



Powerful Sensing Solutions for a Better Life

The MEMSIC AHC525 is an Attitude & Heading Card designed specifically for OEM avionics system applications where an embedded AHRS solution is required. The AHC525 is suitable for use in FAA certified fixed and rotary wing aircraft and is DO-178B Level A approved.

AHC525

ATTITUDE & HEADING CARD



PRELIMINARY



Flight Control Systems



Electronic Flight Instrument Systems

The single card AHRS solution enables cost-effective integration of the complete inertial system within existing avionics enclosures to reduce overall system cost and weight (eliminates duplication of power conditioning and packaging), and to greatly improve the avionics installation process.

Applications

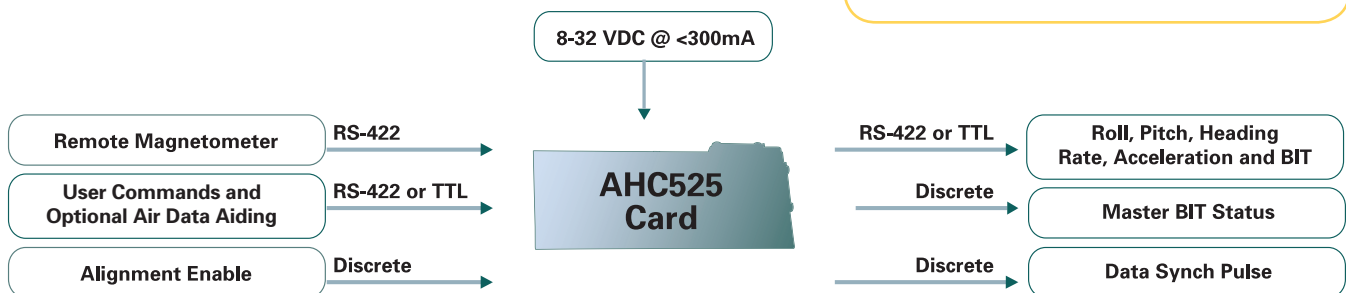
- Electronic Flight Instrument Systems (EFIS)
- Attitude and Heading Indicators
- Flight Control Systems

Features

- Complete "card-level" AHRS Solution
- High Accuracy < 0.2 deg
- TSO Performance without Aiding
- Small Form Factor < 9 cu.in
- Low-power < 2.5W
- Lightweight < 0.25lb
- High Reliability MEMS Sensors
- Roll, Pitch, Heading Outputs at 100Hz
- Remote Magnetometer Input

Certifications

- DO178B Level A Software Approved
- TSO C3d, C4c and C6d Certifiable



Performance**AHC525**

Heading	
Range (°)	± 180
Accuracy ^{1,2} (°)	< 1.0
Resolution (°)	< 0.1
Attitude	
Range: Roll, Pitch (°)	± 180, ± 90
Accuracy ^{1,2} (°)	< 0.2
Resolution (°)	< 0.1
Angular Rate	
Range: Roll, Pitch, Yaw (°/sec)	± 200
Bias Stability In-Run ^{1,3} (°/hr)	< 10
Bias Stability Over Temp ¹ (°/sec)	< 0.02
Resolution (°/sec)	< 0.02
Bandwidth (Hz)	25
Acceleration	
Input Range: X/Y/Z (g)	± 4
Bias Stability In-Run ^{1,3} (mg)	< 0.5
Bias Stability Over Temp ¹ (mg)	< 4
Resolution (mg)	< 0.5
Bandwidth (Hz)	25

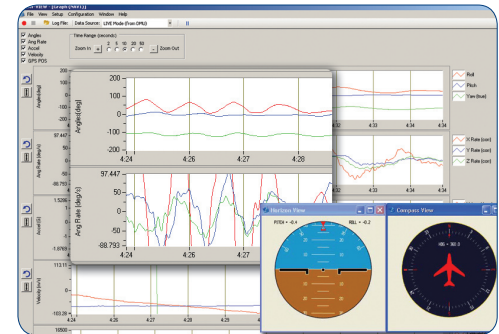
Specifications

Environment	
Operating Temperature (°C)	-40 to +71
Non-Operating Temperature (°C)	-55 to +85
Electrical	
Input Voltage (VDC)	8-32
Power Consumption (W)	< 2.5
Digital Interface	RS-422 or TTL (factory selected)
Physical	
Size (in)	4.80 x 2.00 x 0.837
(cm)	12.20 x 5.08 x 2.13
Weight (lbs)	< 0.25
(kg)	< 0.12
Connector	34 pin Samtec FTSH-117-01-X-DV-EJA

Ordering Information

Model	Description
AHC525GA-200-1	Single Card Attitude and Heading System (Developer's Kit)
AHC525GA-200-2	Single Card Attitude and Heading System (Card Only)

This product has been developed exclusively for commercial applications. It has not been tested for, and makes no representation or warranty as to conformance with, any military specifications or its suitability for any military application or end-use. Additionally, any use of this product for nuclear, chemical or biological weapons, or weapons research, or for any use in missiles, rockets, and/or UAV's of 300km or greater range, or any other activity prohibited by the Export Administration Regulations, is expressly prohibited without the written consent and without obtaining appropriate US export license(s) when required by US law. Diversion contrary to U.S. law is prohibited. Specifications are subject to change without notice. Notes: ¹1-sigma value. ²During steady level flight and with Air Data aiding input. ³Constant temperature, Allan Variance Curve.

NAV-VIEW 2.0**Configuration & Display Software**

NAV-VIEW 2.0 provides an easy to use graphical interface to display, record and analyze all of the AHC525 measurement parameters.

Other Components

Each AHC525GA-200-1 developer's kit is shipped with an interface cable, MEMSIC's 525-Series User's Manual and NAV-VIEW 2.0 configuration and display software.

The AHC525 is designed for use with MEMSIC's CRM-Series remote magnetometers.

Support

For more detailed technical information please refer to the 525-Series User's Manual available online at: www.memsic.com/Support

