ATLANS-C

MOBILE MAPPING POSITION AND ORIENTATION SOLUTION

IXBLUE
DEEP INSIGHT. SHARPER SENSES.

ATLANS-C

MOBILE MAPPING POSITION AND ORIENTATION SOLUTION

THE SMALLEST

ATLANS-C is a high performance all-in-one position and orientation solution for both land and airborne mobile mapping applications. **ATLANS-C** provides integrated smart coupling technique between **iXBlue** fiber-optic gyroscope (FOG) inertial navigation system (INS) and integrated real-time kinematic (RTK) data from Septentrio global navigation satellite system (GNSS) receiver.

It provides extremely robust continuous positioning in urban environments, where GNSS signals can be obscured, intermittent, or possibly distorted by multipath / reflective surfaces. With its robust performance, small size, low weight, low power consumption, and low integration effort, it is optimized to meet the demanding high-quality mobile mapping needs. **ATLANS-C** comes with a powerfull **Post-Processing Software** for improved accuracy and reliability.

ATLANS-C has no moving parts and offers long lifetime without any need for preventive maintenance. It comes with **iXBlue** exclusive 5-year warranty and 24/7 support. **ATLANS-C** has no ITAR component inside.

FEATURES

- All-in-one INS-GNSS solution
- FOG-INS and GNSS smart coupling
- L1/L2, GPS, GLONASS, SBAS, RTK, TERRASTAR READY
- Land and airborne applications
- Small size and low power consumption
- No moving parts

BENEFITS

- Easy to operate, saving time
- Extremely robust positioning
- Single system, increased ROI
- Versatile usage and integration
- Reliable and low maintenance

APPLICATIONS

- Asset management • Land mobile mapping systems • Airborne mobile mapping systems
- Image capturing • LIDAR mapping • GIS data collection • Pavement management
- Tunnel mapping • Railroad and road survey • Underground survey
- Vehicle control and guidance

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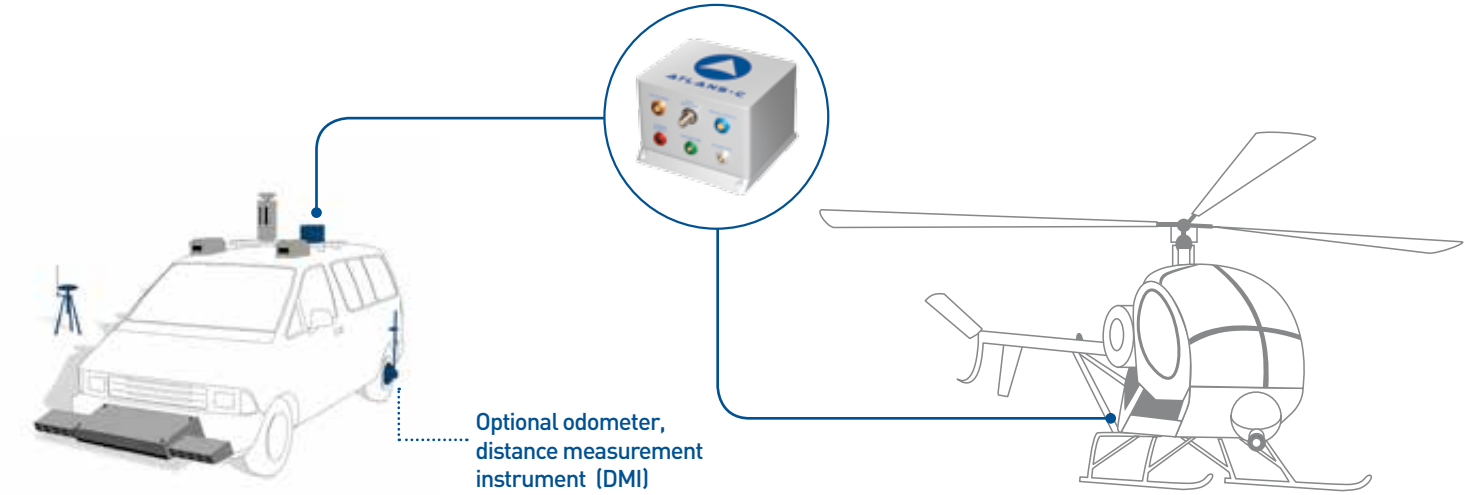
COMMON CHARACTERISTICS FOR LAND AND AIRBORNE

CHARACTERISTICS

• Weight	2.6 kg
• Size	160 mm x 160 mm x 113 mm
• Embedded GNSS	L1/L2, GPS, GLONASS, SBAS, RTK, TERRASTAR ready
• Power	< 22 W, 12 to 33 VDC
• Operating temperature	-20°C to 55°C
• Storage temperature	-40°C to 80°C
• Logging capacity	48 hours (INS and GNSS data)
• MTBF, environmental	100 000 hours standard IP 66

INTERFACES

• Three event markers	100 µs time stamping accuracy up to 1 000 Hz
• Output refreshing rate	up to 200 Hz
• Latency	< 3 ms
• Time tagging	PPS output
• Ethernet 100 Mbits	configuration, monitoring, http access, 2 logical ports
• Two serial inputs	RS232/422
• Two serial outputs	RS232/422
• Pulses	3 in/2 out
• Direct access to embedded GNSS	1 in/1 out
• DMI interface	embedded
• GNSS	embedded (antenna optional)



