

ANC1000

Advanced Navigation Card

MOOG

CROSSBOW



Card-level MEMS-based AHRS

The ANC1000 is an Attitude & Heading Reference System (AHRS) designed as a compact, low-power card-level solution for embedded use within integrated navigation and guidance systems. Moog Crossbow has fielded thousands of systems worldwide for use in U.S. DOD and Coalition Forces programs.

ANC1000

Advanced Navigation Card



DESCRIPTION

The ANC1000 is Moog Crossbow's compact card-level GPS-aided AHRS that incorporates the latest generation MEMS gyroscopes and accelerometers. The ANC1000 allows system designers to integrate the entire inertial system within existing enclosures and achieve dramatic size, weight, power, and cost savings.

The ANC1000 is extremely compact with a 2.5 inch diameter and a 0.75 inch height profile. It includes onboard MEMS gyro and accel sensors, a DSP processor, and embedded Kalman filter software. The ANC1000 accepts external aiding inputs including GPS and a remote magnetometer for heading determination.

Typical applications include UAV flight control, SATCOM on the move, land vehicle guidance, and micro-robotics.



KEY FEATURES

- Single card-level altitude & heading solution
- High reliability MEMS sensors
- High range sensor option available
- High accuracy < 0.2°
- Small form factor < 3.7 in³
- Low power < 1.8W
- Lightweight < 27 grams
- External GPS and magnetometer interface
- High vibration immunity

SPECIFICATIONS

Environment

Operating Temperature -40°C to +71°C

Electrical

Input Voltage 7 to 32 VDC

Power Consumption < 1.8 W

Digital Interface RS-422

Physical

Size 2.5" diameter, 0.75" height

Weight <1 oz (<27 g)

Interface Connector 20 pin Samtec EHF-110-01-L-D-SM

PERFORMANCE

Heading

Range $\pm 180^\circ$
Accuracy <0.75° rms

Attitude

Range: Roll, Pitch $\pm 180^\circ, \pm 90^\circ$
Accuracy <0.2° rms
Mounting Tolerance 1.0°

Angular Rate

Range: Roll, Pitch, Yaw $\pm 300^\circ/\text{sec}$
Bias Stability In-Run <30°/hr
Bias Stability Over Temp <0.02°/sec
Resolution <0.02°/sec
Bandwidth 25 Hz

Acceleration

Input Range: X/Y/Z $\pm 4 g$
Bias Stability In-Run <0.1 mg
Bias Stability Over Temp <4 mg
Resolution <0.5 mg
Bandwidth 25 Hz

ORDERING INFORMATION

Model

ANC1000-300-1

ANC1000-300-2

Description

ANC1000 Developer's Kit
Includes ANC1000 card, cable, NAV-VIEW 2.0 software, and power supply
ANC1000 Card Only

For more information

Phone: 1-408-965-3300
Email: sales@moog-crossbow.com
www.moog-crossbow.com

Moog Crossbow
1421 McCarthy Blvd.
Milpitas, CA 95035

Specifications subject to change without prior notice