

ADAHRS

Delivers precise digital output and referencing of aircraft position rate, vector, and acceleration data

COBHAM

The most important thing we build is trust



ADAHRS

Micro-Electro-Mechanical System (MEMS) technology provides extremely precise digital output

COBHAM

Advanced features

Reliable: DO-178B, Level A software

Lightweight: 3 component product suite is less than 1.5 lbs.

Rugged: Meets RTCA/DO-160E environmental standards

Compact: 2" x 2.5" x 3.9" (ADAHRS)

Greater precision

The new Cobham digital Air Data and solid-state Attitude/Heading Reference System (ADAHRS) is light weight and compact. It incorporates a Magnetic Sensing Unit (MSU) and separate Outside Air Temperature (OAT) Probe.

This highly accurate system employs the latest Micro-Electro-Mechanical System (MEMS) technology to provide extremely precise digital output and referencing of aircraft position rate, vector and acceleration data.

ADAHRS Specifications

MTBF:	13,000 hrs. (MIL-HDBK 217)
COM Ports:	AHRS RS232, 19,200 bps. AHRS ARINC-429 (high speed, labels 320, 324, 325, 326, 327, 330, 331, 332, 333 and 377, SDI set by software) ADC RS232, 19,200 bps. ADC ARINC-429 (low speed, labels 203, 205, 206, 210, 211, 212 and 377, SDI set by software)
Connector Type:	MIL-C 38999 Souriau PN: 8D0C-13F35PN / Airframe side: Souriau PN: 8D5-13F35SN
Thermal Protection:	Internal thermal regulation and monitoring

Input Voltage:	Nominal 14 to 28V, dual bus
Maximum Input Voltage:	Spikes to 80V
Minimum Input Voltage:	Down to 10V for 30 seconds
Power Interruption:	200 milliseconds
Temperature Range:	-55°C to +70°C
Body Rates:	±200° per second
Accelerometer Range:	±10 g
Velocity Range:	20-550 KIAS
Velocity Resolution:	0.2KIAS below 25KIAS / 0.1KIAS 25KIAS and above
Velocity Accuracy:	±5.0KIAS below 50KIAS Meets or exceeds TSO-C106 from 50 to 450 KIAS ±5.0KIAS above 450KIAS
Altitude Range:	-1,000 MSL to FL550
Altitude Resolution:	1 ft
Altitude Accuracy:	Meets or exceeds TSO-C106
OAT Calibration Range:	-70°C to +100°C
OAT Resolution:	0.1°C
OAT Accuracy:	±1.5°C from -70°C to +70°C (per TSO-C106) ±2.5°C from +70°C to +100°C

Status LED:	Off: No power Steady ON: Power present, but either AHRS or ADC not functioning properly Blinking: Both the AHRS and the ADC processors are working normally.
Pitot & Static Ports:	MS16142-4 Straight Thread Tube Fitting O-Ring Gasket type. Thread size 7/16-20. Accommodates fitting ends per MS33656-4 or AN815-4(D) unions with AS568A-904 O-rings installed
Mounting:	Aligned with longitudinal axis (±0.5° for fixed wing aircraft and ±2.0° for rotorcraft)
DO-160E Qualification:	[(F2)V]BBBRXWXSFSZZAZ[ZC][YK]M[A3J33]XXAC
Certification:	RTCA/DO-178B, Level A



Size: 2.0"H x 2.5"W x 3.9"D (ADAHRS, excluding connectors and mounting flange)

Weight: ADAHRS: 0.97 lbs
Magnetometer: 0.40 lbs
OAT Probe: 0.13 lbs

Enclosure: Machined 6061-T6 aluminum

Finish: Black anodized

MSU Specifications

Triaxial Earth Field Magnetometer

OAT Probe Specifications

1,000 Ohm RTD (cabling: 20/24 gauge wire to 40/22 gauge wire)

For further information please contact:

Cobham Avionics, Integrated Systems
One S-TEC Way
Municipal Airport
Mineral Wells, TX 76067 USA
Tel: 1-817-215-7600
Fax: 1-940-325-3904