AEROcontrol

New: Export Free IMUs

Up to 400 Hz data rate

IMU-IIf

IMU-m

AEROcontrol SMU (Sensor Management Unit)

SPECIFICATIONS	SMU	IMU-m	IMU-IIf
Physical Dimensions Height: Width: Depth:	 65 mm (2.56 inches) 140 mm (5.51 inches) 205 mm (8.07 inches)	 96 mm (3.78 inches) 93 mm (3.66 inches) 89 mm (3.5 inches)	 126 mm (4.96 inches) 146 mm (5.75 inches) 98 mm (3.86 inches)
Weight of System	1.8 kg (3.97 pounds)	0.96 kg (2.12 pounds)	2.2 kg (4.85 pounds)
Power Consumption at Full Performance	35W @ 20 ... 30 VDC	11W @ 20 ... 30 VDC	20W @ 20 ... 30 VDC

AEROcontrol is IGI's GNSS/IMU system for the precise determination of position and attitude of an airborne sensor. This can be the position of the projection center and the angles omega, phi, kappa of an aerial camera system or any other airborne sensor.

The *AEROcontrol* system consists of an Inertial Measurement Unit based on fibre-optic gyros (FOG - IMU-IIf) or micro-electro-mechanical gyros (MEMS - IMU-m) and a Sensor Management Unit (SMU) with integrated high end GNSS receiver. For the fibre-optic gyro based IMU, there are three different options available.

AEROcontrol™ - Specifications

PERFORMANCE AEROcontrol SMU				
Performance*	**AEROcontrol-m**	**AEROcontrol-I****	**AEROcontrol-II****	**AEROcontrol-III**
Position [m]	0.05	0.05	0.05	0.05
Velocity [m/s]	0.005	0.005	0.005	0.005
Roll / Pitch [deg]	0.01	0.008	0.004	0.003
True heading [deg]	0.02	0.015	0.01	0.007
Available data rates	400 Hz	128 Hz or 256 Hz	128 Hz or 256 Hz	400 Hz

* Post Processing
** Upgrades to AEROcontrol-II or -III possible at any time

PERFORMANCE	IMU-m	IMU-IIf
Gyro-Bias [deg / h]	2	0.03
Gyro-RW (Random Walk) [deg / sqrt(h)]	0.07	0.005
Accelerometer Bias [mg]	0.1	0.3
Update and transmission rate	400 Hz	128, 256 or 400 Hz

INTERFACES

GNSS Receiver
Internal: NovAtel OEMV-3 or Septentrio AsteRx2e OEM / AsteRx3 OEM

Communication
Ethernet: Gigabit Ethernet LAN Port
Serial Ports: 2 x RS232, 1 x RS422
Discretes: PPS Output, 3 x Event Mark Input

Options
- Combination with flight management system *CCNS-5* or as stand-alone system
- GLONASS
- DIA - Direct Inertial Aiding to assist in areas of poor GPS reception
- DIA+ - Direct Inertial Aiding Plus to assist in areas of poor GPS + GLONASS reception
- Precise Levelling for stabilized mounts

Processing Software
AEROoffice for INS post-processing,
incl. GrafNav & BINGO30 for GNSS post-processing & aerial triangulation

Data storage
8 (default),16 or 32 GB ExpressCard

AEROoffice software package:

The *AEROoffice* software package for post-processing the *AEROcontrol* data provides:
- Forward / backward Kalman filter algorithm to achieve optimal results even under challenging conditions
- Transformation to more than 600 local coordinate systems
- Coordinate System Editor for customized coordinate systems
- Export to standard formats, GoogleEarth™ (*.kml) format and defined customized formats
- Simplified user interface to obtain optimal results for all users without extensive training and experience

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