THE FUT URE IS|TRK

Leica Pegasus TRK Neo

Data Sheet

Autonomous. Intelligent. Simplified.

System Performance

Absolute accuracy[1] in [X,Y], [Z]	No GNSS outage	60 sec GNSS outage
Post-processing	11mm, 11mm	14mm, 16mm
RTK	12mm, 12mm	

Scanner

	TRK500 Neo	TRK700 Neo
Effective measurement rate	500kHz	1000kHz
Scan speed	Up to 250Hz	Up to 500Hz
Maximum range 50% reflectivity at 200kHz / 500kHz	490m / 250m	
Maximum range 10% reflectivity at 200kHz / 500kHz	205m / 130m	
Number of returns	Up to 4	
Minimum range	1.5m	
Field-of-view	360° full circle	
Laser class	Class 1, eye safe	

Camera

Maximum system resolution	120MP powered by SmartFuse technology			
Type	360° Panorama	Butterfly Side	Pavement	Front
Resolution	24MP	48MP	24MP	24MP
Mounting	Fixed	Flexible; Hz & V	Fixed	Fixed
Focal length	3.3mm	12.45mm	12.45mm	12.45mm
Calibration	Permanent	Self-calibrating	Self-calibrating	Self-calibrating
Capture mode	By distance at maximum 8 fps			
Anonymisation	Natively ~~AI~~ based, real-time blurring; fully compliant to GDPR			
Colour calibration	According to CIEDE2000			
Brightness control	Real-time, fully automatic			

Positioning

GNSS	555 channel, multi-constellation, multi-frequency
Antenna	Fully integrated, with additional second antenna support
SLAM	Dual SLAM scanner integration for optimised position in challenging conditions
DMI	Supported - see "Accessories" section
RTK	HxGN SmartNet / NTRIP networks

Remote Services

Theft deterrence[2]	Built-in LOC8 theft deterrence and location solution for remote tracking, localisation and locking by mobile phone or computer
Support	Remote in-field support access

Power Supply

Type	Vehicle independent	
	Hot-swappable, up to 3 x Li-Ion Pegasus battery units	
Interface	Ruggedised, IP54, industrial grade, 2.4 inch colour LCD displaying real-time battery health monitoring	
	TRK500 Neo	**TRK700 Neo**
Operating time	7h / battery unit	6h / battery unit
Transport	Transportation mode for ground and aircraft shipping	
	Fully compliant to dangerous goods UN 3480/3481	

Control Unit

Type	Ruggedised, IP54, industrial grade, multi-core PC with built-in machine learning chip
Interface	5.0 inch colour and touch LCD displaying live battery health monitoring
Real-time capabilities	Data pre-processing and AI based tasks
Data storage	2 x 2TB or 2 x 3.8TB, real-time data stream to high performance, removable SSD`s

Environmental characteristics

Maximum speed	130km / h
Temperature range operating	-10°C to +50°C
Temperature range storage	-20°C to +50°C
IP rating	IP67 during operation, fully dust tight and withstands temporary immersion under water
Shock and vibration	Withstands 4g shocks, ISO9022, MIL-STD-810H

Dimensions

	TRK500 Neo	**TRK700 Neo**
Dimensions [L/W/H]	70 / 33 / 56cm	72 / 46 / 56cm
Weight	18 kg	23 kg

Mounting

	Rotational-tilt mount, adjustable in horizontal position -30°, 0°, +30°, tilting up to 45° improving accessibility and ergonomics by reducing 36cm the mounting height

Accessories and Options DMI

(Distance Measurement Instrument)

Mechanical DMI	Mechanical wheel odometer for road applications
Optical DMI	Optical odometer, for road applications compliant to various "Motor Vehicle Safety Regulations"
Rail DMI	Optical odometer, dedicated for rail applications
Cameras	
Front camera	24MP, horizontal mounting, self-calibrating
Rear camera	24MP, horizontal mounting, self-calibrating
Butterfly side cameras	48MP, horizontal or vertical mounting, self-calibrating
GNSS	
Second GNSS antenna	Leica AS11 GNSS antenna for faster initialisation by more accurate heading
Upgrade	Upgrade from TRK500 to TRK700 availabe
Customer Care Packages	Various multi-year CCPs covering support, hardware and software maintenance, extended warranty, re-calibrations and loan units are offered

Software

Pegasus FIELD	Multi-lingual browser-based interface, accessible by Wi-Fi or cable, mission planning, project management, autonomous data acquisition with routed navigation, real-time anonymisation, pre-processing and remote support
Cyclone Pegasus OFFICE	Post-processing software, project management, trajectory refinement, point cloud classification and anonymisation, feature extraction and data export
Cyclone MMS DELIVER	Information extraction and feature extraction for rail and road applications

Swiss Technology
by Leica Geosystems

1.   One sigma with DMI on Leica Geosystems reference area.

2.   Not available in all geographical regions.

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