THE
FUT
URE
IS|TRK

This is the Future
of Mobile Mapping

Autonomous. Intelligent. Simplified.
Leica Pegasus TRK Neo

leica-geosystems.com/pegasustrk

- when it has to be **right**

Leica
Geosystems

SYSTEM OVERVIEW

The Leica Pegasus TRK Neo is a high-performance mobile mapping system designed for advanced geospatial data collection at scale. It combines long-range scanning with high point cloud density, capturing up to four million points per second to deliver exceptional detail over vast areas. This makes it the ideal solution for demanding applications such as transportation infrastructure, environmental monitoring, and large-scale industrial site surveys. Available as Pegasus TRK500 Neo or TRK700 Neo, it offers single or dual-scanner configurations, allowing users to optimise data capture based on project requirements.
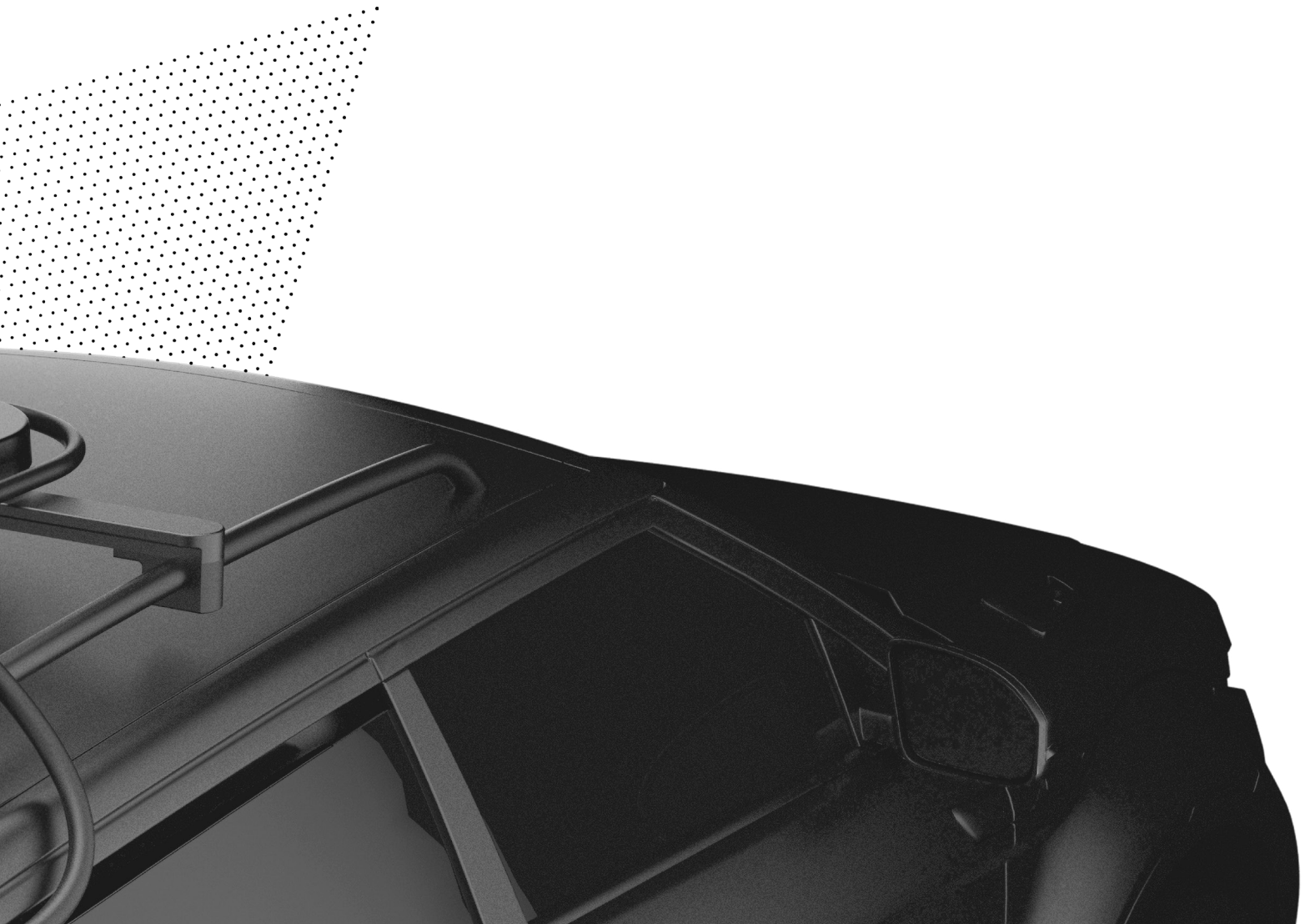
CAPTURE

