FIELD PROVEN >5 Mio km²

iPosCAL-GRAV

INS/GNSS Post Processing & Calculation Software

Windows

Linux

The high performance, ultra fast and easy-to-use Post-Proc Solution for Field Operators and Experts

iPosCAL-GRAV is designed for airborne and shipborne gravimetry data processing and delivers best results when used with iMAR's iCORUS strapdown gravimeters. Building on the core iPosCAL features for INS-based surveying precise determination of position, velocity and attitude over time. It offers batch processing, gravity map visualization, data export and inspection of quality measures.

APPLICATIONS

Mineral Exploration
Local gravity map refinement
Identifying geological structures
Update gravity grids & geoid models

OUTPUT

Gravity
Navigation

KEY FEATURES

very high accuracy
ultra short processing time
Automated, batch-processing

iPosCAL-GRAV

TECHNICAL DATA

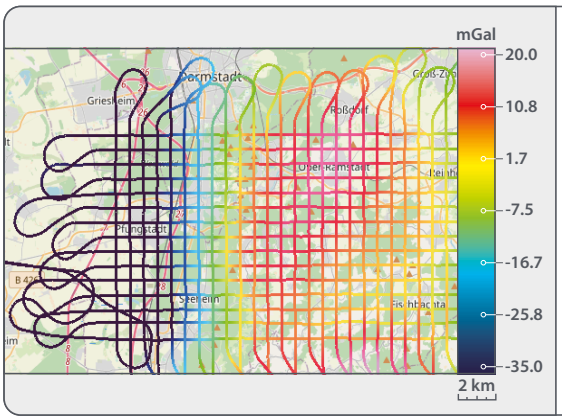
iPosCAL is iMAR's easy-to-use INS/GNSS post-processing software, compatible with all iMAR INS/GNSS devices using the iXCOM protocol, including iCORUS. It processes single datasets and enables automated, ultra-fast batch processing of large survey campaigns with hundreds of surveying hours.

INPUT DATA

INS rawdata	• iXCOM (iCORUS; any iMAR´s INS/GNSS system with iNAT architecture) • ASCII
Gravimetry	• Optional terrestrial gravity tie value at port/airport
GNSS Aiding	• iXCOM (iCORUS) • RINEX 3.x (raw GNSS observations) • Preprocessed ASCII

OUTPUT DATA (CSV)

Gravity or Gravity Disturbance	Gravity disturbance down (Eötvös, free-air), normal gravity (Eötvös)
Position	Latitude / Longitude / ellipsoidal height & time
Velocity	North-East-Down or body fixed front Starboard-Down
Attitude	Roll / pitch / heading
Accelerometer and Gyro Bias	Quality measure export per data set
Estimated Standard Deviations	Postion, velocity, attitude, gravity



- *Determination of gravity from raw acceleration / rotation data and GNSS trajectory*
- *Easy-to-use processing mode for the less experienced user.*
- *Expert mode, allowing the fine-tuning of all relevant processing parameters, user-customizable output files, and much more*
- *Position, velocity, attitude and standard deviation determination with exceptional performance*
- *Ultra short processing time at a very high accuracy (~5 seconds processing time per flight hour on consumer hardware)*
- *Automated, batch-processing to handle even very large campaigns (command line interface on request)*
- *Signal Processing: multi constellation / multi frequency GNSS, Filter and spectrum analyzer capability, lever arm estimator, multi-turn calculation etc.*

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