



NEWS RELEASE

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Curtiss-Wright and Ultra Electronics Collaborate to Deliver Lightweight Crash Recorder and HUMS Solution for Helicopter Platforms

New Fortress HUMS ED-112A compliant Cockpit Voice and Flight Data Recorder features integrated Health and Usage Monitoring System in a single 13 Lb. box

SINGAPORE AIR SHOW, CHIANGI EXHIBITION CENTRE, SINGAPORE – February 15, 2016 (Booth #R75) - [Curtiss-Wright Defense Solutions](#) today announced that its Avionics & Electronics business unit, in collaboration with Ultra Electronics Flightline Systems, has developed **Fortress HUMS, 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. Fortress HUMS 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, overall weight is reduced from 70 lbs. to 13 lbs. (32 kg to 6 kg) versus currently available alternatives.

Fortress HUMS 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. Fortress HUMS 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 on both existing aircraft and new builds, deployed as a permanent installed combined HUMS and recorder system for new aircraft construction, or deployed as an upgrade path for customers who implement an initial Fortress Recorder only installation.

"We are very excited to collaborate with Ultra Electronics Flightline Systems to deliver the unprecedented size and weight reduction provided by the Fortress HUMS recorder to the rotorcraft market," said Lynn Bamford, Senior Vice President and General Manager, Defense Solutions division. "Fortress HUMS 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 Electronics Flightline Systems is excited to be teamed with Curtiss-Wright to bring this next generation and game changing technology to market," said Marc Brodeur, Vice President, Sales & Marketing, Ultra Electronics Flightline Systems. "The Fortress HUMS 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 transformational ability to the customer from crew chief to design engineer."

About Fortress HUMS

Fortress HUMS 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 Electronics. 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 light weight and affordable prognostic and diagnostic health monitoring system. Fortress HUMS' 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.

Fortress HUMS 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. Fortress HUMS 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, Fortress HUMS is easy to reconfigure because sensors can be repurposed, added or removed, and then reprogrammed without the need to remove hardware from the aircraft.

A video introduction to the Fortress recorder can be viewed at:

www.curtisswrightds.com/infocenter/videos/crash-recorder-interview.html

A video introduction to Ultra Electronics' Health and Usage Monitoring System can be viewed at

www.youtube.com/watch?v=lySn-q700Jw&feature=youtu.be

Sales inquiries: Please forward all sales and reader service inquiries to Steve Leaper (sleaper@curtisswright.com) or Marc Brodeur (Marc.Brodeur@ultra-fei.com).

Curtiss-Wright manufactures the Fortress HUMS data recorder system at its facility located in Christchurch, UK, which is supported by the company's facility in Dublin, Ireland.

For more information on Curtiss-Wright Defense Solutions products, please visit www.curtisswrightds.com.

About Ultra Electronics

Ultra Electronics Group manages a portfolio of specialist capabilities, generating highly-differentiated solutions and products in the Defense & Aerospace, Security & Cyber, Transport and Energy markets, by applying electronic and software technologies in demanding and critical environments to meet customer needs. For more information please visit www.ultra-electronics.com. For more information on Ultra Electronics Flightline Systems products, please visit www.ultra-fei.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 9,000 people worldwide. For more information, visit www.curtisswright.com.

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