

FAERITO® Digital Flight Recorder System (DFRS)

/// OVERVIEW

The FAERITO Digital Flight Recorder System (DFRS) is a multi-functional unit that supports audio, video, and flight data recording.

The FAERITO DFRS has been designed and certified to EUROCAE ED-112 and RTCA DO-160E standards for both commercial and military aircraft requirements.

The DFRS can be configured as a standalone flight recorder that contains an 8GB Crash Survivable Memory Unit (CSMU) or it can be integrated with the Cockpit Control Panel, Cockpit Video Cameras, Video Multiplexer, and Removable Memory Units (RMUs).

The DFRS retains the most recent eight (8) hours of video data and up to 25 hours of data and audio recording.

The DFRS supports a variety of I/O interfaces, including RS232, RS422, and MIL-STD-1553, along with a full range of analog and discrete inputs.

The DFRS is configured with an integral Underwater Locator Beacon (ULB) that is activated when submerged in water. The ULB is mounted to the DFRS to easily locate the CSMU, which contains the Crash Survivable Memory.



/// FEATURES

Modes of Operation

- Record audio, video, data, diagnostics, time synchronization
- Download recorded audio, video, data to Removable Memory Unit (RMU)
- Maintenance modes, on aircraft
 - Perform bulk erase of recorded memory
 - Initiate Built-In-Test (I-BIT)
- Data playback

Video Interface

- Number of channels: 2 (up to 4 with CIU (Camera Interface Unit))
- Analog input: 2 (NTSC/RS-170 standards)
- Video input voltage: 0.7 Vp-p
- Analog video sample clock: 13.5 MHz
- Number of pixel per sample: 16 bits
 - (8 bits luminance and 8 bits chrominance)
- Compressed bit rate: 1 Mbps per channel
- Video compression ratio: 250:1 typical
- Number of frames: 5 frames per channel typical

Audio Interface

- Number of channels: 4 mono or 2 stereo
- Input bandwidth: 20 Hz – 20 KHz
- Input resistance: 20 K Ω
- Signal-to-noise ratio of input: 74 dB
- Analog audio input level: max 3 Vp-p
- Analog audio sample rate: 16 KHz
- Compressed bit rate: 16 Kbps per channel

MIL-STD-1553A/B BUS

- Number of channels: 1 with redundancy
- Maximum data speed: 1 Mbps

Discrete Sensor Input for System Control

- Number of channels: 4
- Input level: open or ground
- Sensor input interface: single ended

Discrete Sensor Output for Status Display

- Number of channels: 2
- Output level: open or VCC
- Sensor output interface: single ended

Power

- Power input voltage: 20 V – 40 VDC
- 36 watts max

Mechanical

- Length: 9.0 in. with ULB and bracket
- Width: 5.0 in.
- Height: 4.45 in.
- Weight: <9.9 lb with ULB and bracket

Compliance

- EUROCAE ED-112 Amendment 2
- JAR-OPS 3.715 Appendix 1
- FAA TSO-C176 (Recorder only; FAA reference 13OL-10-259)
- ARINC 573-7/717
- RTCA DO-160D & E

Data Playback Software Requirements

- PC with Microsoft Windows XP Pro Service Pack 2 or higher
- Hardware minimum specifications: 100 GB hard drive, Intel processor 1.6 GHz, system memory 1024 MB RAM, video memory 128 MB, video monitor 1024 x 768 pixels
- Software minimum specifications: DirectX 7.0, .NET Framework 3.5, Windows Media Player 9, Microsoft MFC Library 1.0
- Software includes MPEG-2 transcoding capability

Manufactured under U.S. Patents 6,137,912; 6,167,155; 6,487,312; other Patents Pending



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CERTIFIED
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