



## NEWS RELEASE

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### **Curtiss-Wright and Ultra PCS Collaborate to Deliver Lightweight Crash Recorder and HUMS Solution – FortressHUMS™**

*FortressHUMS is an ED-112A compliant cockpit voice and flight data recorder featuring integrated health and usage monitoring system in a 13 lb. installation*

**2023 NBAA Business Aviation Convention & Exhibition (NBAA-BACE), LAS VEGAS, NEVADA – October 18, 2023** – Curtiss-Wright's [Defense Solutions Division](#) and [Ultra PCS](#) today announced a collaborative agreement to develop FortressHUMS, a new compact and lightweight ED-112A compliant Cockpit Voice and Flight Data Recorder with integral Health and Usage Monitoring System (HUMS) capability designed for use on rotorcraft platforms. FortressHUMS uniquely combines flight data recording and HUMS capabilities in an easy-to-install and affordable single-box solution weighing only a fraction of alternative systems. In a typical installation, the overall system weight (FortressHUMS unit + cables and sensors) is reduced from 70 lbs. to 13 lbs. (32 kg to 6 kg) versus currently available alternatives.

FortressHUMS can be quickly and easily retrofitted onto a helicopter to provide a size, weight, and power (SWaP)-optimized single box solution for mandatory flight recording combined with a HUMS solution for maintenance, safety, fleet management, and supply chain interface. Its innovative serial communications network of intelligent sensors, connected via a single cable routed throughout the aircraft, enables rapid integration,

significantly reduces system complexity, and reduces the amount of time the aircraft needs to be grounded for installation.

FortressHUMS is ideal for use in helicopter applications where operators are seeking to extend aircraft operational life and implement predictive maintenance programs. It can be deployed as a permanent-installed combined HUMS and recorder system for new aircraft construction, or as an upgrade path for customers who implement an initial Fortress Recorder-only installation.

"We are very excited to collaborate with Ultra PCS to deliver the unprecedented size and weight reduction provided by the FortressHUMS recorder to the rotorcraft market," said Brian Perry, Senior Vice President and General Manager, Curtiss-Wright Defense Solutions Division. "FortressHUMS significantly reduces the time and cost of aircraft installation and through-life operational costs thanks to its network-based approach and extremely low installed system weight."

"Ultra PCS is delighted to be teamed with Curtiss-Wright to bring this next generation, game-changing technology to market," said Ben Sutton, Vice President, Data Processing, Ultra PCS. "The FortressHUMS will provide the end-user with a significant fleet management capability that enables them to reduce operational costs by making better decisions about maintenance analysis, safety, training, and interface to the supply system. This system will provide the transformational ability to the customer from crew chief to design engineer."

### **About FortressHUMS**

FortressHUMS is a non-invasive, fault-tolerant, and compact solution that combines Curtiss-Wright's next-generation Fortress crash recorder with the revolutionary integrated Health and Usage Monitoring System developed by Ultra PCS. The resultant product will offer full crash recorder capability coupled with a state-of-the-art HUM system that will offer users a powerful yet lightweight and affordable prognostic and diagnostic health monitoring system. FortressHUMS' algorithms calculate the remaining useful life of components, enabling significant maintenance cost savings and increasing aircraft availability by reducing or extending maintenance beyond conservative periodic routines.

FortressHUMS has a scalable and composable architecture that can accommodate up to 60 smart sensor channels (e.g. accelerometers, tachometers, communications interfaces, and auxiliary data acquisition modules). The distributed sensor network acquires all data parameters required for both HUMS and FDR functions. This includes vibration data for mechanical diagnostics, engine monitoring, and airframe monitoring; platform dynamics for rotor track and balance; analog and digital signals for HUMS usage monitoring, exceedance monitoring and regime recognition; and ARINC 429, analog, and digital signals for flight data recording. FortressHUMS can operate with the cockpit area microphone, HD Color camera, Recorder Independent Power Supply and ground replay software to provide a complete cockpit voice, video and flight data recording capability. What's more, FortressHUMS is easy to reconfigure because sensors can be repurposed, added or removed, and then reprogrammed without the need to remove hardware from the aircraft.

Curtiss-Wright manufactures the FortressHUMS data recorder system at its facility located in Christchurch, UK.

### **About Ultra PCS Ltd**

At Ultra PCS, we solve our customers' problems, providing engineering solutions to safety and mission critical challenges in the air and on the ground. Ultra PCS solutions can be found in the latest military aircraft and vehicles, in civil aircraft, and in unmanned vehicles. We also offer innovative products optimized to support the unique challenges of the dismounted soldier. We help to ensure our customers get to where they need to be safely, achieve their objectives and keep on going back. For more information, please visit [www.ultra-pcs.com](http://www.ultra-pcs.com) and follow us on LinkedIn @UltraPCS.

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

Curtiss-Wright Corporation (NYSE:CW) is a global integrated business that provides highly engineered products, solutions and services mainly to Aerospace & Defense markets, as well as critical technologies in demanding Commercial Power, Process and Industrial markets. We leverage a workforce of 8,400 highly skilled employees who develop, design and build what we believe are the best engineered solutions to the markets we serve. Building on the heritage of Glenn Curtiss and the Wright brothers,

Curtiss-Wright, headquartered in Davidson, North Carolina, has a long tradition of providing innovative solutions through trusted customer relationships. For more information, visit [www.curtisswright.com](http://www.curtisswright.com).

For additional information about Curtiss-Wright Flight Recorder solutions, please visit [www.curtisswrightds.com](http://www.curtisswrightds.com), LinkedIn, and Twitter @CurtissWrightDS.

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