With quick deployment and a robust design, the Pegasus TRK Neo ensures efficient, reliable performance, even in demanding environments. Its advanced sensing and positioning technologies provide high-resolution data capture in real time, delivering the detail you need with minimal effort.

PROCESS

Seamless integration with Leica Pegasus FIELD and OFFICE simplifies workflows from data collection to final deliverables. RTK-enabled in-field processing and direct data export help reduce turnaround time and improve efficiency, while post-processing options in Pegasus OFFICE provide additional refinement.

DELIVER

Turn data into decisions with high-quality, georeferenced outputs. Whether mapping hazardous environments like mining sites, infrastructure networks, or digital twins, the Pegasus TRK Neo delivers precise, high-density results, ready to use when you need them.

Leica Pegasus

Main Unit*

360° Panoramic Camera

Integrated Multi Constellation GNSS

Main Scanner

Hybrid Module

Camera Ports

Hybrid Module

LOC8 Theft Deterrence & Location Solution

Handle

Universal Sensor Port

Camera Ports

Power Button

Main Sensor Connector

*Pegasus TRK500 Neo displayed above

Pegasus TRK500 Neo

Pegasus TRK500 Neo - the data-efficient single scanner option, capturing up to 2 million points per second.

Pegasus TRK700 Neo

Pegasus TRK700 Neo - the high-density dual scanner option, capturing up to 4 million points per second.

Simplicity in design. Simple in use.

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.

Battery Unit
Expand when you need.

With its secure transport mode, the Li-ion batteries can be shipped safely so you can travel the world with ease. Expandable with up to three batteries for up to one full workday or hot-swap for continuous power, the Pegasus TRK power system keeps you moving.
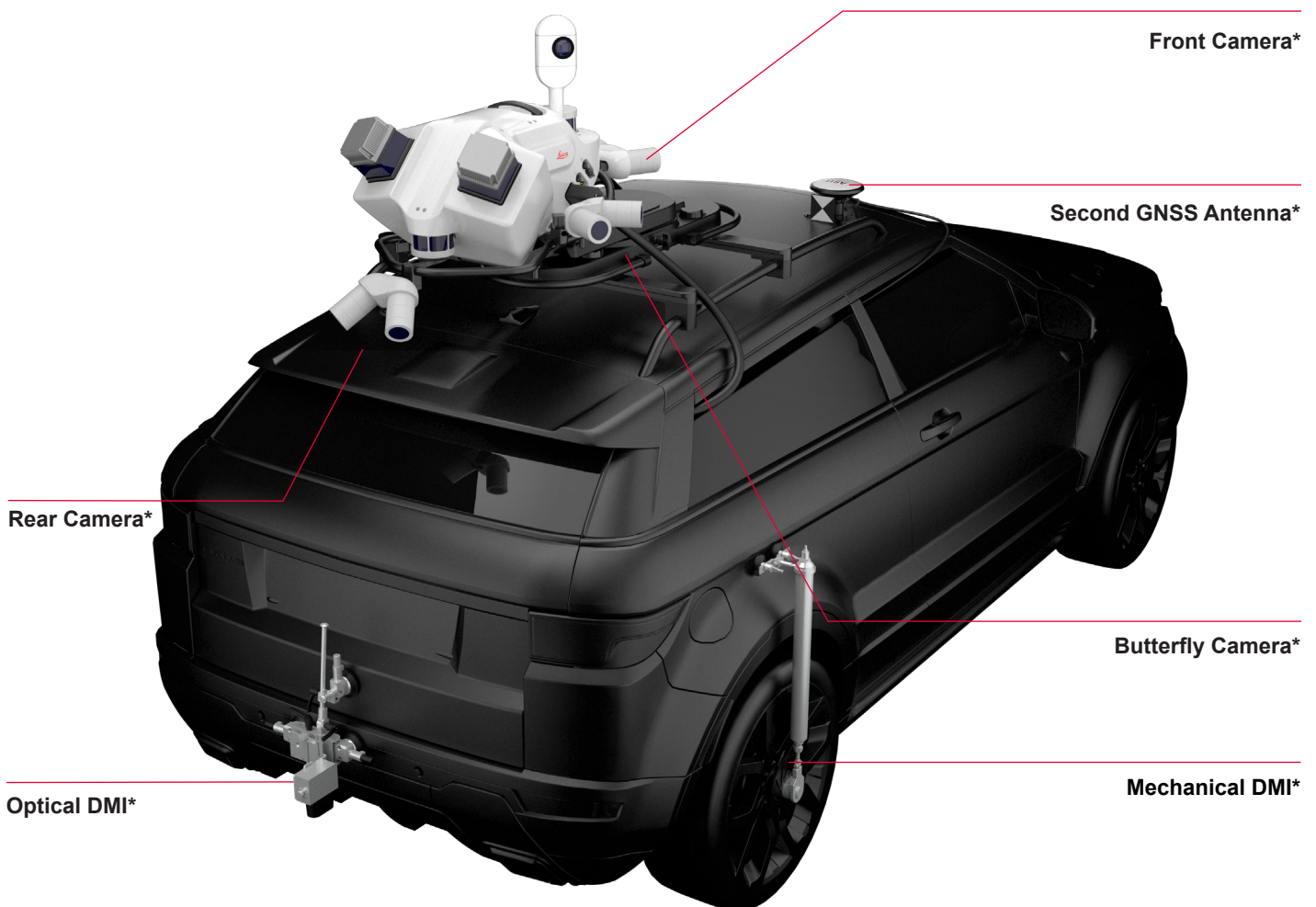

