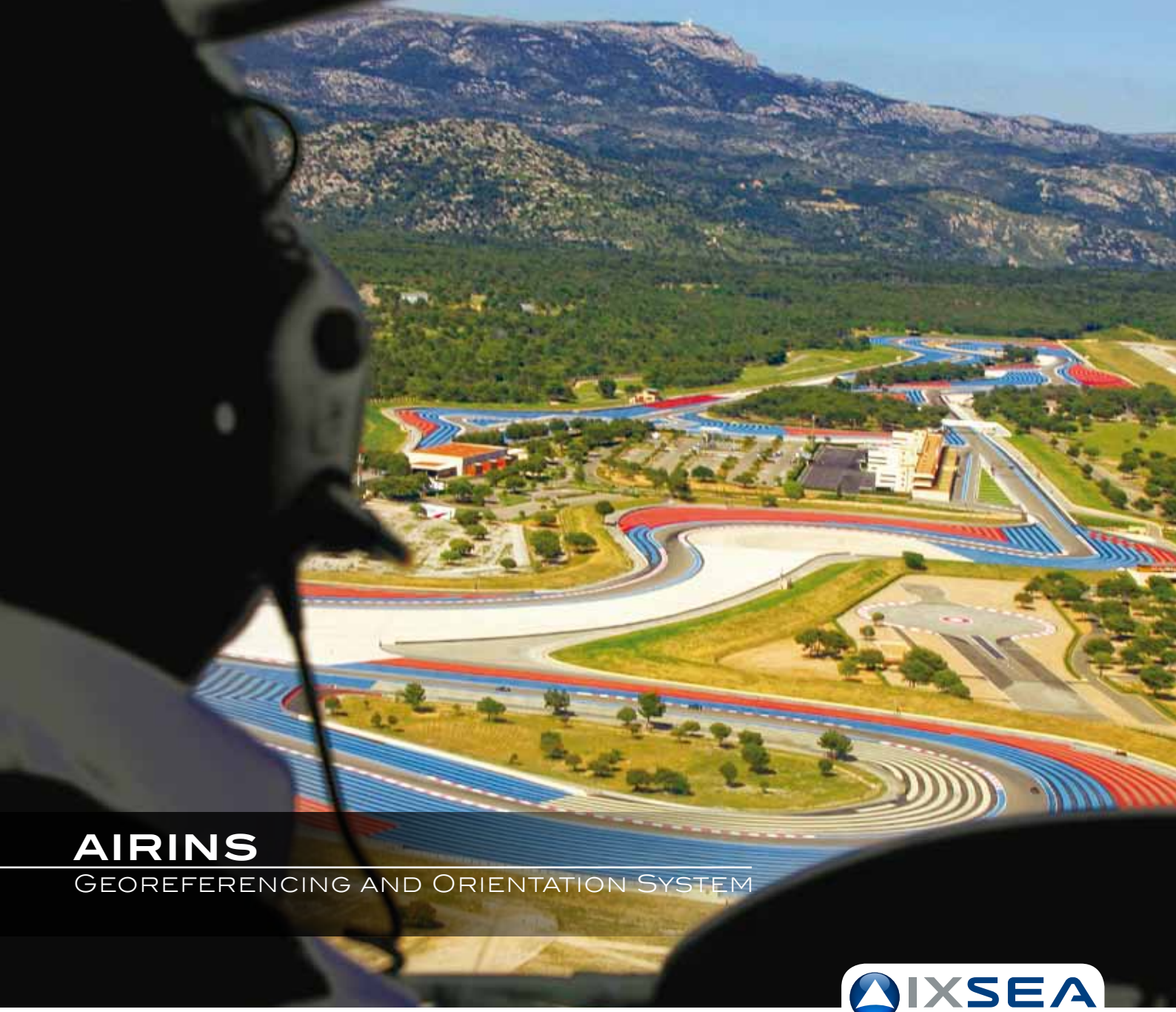
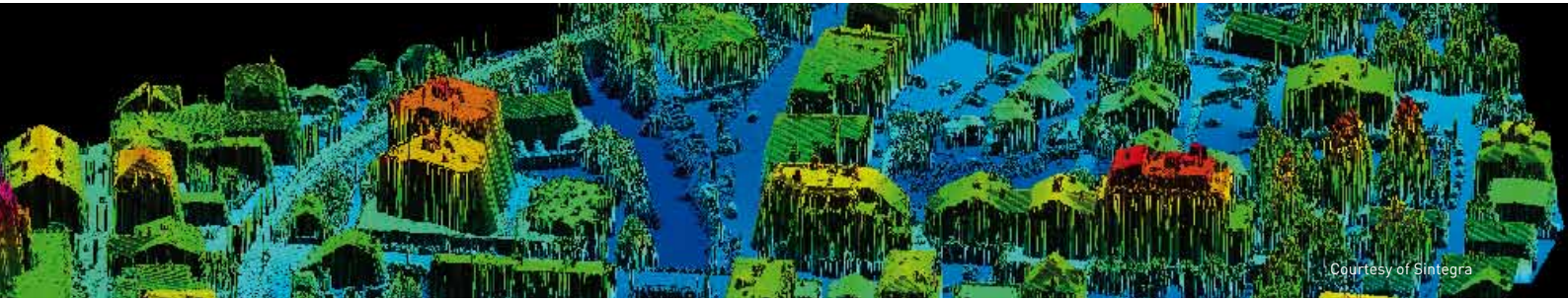


