



## NEWS RELEASE

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### **RUGGED COTS-BASED HELICOPTER AVIONICS AND SUBSYSTEM SOLUTIONS DISPLAYED BY CURTISS-WRIGHT AT HELI-EXPO 2015**

**HELI-EXPO 2015 (Booth# 5466), ORLANDO, Fla. – March 2-5, 2015 – [Curtiss-Wright Corporation](#)** (NYSE: CW) today announced that its [Defense Solution](#) division will display a wide range of its industry leading COTS-based solutions designed for use on commercial and defense aerospace helicopter platforms at **Heli-Expo 2015 (Booth# 5466)**. The broad range of highly engineered solutions displayed will include:

- Air data and data acquisition avionics
- Rugged touchscreen LCD mission displays
- High speed/high capacity data recording and storage products
- Network routers and switches
- Rugged mission computers
- Fully integrated video management systems for helicopter-based airborne surveillance.

#### **Featured Air Data and Data Acquisition avionics products will include:**

- [Air Data Computers \(ADCs\)](#): Curtiss-Wright will be showcasing the latest generation of small, lightweight air data computers. These “fit & forget” systems meet the extended accuracy requirements for operation in NextGEN/SESAR airspace. Our ADCs require no routine maintenance or periodic calibration, which reduces downtime and increases operational readiness while lowering overall cost of ownership. Module versions are available that can be integrated with existing host equipment, such as an Attitude Heading Reference System or Inertial Reference System.
- [Acra KAM-500 Data Acquisition System](#): The popular Acra KAM-500 airborne data acquisition unit (DAU) brings the advantages of the COTS design approach to Flight Test, Structural Health and Flight Data Monitoring applications. This rugged DAU is driven by hardwired finite state machines, making it extremely reliable. Thanks to its modular construction, the KAM-500 reduces cost of ownership. Its

compact size and network native design, the KAM-500 is ideal for installing in restricted spaces and for reducing weight on rotary wing aircraft.

- **Fortress Ultra-Lightweight Crash Recorders**: Introduced at Heli-Expo 2015, our new family of ultra-lightweight recorders for cockpit image, voice and flight data weigh only 5.7 lbs., ~50% less than early generation solid state recorders. The weight reduction which results from the recorders' integrated data acquisition, delivers significant fuel cost savings. They feature dual-redundant CVR/FDR to mitigate the risk of mandatory grounding in case of recorder failure. In addition they support video recording (from cameras and EFIS displays) and datalink messages, such as pre-flight departure clearances uplinked directly from the control tower to the Flight Management System on the aircraft (currently in wide use on fixed-wing airliners and increasingly used on helicopters).
- **Multi-Purpose Flight Recorder (MPFR)**: The MPFR provides flight recorder versatility in a highly compact package. On-helicopter download is achieved in less than two minutes and can be networked directly to a remote operational base for diagnostics and fault reporting. The MPFR is packaged as a compact unit ideal for the rotary wing market. Importantly, it may be attached directly to the airframe without requiring bulky equipment racks or anti-vibration mounts, thus permitting optimum aircraft performance to be attained for lower operating costs.
- **Icing Severity Detection System (ISDS)**: Curtiss-Wright's ISDS helps eliminate the damage and cost resulting from asymmetric loads on helicopter transmissions and airframes that can result from ice shedding. It continuously measures build up from liquid water, providing a rapid warning of changing conditions. A rapid response time of less than 20 seconds for 1.0gm/m<sup>3</sup> liquid water content provides the pilot with invaluable advanced notice of changing conditions – even in the hover. It works seamlessly with Curtiss-Wright autonomous ice protection systems. Our autonomous ice protection systems work independently of the aircraft's crew to provide automatic prevention of ice buildup while in flight. This system can be applied to various surfaces including wings, rotors, windshields and engines.

#### **Featured rugged LCD Display products will include:**

- **Rugged LCD Displays**: Our extensive family of rugged LCD mission displays includes units whose sizes range from 7"-21.5". These touchscreen displays support 1080p video input for the best high definition (HD) imagery. At Heli-Expo we will feature our new **AVDU4300 17.3" HD Mission Display** and **AVDU3000 12.1" Widescreen HD Display**. These rugged displays are designed specifically to meet the demands of airborne rotor-wing applications. They include powerful video processing capabilities with maximum configuration flexibility to meet all

customer requirements. These LCD displays feature excellent sunlight visibility, full NVIS compatibility and powerful built-in capabilities for viewing multiple video inputs simultaneously.

**Featured high speed/high capacity Data Recording and Storage products will include:**

- **Data Transport System (DTS)**: The DTS is a SWaP-optimized, rugged network file server that supports industry-standard storage protocols (NFS, CIFS, HTTP and FTP) through four (4) 1GbE ports. With PXE protocol support, the DTS can provide boot files to network clients. To protect critical data-at-rest, the DTS network attached storage (NAS) system offers AES256 encryption. The three (3) rugged Removable Memory Cartridges (RMC) can store video, audio, and mission data for later analysis. The Ethernet record feature allows the DTS to act as a *sniffer* capturing every packet for post-mission analysis by WireShark®.

