



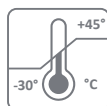
iCORUS-02



iCORUS-02 is a next-generation airborne strapdown gravimeter, designed to deliver the high-resolution gravity data demanded by today's most advanced exploration missions

iCORUS-02 delivers precise airborne gravity measurements, reliable gyrocompassing, and full inertial Position, Navigation & Timing for advanced geophysical surveying and resource exploration. Powered by high-performance

ring laser gyros and accelerometers, a multi-frequency GNSS engine, and dedicated signal processing, iCORUS-02 draws on over 30 years of iMAR expertise in high-accuracy inertial systems.



APPLICATIONS

- Mineral Exploration
- Mapping subsurface densities
- Identifying geological structures
- Update gravity grids & geoid models

KEY FEATURES

- Made for airborne & marine applications
- Fully strapdown — no gimbals
- Small size, lightweight, robust
- No maintenance required

PERFORMANCE

- Repeatability < 1 mGal (rms)
- Motion resistance 20 g
- Ambient temp. -30 ...+45 °C



iCORUS-02

TECHNICAL DATA



iCORUS-02 provides exploration and survey operators with a reliable, efficient, and future-ready solution for high-precision airborne gravimetry

■ PERFORMANCE

Accuracy (post-processed)	< 2.0 mGal (rms)	<i>typical, experienced value (leveled flight)</i>
Accuracy after Bias removal	~ 0.8 - 1.0 mGAL	<i>after line-wise bias removal (leveled flight)</i>
Lateral resolution	1.5 km (@30 m/s)	<i>depending on surveying speed</i>
Motion dynamics	up to 20 g	<i>operable even under turbulent flight conditions</i>

■ ENVIRONMENTAL

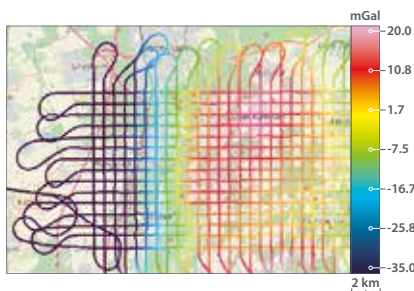
Power Supply (typical / initial)	16...34 V DC - (50 W / 250W)	<i>50 ms hold up time acc. to DO160G, continuous</i>
Temperature range (mission)	± 15 K or adjustable	<i>around initial set value</i>
Temperature range (operational)	-30...+45 °C / -22 ...113 °F	
Weight	~ 18.5 kg / 41 lbs	<i>iCORUS-02 standard version</i>
Installation	easy to mount via 4 screws	<i>mounting flange downside recommended</i>

■ DATA

Data Output	<ul style="list-style-type: none"> • gravity disturbance down (Eötvös, free-air corrected), normal gravity (Eötvös corrected) after post-processing with iPosCAL-GRAV • raw data of IMS / GNSS incl. time stamps and system status • position, heading, roll, pitch, angular rate, velocity (body and nav frame)
Integrated sensors	<ul style="list-style-type: none"> • dedicated sensors for inertial, GNSS, time, etc.
Time Stamping	<ul style="list-style-type: none"> • data sampling accuracy better 1 µs, time-stamped according to PPS
Storage	<ul style="list-style-type: none"> • 128 GB (700 hours) on internal non-volatile memory (> 14 days of flight data)



iPosCAL-GRAV delivers mission-ready gravity results faster, cleaner, and more reliably than any system in its class



iPosCAL-GRAV is iMAR's high-end post-processing engine for airborne and shipborne gravimetry, delivering fast, reliable gravity disturbance maps when paired with the iCORUS strapdown gravimeter. It builds on iMAR's proven iPosCAL INS/GNSS framework and adds advanced line-end detection, cross-over statistics with network adjustment, and instant gravity map generation - to dramatically reduce processing time (typically 10 seconds per flight hour on consumer hardware).

iPosCAL-GRAV provides high data quality, short turnaround, and a streamlined workflow that lowers operational cost and increases survey productivity across every mission.

Each individual iCORUS-02 undergoes rigorous calibration and verification testing at iMAR's calibration laboratory. Performance specifications are derived from field testing and real-world data and are routinely validated to ensure continued compliance with these specifications.