Control Unit

Battery Unit(s)

Endless Opportunity

Pegasus TRK puts mobile mapping in the hands of more people than ever before. Simple to operate, the Pegasus TRK requires less training, resulting in reduced costs without compromising performance. Weighing in at just 18kg with a unique rotating-tilt mounting platform and ergonomic design, Pegasus TRK can be safely set up and operated by one person. Intuitive software guides you from project planning to project delivery.
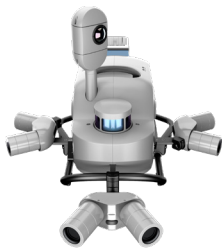

Front Camera*

Second GNSS Antenna*

Rear Camera*

Butterfly Camera*

Optical DMI*

Mechanical DMI*

*Optional accessories

Accessories

Carrier
platform

The platform rotates into three positions (30°/0°/+30°), allowing the TRK500 to collect data in a diagonal and cross-point cloud pattern during multi-pass acquisitions, an effect typically only achievable with a dual scanner.

Modular
camera system*

Seamlessly integrate up to four additional 24MP pairs of cameras - to capture front, sides, and pavement angles for texture analysis and intrinsic calibration for seamless 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.
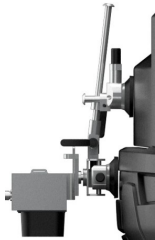
Optical
DMI*

The Optical DMI measures travelled distance by optically tracking road surfaces. Designed as a rear-mounted device, it provides precise distance readings independent of wheel rotation. Its compact mounting ensures compliance with traffic safety regulations by remaining within the vehicle's silhouette.

Second
GNSS antenna*

The second GNSS antenna improves the initialisation for rail and marine applications. The lever arm is automatically calculated.
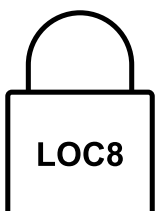
### LOC8 theft deterrence
& location solution

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.