AIRINS

Georeferencing and Orientation System

IXSEA
AN IXBLUE COMPANY



AIRINS, engineered for optimal integration and ease-of use, utilizes iXSea's expertise in Fiber Optic Gyroscopes, already in use in satellite control. AIRINS combines the latest motion sensing technology, electronics and embedded processing design in one single unit. This offers the most compact position, orientation and direct georeferencing system.

FEATURES

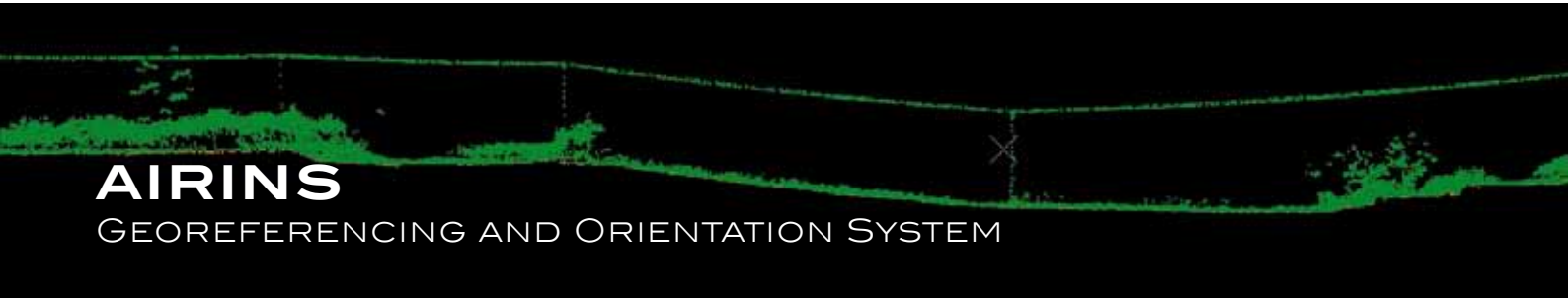
- High accuracy heading, roll and pitch
- No drift in straight line
- Fast alignment
- High banking angles
- ITAR-free sensor
- Industry-ready interface
- Compact, all-in-one
- Direct georeferencing

BENEFITS

- Higher altitude survey for extended coverage
- No need to break-off lines
- Optimal flight
- Efficient operations and time-saving
- Easy to export
- Easy integration: all FMS, mounts, GPS , cameras and lidars
- No external control unit
- Fewer or no Ground Control Points needed

APPLICATIONS:

Corridor mapping • Sensor gyrostabilization • UAV control and navigation • Forestry • LIDAR • Environmental assessment • SAR imaging • High altitude remote sensing • Rapid Response Imaging • Digital camera • Hyperspectral sensors • Urban planning • Film camera • Coastal zone monitoring • Multisensor survey • DTM generation



AIRINS

Georeferencing and Orientation System

Airborne sensing and Mapping

AIRINS is a lightweight, all-in-one, real-time georeferencing and positioning system designed to meet the requirements of the most demanding airborne survey and remote sensing applications such as digital and film cameras, SAR, hyperspectral, pushbroom sensors and LIDARs.