**Featured rugged and miniature Network Router and Switch products will include:**

- **Parvus® DuraNET® 20-11**: This revolutionary new “pocket sized” miniature Gigabit Ethernet (GbE) switch subsystem is 90% smaller, 50% lighter than earlier designs (roughly 10 cubic inches in volume, half a pound in weight, and 5 Watts typical power consumption) making it ideal for SWaP-constrained helicopter platforms. The ultra-small form factor (SFF) rugged COTS 8-port Gigabit Ethernet (GbE) switch subsystem is optimized for aircraft platforms exposed to harsh environmental and noisy electrical conditions (e.g. high altitude, extreme shock & vibe, extended temperatures, humidity, dust & water exposure, noisy EMI, dirty power). Its micro-miniature MIL circular connectors are well suited for low size/weight applications where electromagnetic compatibility (EMC) is important.
- **Parvus DuraMAR® 5915 Rugged IP Router**: This rugged Cisco® IOS-managed mobile router LRU is integrated with Cisco’s 5915 Embedded Services Router (ESR) card in an ultra-rugged chassis optimized for harsh environment helicopter installations. This COTS solution is ideal for IP networking technology refresh and situational awareness applications, including those seeking a migration path for previous generation Parvus rugged networking subsystems. It features dual WAN uplinks and is available as either a standalone 5-port network router or with an integrated Gigabit Ethernet switch for a total of 19 Ethernet ports.
- **Parvus DuraNET 20-10 GbE Switch**: This new Gigabit Ethernet (GbE) Switch LRU subsystem delivers double the port count of Curtiss-Wright’s previous DuraNET GbE Switch products, while drastically reducing power consumption ~50% per port and reducing the unit’s volume size by ~26%. Ideal for adding high speed networking to platforms such as land and air-land vehicles, the fully featured SWaP-optimized subsystem provides true carrier-grade Ethernet software Layer-2

management features, including support for the IEEE-1588 Precision Timing Protocol (PTP).

**Featured rugged Mission Computer products will include:**

- **[MPMC-9310/9321 Rugged Mission Computers](#)**: The **MPMC-9310** and **MPMC-9321** are fully integrated, rugged small form factor 3U VPX Application Ready COTS systems that feature line replaceable (LRM) processing modules and flexible IO. They provide all the elements required of modern mission computers and avionics computers for use on rotor-wing aircraft.
- **[Parvus DuraCOR 80-41 Rugged Core i7 Mission Computer](#)**: The DuraCOR 80-41 is our lightest, highest performance small form factor (SFF) rugged mission computer. This SWaP-C-optimized subsystem redefines the extent of performance and features that customers can obtain from a compact, lightweight rugged mission computer. Powered by a multi-core 4th Gen Intel® Core i7 (“Haswell”) processor, the low-power, fanless DuraCOR 80-41 delivers higher computational performance, more powerful graphics, unmatched I/O, modular expansion and greater data storage flexibility compared to its predecessor, the DuraCOR 80-40, while reducing overall size and weight by 25%.
- **[Parvus DuraCOR 80-40 Rugged Mission Computer](#)**: The DuraCOR 80-40 is a rugged COTS tactical mission computer LRU subsystem based on the 2nd Gen Intel Core i7 (“Sandy Bridge”) processor with a high-speed, stackable PCI-Express bus (PCIe/104) architecture for I/O card expansion. Optimally designed for SWaP-sensitive rotor-wing vehicle applications, the DuraCOR 80-40 combines powerful graphics and multi-core processing. Its ultra-reliable mechanical robustness and modular I/O expansion deliver extreme environmental and EMI performance per MIL-STD-810G (thermal, shock, vibration, dust, water, humidity) and MIL-STD-461F.

**Featured airborne Video Management System products will include:**

- **VRD1**: The **[VRD1 rugged high definition \(HD\) video management system \(VMS\)](#)**, now in full production, delivers a breakthrough approach for implementing Video-Centric™ Architectures on-board helicopters. It is the industry’s first VMS to integrate HD video conversion, switching, scaling, windowing, compression, network distribution and recording in a single compact rugged unit. VRD1 supports 18 video input channels (six each of HD-SDI, RGB/DVI, CVBS) and 12 video outputs (6 each of HD-SDI, RGB/DVI). The two (2) rugged Removable Memory Cartridges (RMC) can store video and audio data for later analysis or replay.

**For additional information** on Curtiss-Wright products please visit [www.curtisswrightds.com](http://www.curtisswrightds.com).

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

Curtiss-Wright Corporation (NYSE:CW) 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](http://www.curtisswright.com).

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