

# Airins

Navigation grade INS designed for ultimate airborne applications

Airins is a high performance Inertial Navigation System (INS) based on Exail Fiber-Optic Gyroscope (FOG) technology. Airins is north-seeking and provides continuous and accurate 3D position, speed and orientation information for all airborne applications.



## FEATURES & BENEFITS

- High-accuracy 3D positioning with heading, roll and pitch
- No drift in straight line
- High banking angles
- Higher altitude survey for extended coverage
- Direct georeferencing: fewer or no ground control points needed
- Easy integration: compatible with standard FMS, gyromount, GNSS receivers, cameras and LiDARs
- Compatible with Exail post-processing software
- ROS driver available
- 24/7 worldwide technical assistance
- Free of ITAR component

## APPLICATIONS

- Airborne mobile mapping
- High altitude survey with LiDAR, SAR, HD cameras
- Sensor gyrostabilization
- Precision pointing

## TECHNICAL SPECIFICATIONS

### Performance<sup>(1)</sup>

#### With GNSS<sup>(2)</sup>

Correction type	SPS/Natural	SBAS	PPP*	PPK**
Position Horizontal (X,Y) (m)	1.20	0.60	0.30	0.02
Position Vertical (Z) (m)	1.90	0.80	0.50	0.05
Heading (deg)	0.010	0.010	0.008	0.005
Roll & Pitch (deg)	0.0025	0.0025	0.002	0.002
Heading drift 10min straight line (deg)	0.002	0.002	0.002	0.002

#### During GNSS outage (1min/2min)

Correction type	SPS/Natural	SBAS	PPP*	PPK**
Horizontal position drift (m)	0.60 / 2.00	0.60 / 2.00	0.30 / 1.50	0.05 / 0.40
Vertical position drift (m)	0.60 / 2.00	0.60 / 2.00	0.30 / 1.50	0.05 / 0.40

### Characteristics

Weight	4.5 kg
Material	Aluminium
Dimensions (L x W x H)	180 mm x 180 mm x 160 mm
Power supply / consumption	24 VDC (20-32 V) / 20 W typ. @24V/23°C (unloaded)
Operating temperature	-20°C to 55°C
Storage temperature	-40°C to 80°C
MTBF	Environmental 150 000 hours
Waterproof	IP66 & IPx7

### Interfaces

Data output rate	0.1 Hz to 200 Hz
Latency	< 3ms
Serial	RS422 or RS232
Ethernet	100 MBit - UDP / TCP server / TCP client / web server (GUI)
Pulses	PPS input for < 100µs time synchronization
Inputs/outputs	Configurable 5i / 5o - Pulses 4i / 2o - Configuration port
Options & accessories	Delph INS post-processing software

(1) Typical RMS Performance

(2) Actual results depending on the quality of the GNSS system used, satellite configuration, atmospheric conditions and other environmental effects

\* PPP: Precise Point positioning

\*\* PPK: Post processing Kinematic using Delph INS post-processing software (smart coupling of INS with GNSS in forward/backward)

All specifications subject to change without notice