



INERTIAL UNIT IMUCAN+INSCAN



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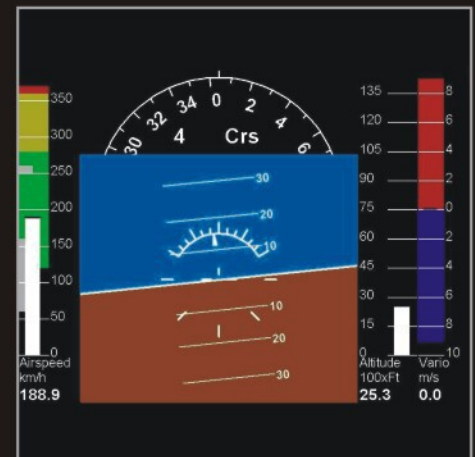
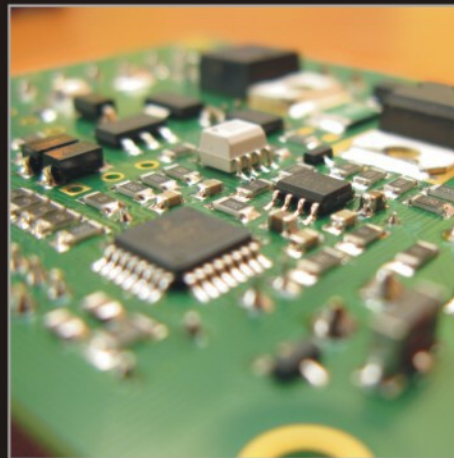
IMUCAN module is a digital intelligent motion sensor. It includes a triaxial gyroscope and accelerometer based on MEMS technology. Embedded microprocessor solves set of tasks as digital data preprocessing and communication over the galvanically isolated CAN interface.

INSCAN module is a digital signal processing engine for distributed strapdown computing. It primarily receives data over the CAN bus from IMUCAN (3D angular speed, 3D acceleration). Optional data input over CAN bus from air data computer, sensor of 3D Intensity of Magnetic Field and GPS receiver is supported.

INSCAN works as a producer of strapdown data (pitch, roll, heading, etc.). It is possible to use embedded CAN Network Management and RS232 connection gateway for easy in system integration.

APPLICATIONS

- Avionics
- Motion control and analysis in robotics, transportation
- Support of navigation
- Stabilisation
- Vibrodiagnostics



SPECIFICATION:

TRIAxIAL GyROSCOPE

Programmable range from $\pm 75^\circ/\text{s}$ to $\pm 300^\circ/\text{s}$
Resolution 14 bit \ddot{u}
Input bandwidth 350 Hz
Output noise max 0,6 $^\circ/\text{s}$ rms
Axis nonorthogonality 0.05 $^\circ$

Angle resolution of strapdown data 0.1 $^\circ$
Output update rate 20 Hz (default), can be changed
Power supply 9-18 VDC (for 12 VDC systems)
alternatively 18-36 VDC (for 24 VDC systems)

Power consumption 600 mW
Enclosure die-cast aluminium GD Al Si 12/DIN 1725
Size 84x79x67 mm
Weight 520 g
Ingress protection IP66/EN60529
Shock survivability 2000 g
Communication Interface CAN (ISO11898, DS301)

TRIAxIAL ACCELEROMETER

Range $\pm 1.7\text{ g}$ (alternatively $\pm 5\text{ g}$)
Resolution 14 bit \ddot{u}
Axis nonorthogonality 0.2 $^\circ$





COMPANY DOMICILE

OPROX, Inc.
RENNESKÁ 35
639 00, BRNO

TEL.:+420 545 215 449
FAX.:+420 545 215 407
WEB:WWW.OPROX.CZ

DESIGNING OFFICES

OPROX, Inc.
KULKOVA 8
615 00, BRNO

WWW.INERTIAL.CZ
info@inertial.cz