditional slip error of wheel-based DMI.

Your business in motion

Fully integrated modular imaging system allows you to add more cameras for more angles, more details and more possibilities. Automatic camera calibration simplifies and streamlines the system set up to expand and go. Collecting at up to eight frames per second, no details are missed.



All the time.

With surgical precision, the Pegasus TRK Evo captures rail tracks at greater point cloud density to unveil track geometry misalignments. Capturing at 1mm precision delivers confidence for critical clearance measurements. Extended data collection in GNSS challenging canyons or tunnels is boosted with GNSS-agnostic SLAM technology and dedicated rail odometers.

track.

Leica Geosystems – when it has to be right

With more than 200 years of history, Leica Geosystems, part of Hexagon, is the trusted supplier of premium sensors, software and services. Delivering value every day to professionals in surveying, construction, infrastructure, mining, mapping and other geospatial content-dependent industries, Leica Geosystems leads the industry with innovative solutions to empower our autonomous future.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,500 employees in 50 countries and net sales of approximately 5.4bn EUR. Learn more at hexagon.com and follow us @HexagonAB

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