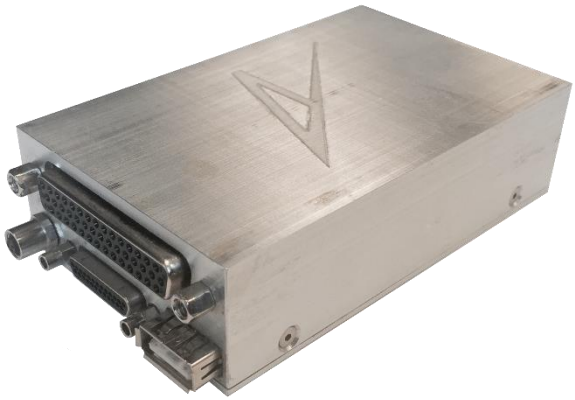
Al Volo

Flight Data Acquisition Systems

info@alvolo.us
Tel. +1.201.937.0680

The Al Volo FDAQ series of flight data acquisition systems provide a complete integrated solution for in-flight measurement at rates of 100, 200, or 400 Hz. The system includes a highly intuitive interface that deploys from the unit to an internet-enabled device via WIFI or USB Ethernet, or to a hand-held console to make configuration and data handling stress-free. Custom integration of additional sensors into the system can be performed upon request.



Key Features

- Onboard inertial, GPS, analog, servo, ported air-data, propulsion sensors and a datalink radio in a small, robust enclosure.
- High level of integration and intuitive interface reduces the effort and cost of system operation.
- Non-ITAR and freely available worldwide

Specifications (configurable options*)

Sampling Rate*	100, 200, or 400 Hz
Inertial Measurement Unit* Only one external IMU may be used.	Internal 9DOF and GNSS receiver, Xsens MTi-G-710 GNSS/INS, or custom unit integrated upon request
Analog Inputs	32, 0–5 V input, 12-bit resolution with optional 8-bit amplifier*
Servo Inputs* Each serial bus requires 2 PWM inputs.	22, 1000–2000 µs PWM, 12-bit resolution 4, servo serial bus: Futaba S-Bus, JR X-Bus, or Spektrum X-Bus
Other Inputs* Max of 18 other inputs may be used with each 6 requiring 2 PWM inputs.	Internal pressure and temperature measurement 12, 5-180 mph pitot-static probe, 0.1 mph resolution 12, optical RPM measurement, 0.05%/FS accuracy for RPM<10,000 10, motor data via Castle ESC: RPM, voltage, current, throttle, etc.
Storage*	8–64 GB
RF Link*	Integrated 2.4 GHz ISM, 100 mW Integrated 900 MHz ISM, 1 W
Local Output*	UART or Ethernet
User Interfacing*	WIFI, Ethernet, or hand-held console
Electrical	V_{in}: 6.5–30 V P_{in}: 1 W (typical w/o radio) or 5 W (typical w/ radio)
Mechanical	Size: 110.0 x 58.0 x 25.4 mm (4.33 x 2.28 x 1.00 in) Weight: 150 grams (5.2 oz)
Environmental	-20C to 45C, 95% noncondensing humidity