

Archangel Systems, Inc.

AHR150A ADAHRS

Air Data Attitude & Heading Reference System

www.archangel.com/products/adahrs/

www.archangel.com

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AHR150A ADAHRS

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Cost Effective Alternative to Fiber Optic Gyro Systems

**Two Box ADAHRS Solution
Do178B Level A Code
DO160E Approvals**

BOX 1: ISU (AHR150A-1)

- Inertial Sensing Unit for Attitude
- Internal Air Data Computer



BOX 2: MSU (AHR150A-2)

- Magnetic Sensing Unit
 - 3 Axis Magnetometer

AHR150A Applications

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- **Mission Critical Attitude / Air Data**

- Level A Code



- **Rotorcraft**

- Part 27
- Part 29



- **Fixed Wing**

- Part 23
- Part 25



- **Unmanned Systems**

- **Back-up ADAHRS**

- Low Size, Weight, & Power Budgets

AHR150A-1 ISU

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- **Size / Weight / Power**
 - 4.25" by 4.25" by 5.25"
 - 3.1 Lbs
 - 20 Watts
 - 16 to 36 VDC
- **Attitude Data**
 - ARINC 705-5
 - 4 Hi Speed ARINC 429
 - DG Mode
- **Air Data**
 - ARINC 706-4
 - AoA Interface
 - OAT/TAT Interface
 - 4 Lo Speed ARINC 429



AHR150A-2 MSU

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- **Size / Weight / Power**
 - 3" Diameter by 0.75" Tall
 - 0.5 lbs
 - Powered by ISU
- **Features**
 - 3 Axis Magnetometer
 - RS422 Interface to ISU
 - Calibration Routines Included



Dynamic Flight Accuracies

• Pitch and Roll	±1.0°	3 σ
• Heading	±2.0°	3 σ
• Body Rates	0.1%	Full Scale
• Airspeed (6 σ)	5 kts	20 to 60 kts
	3	61 to 90
	3	91 to 240
	2.4	241 to 275
	2.8	276 to 325
	3.2	325 to 375
	3.6	376 to 425

• OAT	±1.5°C	6 σ
• Altitude (6 σ)	25 ft	-1000 to 5999 ft
	30	6000 to 8999
	35	9000 to 13999
	40	14000 to 16999
	45	17000 to 19999
	50	20000 to 29999
	75	30000 to 39999
	100	40000 to 49999
	125	50000 to 52000

FAA TSO Certifications

- **C4c - Bank & Pitch Instruments**
- **C5f - Gyroscopically Stabilized Directional Instruments**
- **C6e - Gyroscopically Stabilized Magnetic Directional Instruments**
- **C88b - Pressure Altitude Reporting Equipment**
- **C106 - Air Data Computer**