DAQAHRS

GPS/INERTIAL SENSOR MODULE

Product Features

- High performance AHRS, IMU and GPS
- Extended Kalman Filter provides drift free orientation solution and calibrated sensor data
- Multiple interfaces
- Flexible user configuration and parameter mapping
- Fully integrated with Nginuity DAQ9000 Data Acquisition System and other DAQ products

DAQAHRS GPS/INERTIAL SENSOR MODULE

A high performance Attitude and Heading Reference System (AHRS), Inertial Measurement Unit (IMU) and Global Positioning System (GPS) providing position and inertial navigation information with 10 degrees of freedom. DAQAHRS provides calibrated sensor data and a drift free orientation solution using an Extended Kalman Filter. An ideal sensor module for flight test instrumentation, recorder and system applications requiring position awareness.

Product Features

Attitude & Heading
- Range: Heading, Roll: ±180°, Pitch: ±90°
- Accuracy (heading): < 2.0°
- Accuracy (pitch/roll): < 0.5°
- Angular Resolution: < 0.05°
- Maximum Output Rate: 200Hz

Gyro
- 3 axis angular rate
- Range: ±500°/s
- Linearity: < 0.1% FS
- Noise Density: 0.005°/s /√Hz

Accelerometer
- 3 axis acceleration
- Range: ±8g
- Linearity: < 0.5% FS
- Noise Density: 0.4mg/√Hz

Compass
- 3 axis magnetometer
- Range: ±2.5 Gauss
- Linearity: < 0.1% FS
- Noise Density: 140µGauss/√Hz

GPS Receiver
- Receiver: L1 C/A Code
- Up to 10Hz update rate
- Differential GPS enabled (1Hz update rate)
        RTCM 104, SBAS (WAAS, EGNOS, MSAS)
- Antenna supply options
        3.3V (30mA), 5V (60mA) or passive

Speed Inertial Augmentation
- From GPS or external speed data source

Data Output
Digital serial interfaces :-
- ARINC 429 Tx (High or Low speed)
- 2 off RS232 Rx/Tx or 1 off RS422/485 Rx/Tx
- 1 off ARINC 825/CAN Spec 2.0B Rx/Tx (termination resistor selectable in connector)
- Configurable parameter outputs per interface

Power: 10 to 36Vdc, 2W max.

Temperature
- Operating: -15°C to +55°C
- Storage: -40°C to +85°C

Size: 105 x 60 x 31mm

Weight: 0.2kg max

Colour
Orange, Black or Alocrom 1200

The DAQAHRS GPS/Inertial Sensor Module integrates all the sensors needed to achieve full position and motion sensing of any platform for data recording or position indication applications. The fused data as well as the individual sensor data are available directly. Each interface can be configured to output any parameter.

Full integrated with our DAQ9000 Data Acquisition System and other products in the DAQ range for acquisition, recording and correlation with other data sources.