

LANDINS

GEOREFERENCING AND ORIENTATION SYSTEM

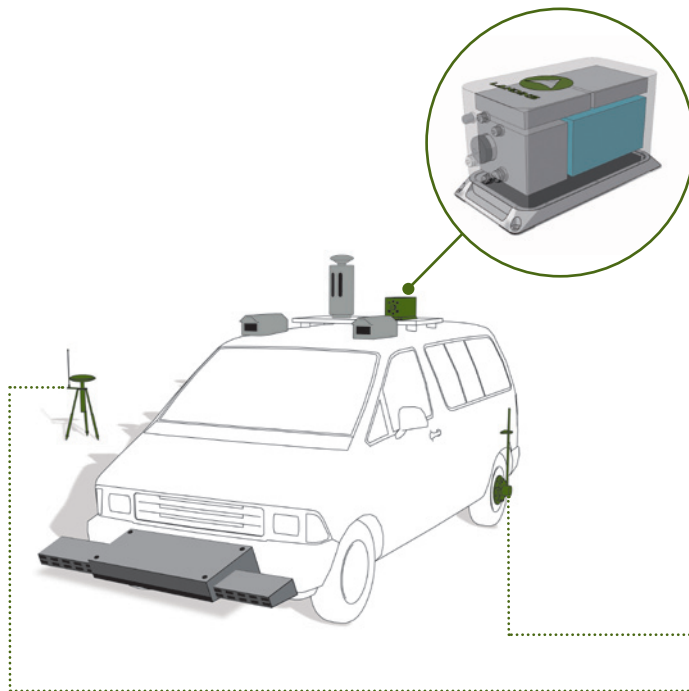


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GEOREFERENCING AND ORIENTATION SYSTEM

LANDINS is a simple, turnkey position and orientation system for land-based mobile applications. It offers dependable position information in urban environments where GNSS is limited, even in real-time, thanks to its high-grade inertial heart designed by IXSEA. LANDINS combines highly accurate position, precise timing and a very fast output rate to meet the requirements of the most demanding road survey and mapping applications.

LANDINS, All-in-one INS/GPS solution



IXSEA FOG IMU:

- High grade FOG and acceleration sensors
- No heading drift even when GNSS is down
- 1 single GNSS antenna only

Data processing:

- Uses IMU, GNSS and DMI for data fusion
- 200 Hz real-time data
- 1,000 Hz event markers
- Precise time-tagging
- Self-calibration when vehicle stops (ZUPTs)
- Fast in-motion initialization

Embedded GNSS*:

- RTK position for real-time use or post-processing

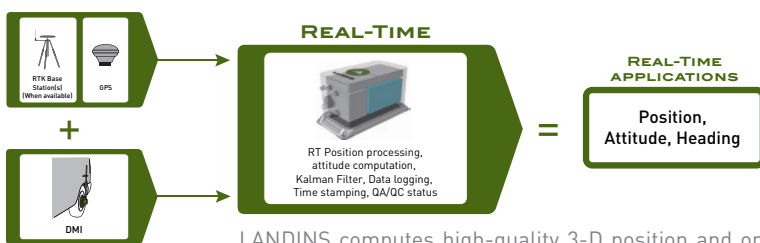
Data logger:

- IMU data for post-processing
- GNSS raw data
- Real-time INS output

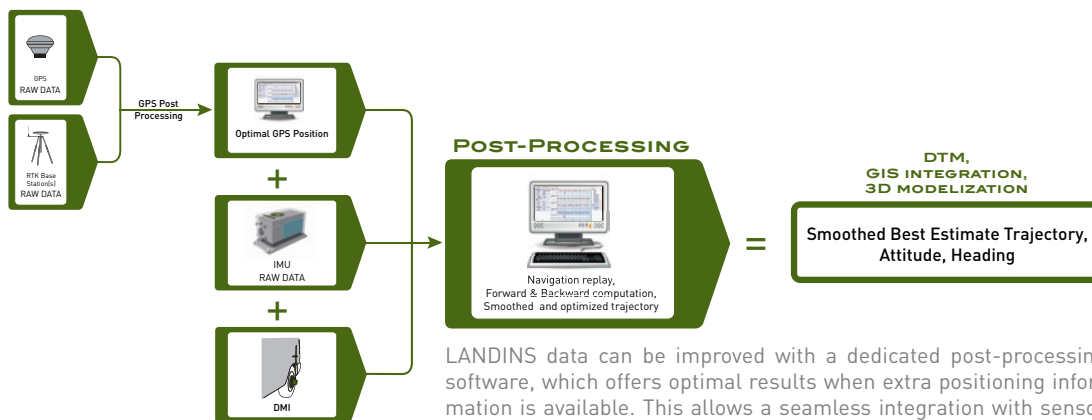
DMI*: Distance Measurement Instrument

GNSS: Reference station*

* Optional



LANDINS computes high-quality 3-D position and orientation data in real-time, even in difficult environments, which makes it an ideal system for fast response applications.



LANDINS data can be improved with a dedicated post-processing software, which offers optimal results when extra positioning information is available. This allows a seamless integration with sensor data collected in the field. It reduces the amount of offline work and boosts productivity.

APPLICATIONS:

Asset management • Vehicle dynamics research • GIS data collection • Tunnel mapping • Vehicle control • Road and pavement survey • Mobile mapping • Urban geomatics • Image capture • Underground survey • Autonomous vehicles • LIDAR mapping • Railway survey



LANDINS

SPECIFICATIONS

PERFORMANCE*

	DGPS	RTK	PPK
True heading (deg)	0.01	0.01	0.01
Roll/Pitch (deg)	0.005	0.005	0.005
Position X and Y (m)	1	0.035	0.02
Position Z (m)	1.5	0.05	0.05

PERFORMANCE* DURING GPS OUTAGES

Outage duration (sec)	15		60		120		300	
	RTK	PPK	RTK	PPK	RTK	PPK	RTK	PPK
True heading (deg)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Roll/Pitch (deg)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Position X and Y (m)	0.07	0.05	0.20	0.10	0.30	0.25	0.70	0.60
Position Z (m)	0.05	0.05	0.10	0.07	0.25	0.20	0.50	0.40

* All figures are RMS
 Specifications subject to change without notice



INS CHARACTERISTICS

Weight:	4.5 kg	Operating temperature:	-10°C to 50°C
Size:	275 mm x 136 mm x 175 mm	Storage temperature:	-40°C to 80°C
Embedded GNSS*:	L1/L2, Glonass, RTK	Logging capacity:	up to 48 hrs (IMU, INS & GNSS data)
Power:	consumption: < 18W input range: 12 to 32V DC	MTBF:	> 30,000 Hours

INS INTERFACES

3 "event markers":	100 μ s time stamping accuracy, up to 1,000Hz
Output refreshing rate:	up to 200 Hz
Latency:	< 3 ms
Time tagging:	PPS signal
Ethernet 100 Mbits:	-configuration, monitoring, ftp/http access -5 logical ports
2 serial inputs:	RS232/422
2 serial outputs:	RS232/422
Pulses:	3 in/2 out
USB host:	for real-time logging or data transfer
DMI embedded interface:	-TTL dual-phase or single phase & sign signals -12-24V dual-phase or single phase & sign signals -open/close switch & sign signals

* Optional



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