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SINGLE SOLUTION FOR LAND AND AIRBORNE

LAND PERFORMANCE

	GNSS RTK*	GNSS PPK**	GNSS RTK* with 60 seconds dropout duration	GNSS PPK* with 60 seconds dropout duration
Heading accuracy [1][2]	0.02°	0.02°	0.02°	0.02°
Roll and pitch accuracy [2]	0.008°	0.005°	0.015°	0.015°
Horizontal accuracy (X,Y) [2]	0.035 m	0.02 m	0.35 m ***	0.15 m ***
Vertical accuracy (Z) [2]	0.05 m	0.05 m	0.3 m ***	0.1 m ***
Range	Heading: 0° to 360° Roll: -180° to +180° Pitch: -90° to +90°			
Setup time	5 min stationary +15 min in motion (typical)			

AIRBORNE PERFORMANCE

	DGPS	PPK**
Heading accuracy [1][2]	0.1°	0.02°
Roll and pitch accuracy [2]	0.02°	0.01°
Horizontal accuracy (X,Y) [2]	0.6 m	5 cm + 1 ppm baseline
Vertical accuracy (Z) [2]	0.9 m	10 cm + 1 ppm baseline
Range	Heading: 0° to 360° Roll: -180° to + 180° Pitch: -90° to + 90°	
Setup time	5 min stationary + 15 min in motion (typical)	

(1) Secant latitude = 1 / cosine latitude
(2) RMS values
Actual results are dependant upon satellite configuration, atmospheric conditions and other environmental effects.
* RTK: real-time kinematic
** PPK: post-processed kinematic using ATLANS Post-Processing Software
*** Values with typical vehicle dynamics and environment
The performance results require using a distance measurement unit.

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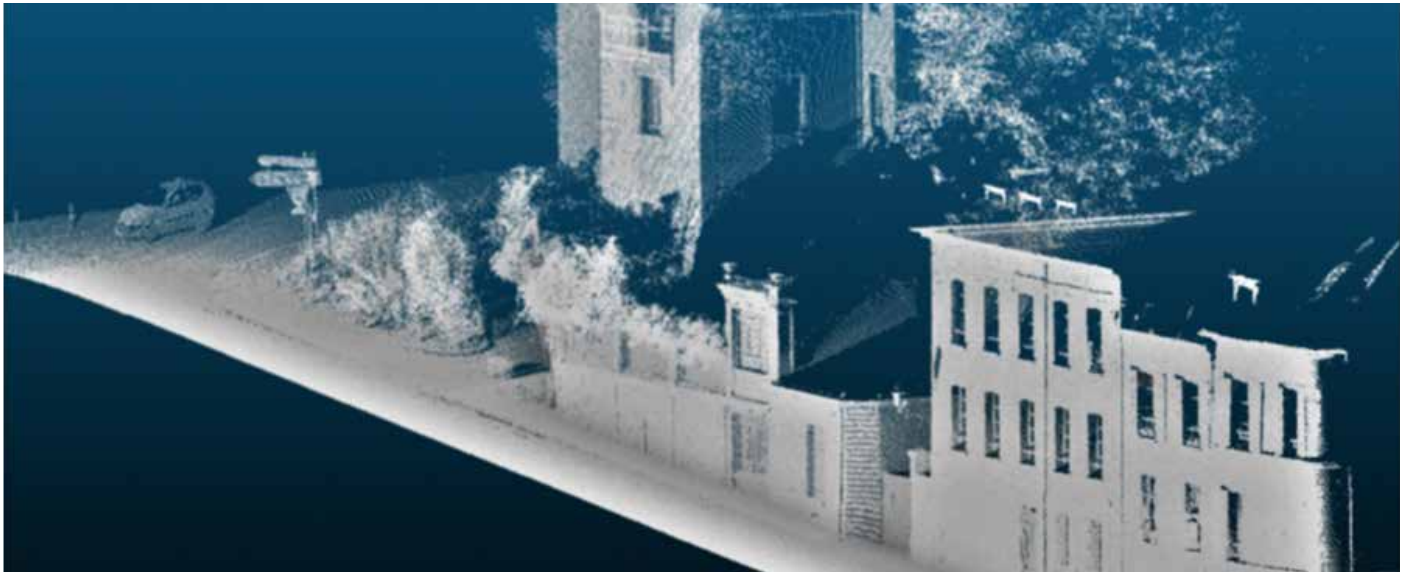
FOR REAL-TIME APPLICATIONS OR OFFLINE USE

ATLANS POST-PROCESSING SOFTWARE

ATLANS Post-Processing Software is a powerful tool for improved accuracy and increased reliability for mobile mapping (MM) applications.

ATLANS Post-Processing Software is all-in-one software and combines GNSS and INS in post-processing. It relies on the Septentrio-**iXBlue** GNSS inertial link (SIGIL) smart coupling algorithm between INS and GNSS data.

ATLANS Post-Processing Software is easy to use for data management. It utilizes forward, backward, and smoothing techniques for optimal trajectory computation. **ATLANS Post-Processing Software** allows seamless integration with sensor data collected in the field. It reduces the amount of offline work and boosts productivity due to batch processing capability. The data can be easily exported to common third party image processing software packages.



Survey made in Marly le Roi, France, mapping was carried out with **ATLANS-C** and its **Post-Processing Software**, visualized in third party LIDAR software package.

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