



## NEWS RELEASE

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### **Curtiss-Wright Introduces Avionics Industry's First Crash Protected Memory Module (CPMM) for Cockpit Voice & Data Recorder Designers**

*Fortress CPMM significantly lowers the cost and mitigates the design risk of producing a new crash protected recorder for protected data storage*

**ASHBURN, Va. – June 25, 2018** – Curtiss-Wright's [Defense Solutions](#) division has introduced the industry's first commercial-off-the-shelf (COTS) [crash protected memory module \(CPMM\)](#). The CPMM has been designed for use in flight data recorder (FDR) applications where captured cockpit image, voice, datalink, and flight data requires protection against stipulated crash conditions.

The Fortress CPMM unit provides system designers with the same highly rugged memory technology fielded in Curtiss-Wright's industry-leading Fortress™ FDR product family, to save time and reduce the cost of developing new FDR solutions. It makes available, for the first time, the enabling technology required to develop unique tailored FDR solutions. When developing a new FDR, effective crash protection for the memory provides system designers with their greatest challenge. Use of the proven and qualified Fortress CPMM, eliminates the need for customers to invest the significant resources required to design and qualify a crash protected memory module.

The CPMM is designed to provide protected data storage for crash conditions related to flight data recorder applications. It is also suitable for new applications where protection of data against severe mechanical conditions, temperature and pressure is required, such as missile flight test and space launch applications.

"Crash protected memory resides at the core of any flight data recorder design, and requires the largest investment of resources and intellectual property to successfully meet the engineering challenge," said Lynn Bamford, Senior Vice President and General Manager, Defense Solutions division. "In response to customer demand, we are now offering the ED-112A compliant Fortress CPMM memory module, the industry's first COTS crash protected memory unit. Using

the CPMM, designers of new data recorders for aviation or telemetry applications will greatly simplify and speed the development and deployment of new recorder designs.”

The Fortress CPMM is designed and qualified to satisfy all current and upcoming international aviation regulations, including EUROCAE ED-112A, FAA TSO, and EASA ETSO requirements for [FDR and cockpit voice recorders \(CVR\)](#). The unit’s hardened enclosure withstands extremely harsh conditions, including exposure to jet fuel fire (260°C for 10 hours; 1100°C for 60 minutes) and immersion in sea water for 30 days. The unit was developed in accordance with DO-254 level D and meets FAA TSO standards for CVR (TSO-C123c), FDR (TSO-C124c), Airborne Image Recording (TSO-C176a), and Datalink Recording (TSO-C177a) applications.

The compact, lightweight CPMM unit (2.8 lb/1.3 kg) features a 64 GB solid-state memory array housed in a hardened enclosure. In its FDR application, the CPMM supports segregated and partitioned recording for voice, parametric flight data, datalink and image data via an industry standard interface. However, the CPMM presents a memory array that can be used for applications where segregation and partitioning is not required. An optional mounting bracket is available for a 90-day Underwater Locator Beacon (ULB), such as the DK120/90 or Blue90. The ULB bracket is designed and tested to meet ED-112A shear and tensile strength requirements. Additional options include a controller electronics card, and crash damage recovery equipment.

### **State-of-the-Art Crash Protection**

The Fortress CPMM delivers the same technology used in [Curtiss-Wright’s Fortress family of recorders](#), the newest range of FDRs on the market. Fortress FDRs combine a CVR, FDR, DataLink recorder and image recorder in a single unit. Fortress has been qualified for flight release and meets the requirements set forth by the EUROCAE ED-112A “Minimum Operational Performance Specification for Crash Protected Airborne Recorder Systems” standard. Crash survivability and operational environmental qualification tests validate the ruggedness, operating temperature range and mitigation of problematic EMC emissions during operation.

### **CPMM Performance Features:**

- 64 GB solid state memory array
- Industry standard QSPi interface
- Designed in accordance with RTCA/DO-254 DAL D
- Compact and lightweight – 2.8 lb (1.3 kg)
- Crash protected enclosure meets ED-112A requirements
- Adheres to ED-112A (TSO C123C/C124C) 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 minutes 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

### **About Curtiss-Wright Flight Data Recorders**

Curtiss-Wright has been a leading manufacturer of crash protected recorders since 1957. The company introduced the industry's first combined cockpit voice/flight data recorder (CVR/FDR) in 1986, and was the first supplier to obtain RTCA-DO-178 approval for solid-state recorders.

### **About Fortress Recorders**

For system designers who prefer a completely integrated flight data recorder, Curtiss-Wright Fortress FDRs offer the most flexible, compact and lightweight recorders available. With support for modular plug-in cards, the Fortress family is ideal for a wide range of aircraft platforms, including helicopters, airliners, executive jets, and military combat and transport aircraft. The new crash recorders are hard-mountable for easy installation.

**Sales inquiries:** Please forward all sales and reader service inquiries to [ds@curtisswright.com](mailto:ds@curtisswright.com).

For more information on Curtiss-Wright Defense Solutions products, please visit [www.curtisswrightds.com](http://www.curtisswrightds.com).

### **About Curtiss-Wright Corporation**

Curtiss-Wright Corporation is a global innovative company that delivers highly engineered, critical function products and services to the commercial, industrial, defense and energy markets. Building on the heritage of Glenn Curtiss and the Wright brothers, Curtiss-Wright has a long tradition of providing reliable solutions through trusted customer relationships. The company employs approximately 8,600 people worldwide. For more information, visit [www.curtisswright.com](http://www.curtisswright.com).

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