

Fortress OEM

Multi Purpose Flight Recorder with Integrated
3rd Party Card

**CURTISS-
WRIGHT**

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Key Features

- Combined voice, data, datalink and image recording (stand-alone options available)
- ED-112A compliant
- Designed to meet current regulations
- Compact and lightweight – 8.1 lb (3.7 kg)
- Webserver for fast & free data download
- Approval to ETSO-C123c, C124c, C176a, C177a
- 90 day Ultrasonic Locator Beacon to TSO-C121b
- Expansion slot for 3rd party application card

Applications

- Crash protected recording
- Data storage for other applications including
 - + FOQA/FDM/FDAP
 - + Aircraft performance monitoring
 - + Engine condition trend monitoring
 - + Health and usage monitoring
 - + Encrypted recording system

Overview

Recorders are built to meet the latest regulations and often designed with any upcoming changes in mind. To ensure they meet the requirements of new and old aircraft, some modifications may be required, or additional data formatting hardware used. Curtiss-Wright has been manufacturing recorders since 1957 and introduced the world's first to obtain RTCA-DO178 approval for solid state recorders.

Fortress OEM provides an aircraft recording solution supporting parametric flight data, 4 channels of cockpit voice recording and CPDLC recording for up to 25 hours each and image recording for 2 hours minimum.

Fortress OEM is designed in accordance with RTCA/DO-178C and RTCA/DO-254. It meets all current FAA and EUROCAE requirements and has a 90 day ultrasonic locator beacon (ULB), certified to TSO-C121b.

Through the provision of an expansion slot with internal interface to the Fortress processor card, Fortress OEM can be adapted to support different interface and functional requirements such as the expansion of data acquisition interfaces, the inclusion of health and usage monitoring capability and data/audio encryption capability.

Fortress OEM attaches directly to an airframe to eliminate the need for heavy mounts and easily integrates with other systems to provide additional functionality such as

- High speed (<45 seconds) and license free flight data download at the gate via a Gigabit Ethernet link
- Reachback capability for FOQA/FDM/FDAP Aircraft Performance and Engine Condition Trend monitoring programs
- Health and usage monitoring
- Integrated data acquisition
- Encrypted recording

The Fortress OEM is supported by dedicated recorder independent power supply, cockpit area microphone, cockpit area camera and cockpit control unit. Variants of the cockpit control unit support dual recorder installations, enabling data and image distribution to two installed Fortress OEM recorders.

Specifications

Interfaces

- Flight Data Recorder (FDR)
 - + 25 hours capacity from
 - › ARINC 717 format 64 – 4096 wps (external interface)
 - › ARINC 717 format (internal interface)
- Cockpit Voice Recorder (CVR)
 - + 4 channels, 30 minutes to 25 hours duration
 - + 3 crew channels
 - + 1 cockpit area microphone channel
- Datalink Recorder (CPDLC)
 - + 2 to 25 hours, ARINC 429
- Airborne Image Recorder (AIR)
 - + 2 hours, up to 16 fps, 100 Mb Ethernet
- Receives GMT/UTC via ARINC 429
- Comprehensive BIT including individual discrete output for each recording function
- OMS via ARINC 429
- Rotor tachometer input
- Tri-axial accelerometer input
- Gigabit Ethernet maintenance port

Electrical and Mechanical

- Power
 - + 28 VDC
 - + 13W max (excluding application specific expansion card)
- Mass: 8.1 lb (3.7 kg) including underwater locator beacon, excluding expansion card
- Dimensions (H x L x W) within
 - + 4.8 x 10.63 x 4.88" (122 x 270 x 124 mm)
- Underwater Locator Beacon: Beacon to TSO-C121b, battery and bracket included



Fortress OEM is ED-112A compliant

Environmental

Adheres to ED-112A defined crash survivability tests

- Fire intensity
 - + High: 1100°C for 60 minutes
 - + Low: 260°C for 10 hours
- Impact shock: 3,400 G for 6.5 ms
- Penetration resistance: 500 lb from 10 ft ¼ inch contact point
- Static crush: 5,000 lb for 5 mins per axis
- Shear/Tensile strength: 6,000 lb for 1 minute each axis
- Fluid immersion: Immersion in aircraft fluids for 24 hr
- Water immersion: 30 day sea water
- Hydrostatic pressure: Equivalent to depth of 20,000 ft

RTCA-DO160G Environmental Qualification

- Temperature
 - + Operating: -55°C to 70°C
 - + Non-operating: -55°C to 85°C
- Altitude: -1,000 ft to 55,000 ft
- RTCA-DO160G categories
 - + E1ABB(R(C,C1),U2(F,F1))EWFSFTAZ(XX)AZCWXRMA3J3L3XXAC

Optional Equipment

- Cockpit Control Unit (CCU)
- Recorder Independent Power Supply (RIPS)
- Cockpit Area Camera (CAC)
- Cockpit Area Microphone (CAM)
- Flight recorder system accelerometer
- Ground support equipment

Ordering Information

Please contact Curtiss-Wright Defense Solutions.



Fortress OEM features a 90 day ULB