*Optional accessories

SOFTWARE

Leica Pegasus OFFICE

The Leica Pegasus FIELD software empowers autonomous data collection in the field. Plan routes and set specific goals for each project directly on-site. With edge computing and real-time processing, data is collected and processed at the speed of traffic as you head back to the office. This powerful software guides you through project setup and adapts project plans based on accuracy requirements and environmental conditions, whether you are on city streets or railways. Use predefined profiles to achieve optimal results every time.
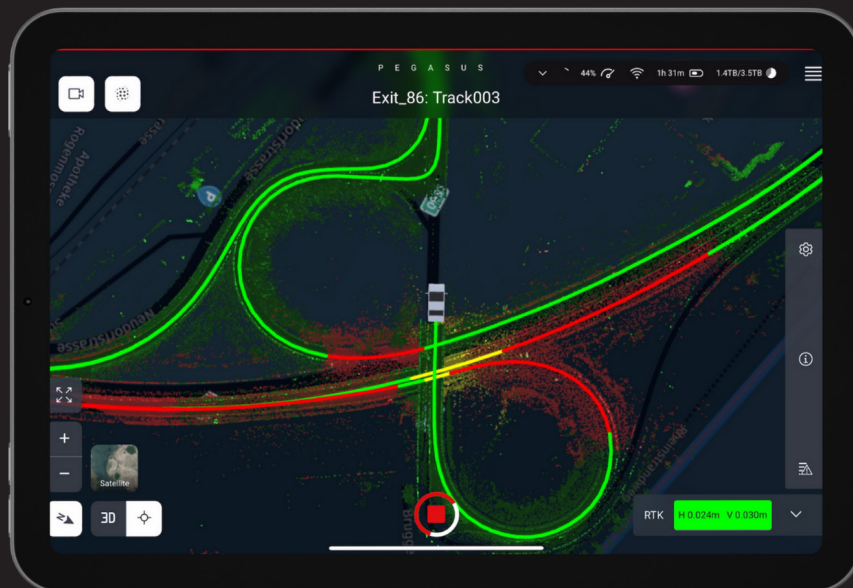
Leica Pegasus FIELD

Leica Pegasus OFFICE enables a seamless data flow into post-processing and publishing workflows, allowing you to complete all processing requirements in one integrated solution. Refine data with precise geo-referencing, multi-pass trajectory adjustment, and the export of several file formats, including multi-return results to support applications such as identifying ground surfaces through vegetation. Create colourised 3D point cloud data that is automatically privacy-compliant.

REAL-WORLD APPLICATIONS

The Pegasus TRK Neo is designed for large-scale, high-density mobile mapping, combining long-range scanning with high point cloud resolution to efficiently capture vast and complex environments. With its single or dual-scanner configurations, it collects up to four million points per second, ensuring comprehensive coverage while minimising data gaps. Real-time processing gives users full control over their workflow, allowing them to validate data on-site and choose between immediate export in Pegasus FIELD or post-processing in Pegasus OFFICE.

For urban development and smart city modelling, the Pegasus TRK Neo's extended range and advanced imaging capabilities enable the capture of detailed, up-to-date city data for strategic planning, infrastructure expansion, and traffic optimisation. SmartFusion technology refines image selection, allowing users to focus only on relevant details, reducing unnecessary data storage.

In environmental monitoring, the Pegasus TRK Neo provides quick and comprehensive repeat captures for tracking land-use changes, monitoring terrain conditions, and conducting flood risk assessments. Its high-density point cloud data delivers a precise foundation for land-use planning and ecological studies.

For transportation networks and road infrastructure, the Pegasus TRK Neo's high-volume data capture ensures accurate pre-construction surveys, progress monitoring, and pavement condition analysis. Automatic track linking streamlines post-processing, ensuring seamless alignment of overlapping routes and reducing manual adjustments.

In hazardous or remote environments, such as mining sites, the Pegasus TRK Neo's long-range capabilities enable detailed terrain mapping from a safe distance, minimising on-site risk. Its high-volume data collection supports resource extraction, operational monitoring, and compliance reporting, providing essential insights for efficient site management.

With its combination of range, density, and processing flexibility, the Pegasus TRK Neo is built for demanding large-scale applications, from smart city modelling and environmental monitoring to transportation planning and mining operations.

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 24,000 employees in 50 countries and net sales of approximately 5.2bn EUR. Learn more at hexagon.com and follow us @HexagonAB.

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