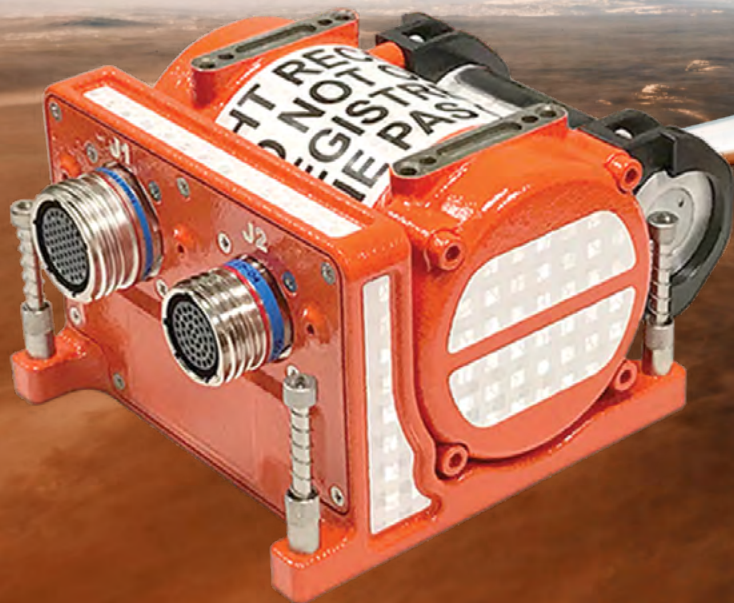




SENTRY RECORDER PLATFORM

United Kingdom | United States | Australia





FDS OVERVIEW

Innovative end-to-end flight data solutions
for forward and retrofit platforms

Flight Data Systems (FDS) is an international avionics equipment & services provider with 65+ talented specialists working in design, manufacturing, repair, and data.

Established in 1990, Flight Data Systems joined the ACR Group in 2018 which includes aviation brands [ARTEX](#), [SKYTRAC](#), [Latitude Technologies](#), and [FreeFlight Systems](#).

FDS ground support equipment includes the popular Handheld Multipurpose Interface (HHMPI) unit for downloading recorder data from popular recorder brands. FDS airborne

products include the SENTRY flight recorder platform, the Modular Acquisition Unit (MAU), and the Remote Data Concentrator (RDC).

FDS services include flight data monitoring, equipment repair & overhaul, electronics manufacturing & testing, flight data readout services, and logistics management.

For a complete list of products and services, reach out to one of our Regional Sales Managers at sales@flightdata.aero or visit www.flightdata.aero.

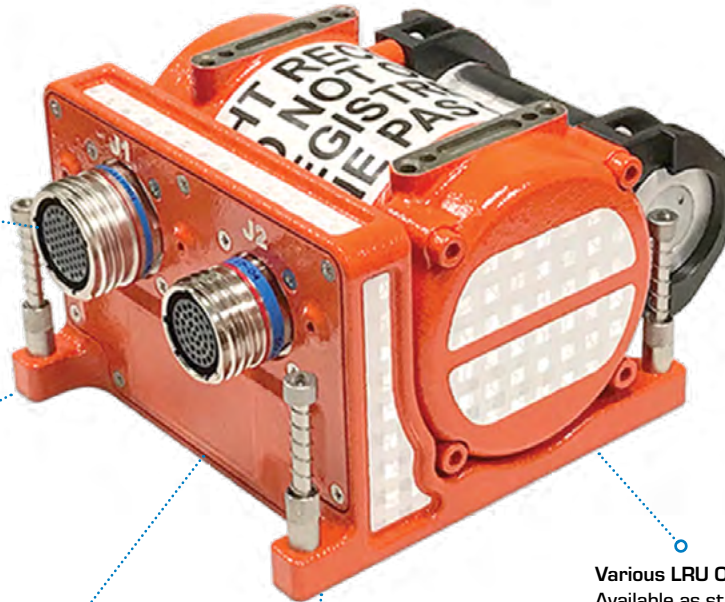
CLICK TO LEARN MORE >>

[Overview](#)



SENTRY AT A GLANCE

INNOVATIVE FLIGHT DATA RECORDER



Industry Leading:
Smallest & lightest recorder on the market with significant SWaP optimizations

Multiple Beacon Locations:
Available with rear beacon mount and top beacon mount (optional)

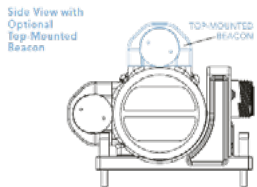
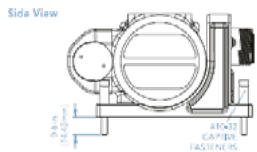
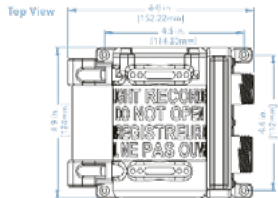
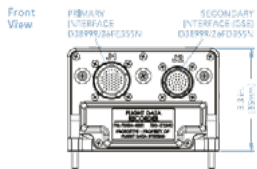
Sensor Inputs:
Analog and digital

Modular:
Modular hardware with broad expansion capabilities

Versatile:
Ideal for all platforms including civil, military, fixed-wing, rotor-wing, and RPAS

Various LRU Options:
Available as standalone FDR or CVR and as combination CVFDR unit

SENTRY Dimensions



The SENTRY Flight Data Recorder (FDR), Cockpit Voice Recorder (CVR), Combined CVFDR has been designed to be the world's smallest, lightest, lowest power ED112-A compliant Flight Recorder.

Many of the world's previously popular recorders flight recorders are becoming obsolete or extremely difficult to source. Flight Data Systems has used its 25 years of market experience to develop a unique approach to storing your flight information securely and reliably in a single form factor (FDR/CVR/CVFDR).

