



GE Aviation's Data Acquisition System: the next generation data and recording system.

GE Aviation is the world leader in the design, development and production of reliable solid-state crash-survivable cockpit voice and flight data recorder systems. The Data Acquisition System (DAS) is a drop in replacement for the F-16 Crash Survivable Flight Data Recorder and the USAF Standard Flight Data Recorder. The DAS provides enhanced versatility, small size, low weight, and adaptability to a wide range of customer information management needs.

The DAS incorporates open architecture and commercial standards into a design that supports ease of software and hardware tailoring to meet specific customer acquisition, processing and recording requirements. The DAS acquires, processes and stores data from a wide range of analog, digital and discrete sources. The DAS consists of a Data Acquisition Unit (DAU), and an Enhanced Crash Survivable Memory Unit (ECSMU). The DAU provides adaptable interfacing and functionality with significant acquisition, processing and recording growth. The ECSMU is a very small, extremely light weight, high capacity mishap recorder. The ECSMU complies with the ED-55, ED-56a, ED-112 recorder crash survivability requirements and includes the next generation growth adaptabilities.

Capabilities

Mishap recorder

- Flight data
- Audio
- Video

Engine and structures monitoring

Operations and mission management

Integrated Vehicle Health Monitoring (IVHM)

Prognostics and Health Management (PHM)

Flight Operation and Quality Assurance (FOQA)

Training



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Specifications

Physical Characteristics		Digital I/O	
4.25 x 6.5 x 3.5 inches (ECSMU)		MIL-STD-1553B	
6.2 x 7.4 x 7 inches (DAU)		Ethernet 10/100 Base T	
5.8 lbs (ECSMU not including beacon)		ARINC 429	
9.1 lbs (DAU)		RS-422/485	
		ARINC 717	
Audio Interface			
Three low-band channels		Input power	
One high-band cockpit area mic		+28 VDC/115 VAC	
Audio input monitor			
Certification			
Analog/discretes		EUROCAE: ED-55, ED-56A and ED-112	
AC/DC differential inputs			
Frequency inputs		Qualifications	
Configurable I/O discretes		Environment: MIL-STD-810	
Ratiometric		MIL-STD-461D	
Synchros		MIL-STD-5400	
LVDT		MIL-STD-704A	
Strain gauges			

Ground support equipment
GE's extensive toolsets minimize the cost of configuring and operating recorder systems:

- Download is accomplished with a PC running a web-browser and needs no special software
- Recorder configuration is performed by the OEM using a PC based tool to select the desired parameters, storage, exceedance checks etc.
- Replay, analysis and animation software



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