Because helicopters can fly any speed, trust in Thales most accurate Air Data Unit ever

High accuracy at low speed

For helicopters, air speed measurement at low speed is a key point. Therefore, in addition to in house high quality sensors, Thales has developed an exclusive blade noise mitigation algorithm that drastically reduces measurement error caused by rotor disturbance. This confers an unparalleled level of accuracy on our ADU 3200 – **even at air speeds as low as 20 knots** and in the most severe operating conditions.

Versatile & cost efficient

A single ADU 3200 part number can be fitted on a range of helicopter types. Indeed the ADU 3200 is capable of hosting up to 8 different aircraft' **Source Error Correction (SEC) laws**, easily uploaded via a RS422 link, making system integration and global support much easier.

All communications with onboard systems are via Arinc 429 link.

Exclusive blade noise mitigation algorithm

Fit & Forget

While being compliant with the most severe helicopter environment, the ADU 3200 features **impressive reliability (MTBF of 14,500 hours)** representing 15 years of high profile use of a helicopter. Moreover, the ADU 3200 delivers high performance for the long term and does not require costly periodic calibration.

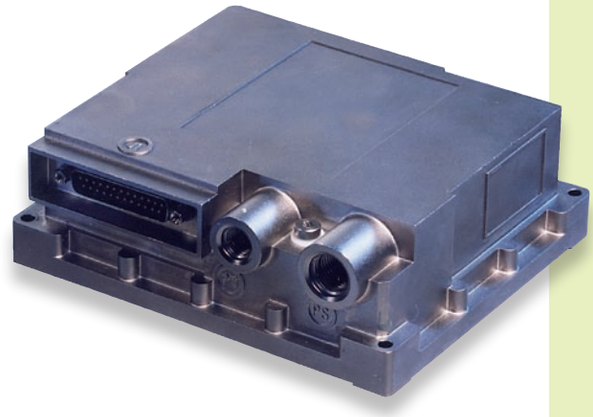
Light & Small

The ADU 3200 incorporates latest silicon technologies to offer state-of-the-art air data measurement performance while achieving a low form factor of **975 cm^3 for a weight of just 750 g**.

Safe & ITAR free

Thales has been leveraging the advantages of its patented MEMS technologies (Micro-ElectroMechanical Systems) for over 15 years. Most of Airbus and Boeing commercial aircraft types use silicon sensors from Thales and have logged **millions of flight hours** with these products. The ADU 3200 is made in Europe for civil applications and **is ready for global export**.

www.thalesgroup.com



ADU 3200
>> HELICOPTER AIR DATA UNIT

STATE OF THE ART

Already selected for the S-76D, EC 135, EC 145, EC 155, EC 225 and EC 725 helicopters, the ADU 3200 is the first air data product with object-oriented software to achieve DO-178B Level A certification. Its low-complexity software is largely hardware independent to facilitate future development and upgrades.

The ADU 3200 uses latest digital technologies and has extensive processing capacity to allow for the addition of new functionalities and/or interface protocols such as ARINC 629 or AFDX.

KEY FEATURES

Air data parameters measured
- Indicated static pressure
- Indicated differential pressure
- Total temperature
- Baro correction

Output (computed parameters)
- Static pressure (indicated or corrected)
- Differential pressure (indicated or corrected)
- Standard altitude
- Baro-corrected altitude
- Altitude rate
- Mach number
- Computed air speed
- True air speed
- Total air temperature
- Static air temperature
- Baro correction

APPLICABLE STANDARDS

- TSO C106 certified
- Compliant with TSO-C2d and FAR 43
- Other applicable standards: DO-178B/DO-254 level A

PERFORMANCE

Altitude (ft)	Error (±ft)
-1,000	25
0	25
1,000	25
1,500	25
5,000	25
8,000	30
11,000	35
14,000	40
17,000	45
20,000	50

Computed air speed (kt)	Error (±ft)
20	5
30	5
40	5
50	5
60	4
80	3
100	2
200	2

- Total Air Temperature (TAT): error = ± 1.2 °C (range= -56°C to +73°C)

PHYSICAL SPECIFICATIONS

Dimensions	50 X 130 X 150 mm
Weight	< 0.75 kg
Power consumption	< 5W
Power Supply	28 V
Operating temperature range (basic)	- 45°C to +55°C
Operating temperature range (extended)	- 45°C to +65°C
Environment	DO-160 E
Shock	20 g/11 ms (crash safety shock)
MTBF	14,500 hrs

INTERFACES

Input	analogue baro correction analogue temperature
Output	two ARINC 429 digital bus
Connectors	
static pressure	MS 33649-06 (9/16 inch or 18UNJF)
total pressure	MS 3364-04 (7/16 inch or 20 UNJF)
electrical	MIL-C-24308-HE501A standard, 25 pin (male)

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