IMU 2.0

Inertial Measurement Unit

HIGH-ACCURACY

Equipment Positioning

CPAC's IMU combines high-accuracy 3-axis accelerometer, gyroscope, and magnetometer to provide exceptional positioning data for any on-road, off-road and marine equipment. The IMU is put through an extensive calibration procedure which ensures the sensor's accuracy in static and dynamic conditions in the full temperatures range. Each sensor is continuously self-calibrating through refined software to guarantee performance over time.

The IMU is a versatile sensor suitable for applications in, for example, machine control, machine guidance and load weighing. It has been tested and proven in a wide range of industrial machines operating in challenging conditions. The reliability of the IMU is trusted by high-end brands like Volvo CE and Aebi Schmidt.

FEATURES

- High-accuracy positioning data
- 3-axis accelerometer
- 3-axis gyroscope
- 3-axis magnetometer
- CAN communication
- Built-in strain relief of connectors
- Designed for harsh conditions
- Easy to install
- Continuously self-calibrating

CPAC SYSTEMS AB
Box 217 • 401 23 Göteborg, Sweden • Phone +46 (0)31 352 16 00
info@cpacsystems.se • www.cpacsystems.se

v.2

IMU 2.0
Inertial Measurement Unit

SPECIFICATIONS

CPAC's IMU meets the highest quality standards to endure the harsh environment in the construction segment. We are proud of our industrial heritage in Sweden—known for quality and reliability. Our IMU is no exception and carries the legacy into the future with a robust design and exceptional build quality.

SPECIFICATIONS

3-axis gyroscope

Range	**± 200°/s**
Resolution	**0.008°/s/digit**
Non-linearity	**0.25% F.S.**
Noise	**0.008°/s/√Hz**
Temperature dep.	**± 0.02%/°C**

3-axis magnetometer

Range	**± 5 gauss**
Sensitivity	**1300 digits/gauss**
Non-linearity	**± 0.15 % F.S. ± 2 gauss**
Noise	**± 30 ppm**
Temperature dep.	**± 0.5 %/°C**

3-axis accelerometer

Range	**± 1.5 g or ± 16 g**
Resolution	**5400 LSB/g**
Non-linearity	**± 1 mg**
Noise	**37 mg/√Hz**
Temperature dep.	**± 0.3 %/°C**

Physical

Dimensions (W × D × H)	**112 × 87 × 44.5 mm**
Weight	**420 g**
Material	**Aluminum**
Color	**Grey (Y-400-4)**

Environmental

Operating temperature	**-40°C ≤ T ≤ 85°C**
Storage temperature	**-40°C ≤ T ≤ 85°C**
Degree of protection	**IP6K9K - ISO 20653**
EMC	**EN 13309:2003, ISO 13766**

Connections

Female connector	**Molex 120084-5179**
Male connector	**Molex 120084-5181**
Cable kit	**120080-8065**
Bus terminator	**120085-5014**

Functional

Supply voltage	**12 and 24 VDC**
Current consumption	**72 mA / 37 mA**
Max consumption	**1 W**

REGULATIONS AND STANDARDS

EMC

ISO13766
EN13309:2003

Road vehicles

ISO 16750-1
ISO 16750-2:2010
ISO 16750-3:2007
ISO 16750-4:2010
ISO 16750-5:2010
Code: ISO 16750-Z-ZS-G-Z-ZD-IP6K9K

CPAC SYSTEMS AB
Box 217 • 401 23 Göteborg, Sweden • Phone +46 (0)31 352 16 00
info@cpacsystems.se • www.cpacsystems.se