

All aircraft systems need the same key air data parameters such as altitude, airspeed, height deviation and temperature to ensure safe and accurate flight detail, on both rotary and fixed wing aircraft. The Curtiss-Wright Controls Integrated Sensing (CWCIS) ESCADU is highly configurable, highly reliable.

- Reduced Vertical Separation Minima (RVSM) capability
- Encoding altimeter, (Gilham) to ARINC 572-1
- ETI information available via ARINC 429 bus
- Instantaneous vertical speed indication (IVSI)
- Remotely re-programmable firmware
- Weighs less than 1.3kg (2.9lb)

The Enhanced Software Configurable Air Data Unit (ESCADU) is intended to be the primary supply of air data parameters to the aircraft systems. The ESCADU calculates the air data parameters from information received from the pitot and static pressure sensors and an outside air temperature probe. This computed information is supplied to other aircraft systems via an ARINC 429, analogue dc or discrete signals.

Traditional rotary installations have required mechanical dampening in order to remove the effects of rotor-wash from the display screens. The ESCADU is able to counter this by using electronic filtering to negate this effect, reducing cost of ownership by reducing weight and removing maintenance issues for the operators.

The ESCADU is a microprocessor controlled system that computes the following aircraft functions:

- Altitude parameters
- Airspeed parameters
- Height deviation
- Mach number
- Air temperature parameters
- Maximum allowable airspeed
- Signal validities



Primary Measurement of Air Data Parameters...

- more I/O
- more interfaces
- more computation
- more aircraft applications

Quality Approvals

CWCIS are committed to complete customer satisfaction in all products and services. International quality approvals include BS EN ISO9001:2000 and Civil Aviation Authority

www.cwcontrols.com

ESCADU

ENHANCED SOFTWARE CONFIGURABLE AIR DATA UNIT

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The majority of the ESCADU parameters can be configured by software to tailor the unit for a specific aircraft type. Re-programmable firmware enables remote reconfiguration easily accommodating other system changes. Up to 15 aircraft configurations can be stored in the unit, simplifying logistics and increasing versatility.

The unit is constructed as a rugged aluminium enclosure and is designed for mounting in any orientation on its base plate.

TYPICAL OUTLINE SPECIFICATION

For further information please contact the sales department as listed below.

KEY FEATURES

TSO – C106 certified
Software – RTCA DO-178B level A certified
Latest sensor and micro-electronics technology
Modular functionality
Increased environmental capability
Instantaneous vertical speed indication (IVSI)
RVSM capability
Encoding altimeter output (Gilham Code)
Reliability – in excess of 10,000hours
Weight – less than 1.3kg (2.9lb)
Remotely re-programmable firmware
ETI information available on ARINC 429 bus
Configurable for up to 15 applications

SPECIFICATION

Output signals - Digital

Pressure altitude:	-3000 to 80,000ft
Baro corrected altitude:	-3000 to 80,000ft
Instantaneous vertical speed:	0 to $\pm 10,000$ ft/min
Computed airspeed	
Range 1:	0 to 595kts
Range 2:	0 to 785kts
Static air temperature:	-100°C to + 90°C
Mach number:	0 to 4.0
Baro setting:	745 to 1050mBar

Output signals - Analog dc

Four outputs configurable to any air data parameter or parameter derivation

Power

28Vdc: 15W max

Weight

Less than 1.3kg (2.9lb)

Environmental

Operating temperature:	-45°C to +71°C
Reliability:	In excess of 10,000 hours
Tested and certified to:	RTCA/DO-160D

ARINC 429 outputs

Static pressure
Pressure altitude
Barometric corrected altitude
Barometric correction acceleration
Vertical speed (instantaneous)
Impact pressure – mBar
Total pressure – mBar
Indicated airspeed
Computed airspeed
Mach number
Total air temperature
Static air temperature
True airspeed
Maximum allowable airspeed

Other Outputs

Encoding altimeter (Gilham) output to ARINC 572-1
4 discrete outputs for validities or parameter switches
Configurable SSEC/PSEC

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Innovation In Motion

**CURTISS
WRIGHT** Controls
Integrated Sensing