The solution that not only reduces size and weight, but by reducing power consumption to less than half that of many of our competitors, also allows the

end user to maximise the aircraft power budget for additional mission critical systems.

Designed around the principle of reduced Size, Weight & Power (SWaP), we have worked with both Civil and Military Operators to develop SENTRY to exhibit the best features from existing recorders on the market in an obsolescence free, crash survivable package.

Designed for all aircraft types, and with particular consideration for the size constraints often found in the retrofit market, the SENTRY and its complementary portfolio of Flight Data Acquisition products provides a unique and customer specific configurable, end to end Flight Data System.

TECHNICAL SPECS.

CAPABILITIES:

- Extremely compact and lightweight - weights as little as 4.5 lbs (2kg)
- Advanced hardware design minimizes size, weight & power (SwaP)
- TSO and aircraft-specific configurations available
- Qualified to DO-160G
- Modular hardware with broad expansion capabilities
- Extremely low power consumption (2-4 Watts Nominal)
- Optional safety critical soft-core processor for third-party software
- Flange mount in any attitude using captive hardware

Data, including specifications, contained within this document are summary in nature and subject to change at any time without notice at Flight Data Systems' discretion. Contact sales@flightdata.aero for the latest revision.

Type	Description
Physical Dimensions (in.)	3.3 in. H x 4.9 in. D x 6.0 in. W
Physical Dimensions (mm.)	85mm H x 124mm D x 152.22mm W
Weight (Titanium unit)	Titanium @ 4.5 lb. (2kg) min
Colour	FED-STD-595 Aviation Orange with high-reflective white stripes
Input Power	Dual-redundant 28 V DC power inputs, MIL-STD-704F
Power Consumption	8 W max (steady state)
Main Connector	<ul style="list-style-type: none"> • MIL-C-38999 Series III 55 pins as primary input connector • 37-pin connector as GSE and additional interface expansion
Environmental	DO-160G
Operating Temperature	-40 °C to 71 °C
Non-operating Temperature	-40 °C to 85 °C
Humidity	100%
Operational Altitude	70,000 ft.
Operational Shock	20 g
EMI/EMC	DO-160G
Reliability	>25,000 operating hrs.
Cooling	Passive convection
Crash Survivability per ED-112 Penetration	500 lb./10 ft./¼-in. probe
Static Crush	5,000 lbs
Fire Protection	50,000 BTU/sq. ft./hr. for 60 min. @ 1,100 °C; 10 hrs. @ 260 °C
Impact Shock	3,400 g, 6.5 ms, half-sine shock wave
Immersion	Seawater @ 20,000 ft. for 30 days; aircraft and fire extinguishing fluids for 48 hours
Underwater Acoustic Beacon	90-day beacon, TSO-C121b; six-year battery and bracket supplied with unit
Cockpit Audio	Up to 4 audio inputs
Rotor Speed	2 input, 7 Hz to 6 kHz, 2 VRMS to 122 VRMS
ARINC 429	Minimum of 2 inputs
ARINC 717	64 to 1,024 wps
ARINC 777	RIPS interface
ETHERNET	10/100 Base-T with UDP/IP
Control Unit:	Optional, ARINC 757-compatible, panel-mount unit for audio testing and erasing, with internal and external cockpit area microphone options
Recorder Independent Power Supply (RIPS)	Optional bolt-down RIPS authorized to ARINC 777 and TSO-C155 for additional 10 minutes of CVFDR power

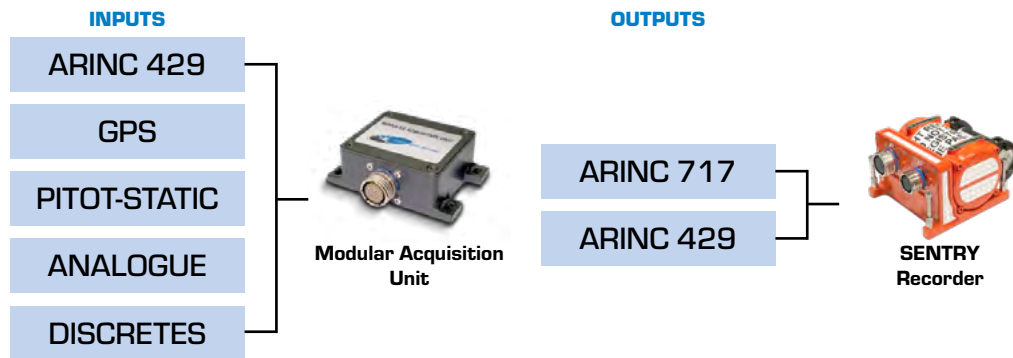
ACQUISITION CAPABILITIES

The FDS Modular Acquisition Unit (MAU) is the key to unlocking the aircraft sensor information. Converting a multitude of ARINC, Digital, Analogue, Synchro signals to the ARINC 717 standard that the Sentry FDR requires, the MAU provides the flexibility that is necessary in major aftermarket modifications.

The FDS MAU is one of the few fully flexible flight data acquisition units within the marketplace. The MAU can take up to 24 signal parameters in a configurable format and, therefore, has the capability to be completely flexible to the aircraft upgrade requirements. A clear benefit to this is the ability to build revenue back into the aircraft

by capturing more data than ever before, over and above the standard parameter set. In addition, as the MAU is modular in design, the number of input signals can easily extend to double capacity (up to 48 inputs)

In a world where big data is increasingly important and the ability to realise cost saving opportunities is paramount, Flight Data Systems is one of the world's largest Flight Data Recorder Readout and Flight Data Monitoring (FDM/FOQA) service providers.



QUESTIONS? GET IN TOUCH

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