AHRS510

ATTITUDE & HEADING REFERENCE SYSTEM

ACEINNA's AHRS510CA is a field proven high-reliability MEMS Attitude & Heading Reference System that supports all of the standard ARINC 429 message labels The AHRS510CA is designed for use in OEM and retrofit avionics systems upgrades, and for airborne antenna pointing systems.

EFIS and Flight Management Systems

Airborne Antenna Control

The AHRS510CA meets all standard avionics performance requirements as a stand-alone system. For applications with more demanding performance requirements, the AHRS510CA provides the interfaces necessary to accept external velocity-aiding.

Applications

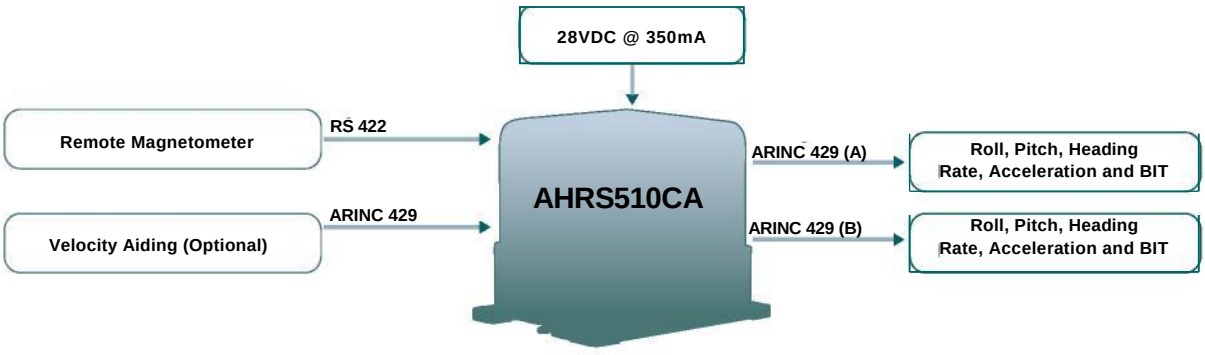
- EFIS and Flight Management Systems
- Airborne Antenna Control

Features

- Primary Flight Attitude and Heading
- Standard ARINC 429 AHRS Messages (Label 320, 324, 325 etc.)
- Optional Airdata External Input Aiding
- Low Power < 10W
- Comprehensive BIT (Built-in-Test)
- High Reliability MEMS Sensors
- Supports CRM-series Remote Magnetometers

Certifications

- DO-160E Environments



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Performance — AHRS510

Heading	
Range (°)	± 180
Accuracy[1] (2σ)	± 2.0
Resolution (°)	< 0.05
Attitude	
Range: Roll, Pitch (°)	± 180, ± 90
Accuracy[1] (2σ)	± 1.0
Resolution (°)	< 0.05
Angular Rate	
Range[2]: Roll, Pitch, Yaw (°/sec)	± 200
Bias: Roll, Pitch, Yaw (°/sec)	< ± 0.1
Resolution (°/sec)	< 0.02
Bandwidth (Hz)	25
Acceleration	
Range[2]: X/Y/Z (g)	± 10
Bias: X/Y/Z (mg)	< ± 15
Resolution (mg)	< 1.0
Bandwidth (Hz)	25

Specifications

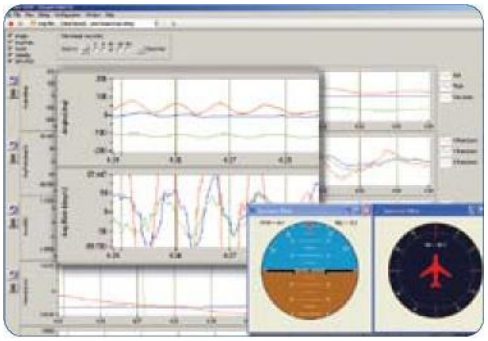
Environment	
Operating Temperature (°C)	-40 to +70
Non-Operating Temperature (°C)	-55 to +85
Enclosure	Sealed Housing
Electrical	
Input Voltage (VDC)	18-32
Power Consumption (W)	< 10
Digital Interfaces	2x ARINC 429 output (high speed)
	1x ARINC 429 input (low speed)
	1x RS-422 input (remote mag)
Physical	
Size (in)	4.66 x 4.53 x 4.86
(cm)	11.84 x 11.51 x 12.35
Weight (lbs)	3.0
(kg)	1.36
Connector	MIL-C-38999, Series III

Ordering Information

Model	Description
AHRS510CA-400	AHRS with ARINC 429 Interface

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: [1] Requires connection to CRM Series Remote Magnetometer and correct MagAlign. [2] The ARINC Label definition limits the output data ranges to +/-128 deg/sec and +/-4g.

GYRO-VIEW 2.6 Configuration & Display Software



GYRO-VIEW 2.6 provides an easy to use graphical interface to display, record and analyze all of the AHRS510 measurement parameters.

Other Components

Each AHRS510CA is shipped with a 510 Series Installation Manual, and ACEINNA's GYRO-VIEW 2.6 configuration and display software.

An optional ARINC 429 to RS-232 interface cable is available (additional cost) for use with ACEINNA's GYRO-VIEW and MAG-ALIGN application software running on a PC.

The AHRS510CA system utilizes ACEINNA's CRM-series remote magnetometer to ensure optimum heading alignment.

Support

For more detailed technical information please refer to the AHRS510CA Installation and Operator's Manual available online at:

www.aceinna.com/support