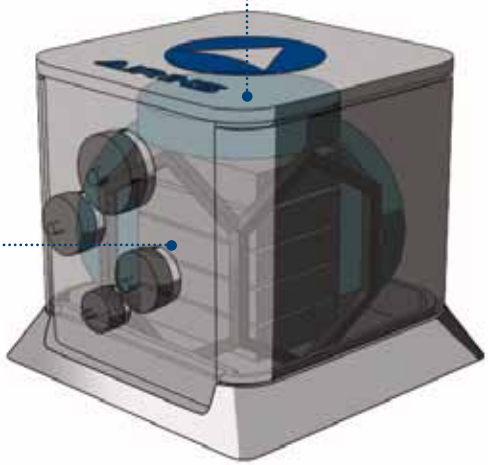
Designed for easy integration, AIRINS combines multiple I/Os and an extensive protocol library to accept all types of GNSS. It handles multi-sensor operations (LIDAR and cameras) thanks to precise timing, a very fast output rate, event markers and highly accurate position information in real-time. AIRINS computes high-accuracy position and orientation data up to two hundred times per second.

AIRINS, All-in-one GPS/IMU

iXSea FOG IMU:
- High grade FOG and acceleration sensors
- Absolute accuracy
- Very low noise level
- High relative accuracy (<1 arc-second)

Embedded Data Processing:
- Navigation solution
- Relies mostly on IMU sensors rather than aiding GPS
- Accepts any GPS receiver (No tight coupling required)
- Fast alignment mode
- Automatic setup and initialization

Comprehensive interface:
- 200 Hz real-time data
- 1,000 Hz event markers
- Precise time-tagging
- Pulses
- Ethernet



AIRINS

All-in-one Compact Solution

Performance*

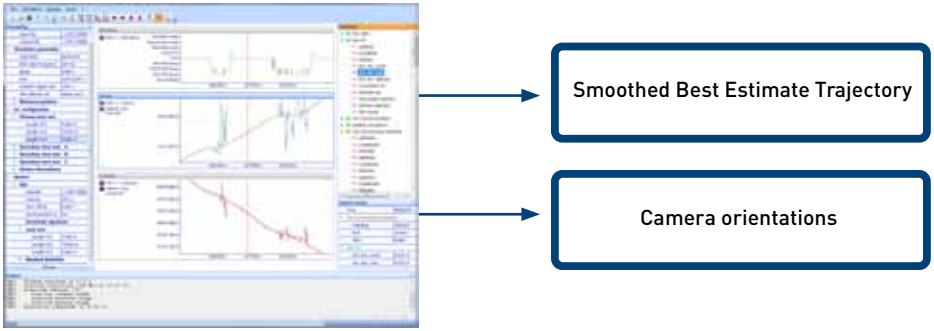
	GPS	DGPS	RTK	PPK
True heading (deg)	0.02	0.02	0.01	0.005
Roll/Pitch (deg)	0.005	0.005	0.005	0.0025
Velocity (m/s)	0.03	0.02	0.01	0.01
Position (m)	5	0.6	0.15	0.15

IMU performance

Drift	< 0.01 °/hr
Noise	< 0.0015 °/sqrt (hr)

Delphins Post-Processing Software

DELPHINS utilizes forward, backward and smoothing techniques for optimal trajectory computation and increased reliability. It allows seamless integration with sensor data collected in the field. It reduces the amount of offline work and boosts productivity.



* All figures are RMS
Specifications subject to change without notice


Courtesy of Dimac

INS Characteristics

Weight:	4.5 kg	**Operating temperature:**	-20°C to 55°C
Size:	180 mm x 180 mm x 160 mm	**Storage temperature:**	-40°C to 80°C
Power:	consumption: 15 W input range: 12 to 32V DC	**MTBF:**	40,000 hours

INS Interfaces

3 event markers:	100 µs 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
Repeater I/O:	Configuration/monitoring
GNSS:	GPS L1/L2, Glonass, Omnistar, RTK

EMEA
Phone: +33 1 30 08 98 88

USA
Phone: +1 781 937 8800

ASIA-PACIFIC
Phone: +65 6747 4912

www.ixsea.com

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