NEWS RELEASE

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Curtiss-Wright Debuts First Raspberry Pi Powered Ultra-Small Form Factor Rugged Mission Computer for Defense and Aerospace Applications

DuraCOR Pi is first MIL-STD rugged "Pocket-Size" mission computer to deliver 100% compatibility with Raspberry Pi software ecosystem and HAT expansion module ecosystem

ASHBURN, Va. – March 14, 2022 – Curtiss-Wright's Defense Solutions division, a leading supplier of modular open systems approach (MOSA) solutions engineered to succeed, today introduced the Parvus® DuraCOR® Pi, the embedded industry's first Raspberry Pi (RPi) powered mission computer for defense and aerospace applications. The ultra-small form factor (USFF) DuraCOR Pi, fully ruggedized to deliver optimal performance in harsh operating environments, is the first mission computer to deliver 100% compatibility with the vast Pi Developer Ecosystem in a fully MIL-STD rugged sealed housing. Based on the industrial Raspberry Pi Compute Module 4 (CM4), the DuraCOR Pi provides defense and aerospace system designers with a stackable unit that offers 100% compatibility with all software developed by the RPi environment's 7 million-plus user base. Small enough to fit in the palm of a hand, the DuraCOR Pi mission computer, engineered by Curtiss-Wright to succeed in the harshest environments, weighs only 0.50 lbs. and measures 1.20 x 2.49 x 3.34" (30.5 x 63.2 x 84.8 mm).

Stackable and Scalable System Solutions

Parvus products can be stacked to extend functionality and performance via their Expandable Ring system design. This enables system designers to configure the exact mix of DuraCOR Pi mission computers and HAT (Hardware Attached on Top) modules required for their specific application. The USFF DuraCOR Pi can also be combined in a stack with the similarly miniaturized Parvus DuraNET® 20-11 network switch, which provides true carrier-grade Ethernet software Level-2+ management features including support for IEEE-1588v2 Precision Timing Protocol (PTP).

What's more, DuraCOR Pi supports I/O expansion via a standard RPi 40-pin HAT connector. The DuraCOR Pi unit can be easily extended with one or more HAT modules via a flexible expansion "ring" system that allows additional module rings to be stacked on top of the unit housing. To support common I/O options and HAT application development, GPIO and serial I/O and signals from the 40-pin HAT connector are also accessible via a MIL-STD-38999 connector on the unit's front-panel.

"Curtiss-Wright, an industry leader in delivering rugged ultra-small form factor high-performance compute and network systems for battlefield edge computing, has redefined ultra-small MOSA computing with the introduction of the industry's first fully Mil-rugged Raspberry Pi based mission computer," said Chris Wiltsey, Senior Vice President and General Manager, Curtiss-Wright Defense Solutions. "Our new DuraCOR Pi delivers 100% compatibility with RPi software and the HAT expansion ecosystem, in a fully rugged and sealed design our customers expect from the Parvus product line. By providing system designers with immediate access to the vast open-source RPi ecosystem, this pocket-sized mission computer will drive entirely new application and system design possibilities."

Tiny, but Fully Rugged

For many platforms, the size, weight and power requirements of rugged mission systems, not to mention cost (SWaP-C), can be paramount design barriers. With the DuraCOR Pi, Curtiss-Wright introduces a whole new class of affordable, ultra-small open standards-based processing for use on the most SWaP-C constrained aerospace and defense platforms, from UUVs to UGVs to UAVs. The DuraCOR Pi is ideal for bringing compute and connectivity capabilities to the edge of the battlefield for deployment where larger, heavier alternatives are unacceptable. With its widely familiar RPi development environment, the DuraCOR Pi simplifies the integration of mission computing capabilities into manned and unmanned platforms that must operate in the harshest environmental and noisiest electrical conditions.

Long established as an innovative supplier of rugged small form factor mission computer and network products, Curtiss-Wright has applied its industry leading MOSA system design and packaging expertise to enable the deployment of ultra-small, cost effective RPi compute solutions at the tactical edge of the battlefield. Featuring the full MIL-STD ruggedization that customers expect from Curtiss-Wright's Parvus family of ultra-small solutions, the DuraCOR Pi meets the demanding

requirements for extremely low SWaP-C in deployed applications, such as edge computers, IoT gateways, and wearable systems.

With its built-in wired Ethernet interface and support for Wi-Fi and Bluetooth, the DuraCOR Pi is designed to speed and eases network connectivity for mission computing. With MIL-STD-38999 connectors, a MIL-grade power supply, and a sealed IP67 chassis, DuraCOR Pi delivers high reliability in a military grade design. The unit meets stringent MIL-STD / DO-160 environmental standards (MIL-STD-704F, MIL-STD-1275D, MIL-STD-461F, and RTCA/DO-160 for civil and military use). The DuraCOR Pi has no moving parts, supports extended temperature operation (-40 to +85C), and is resistant to high shock/vibration, humidity, altitude, and dust/water ingress.

Software Support

Because it is 100% compatible with the Pi Development Ecosystem, DuraCOR Pi is able to run all software developed for the RPi operating environment, such as Pi operating systems (NSA STIGd Raspian Linux, VxWorks, Windows IoT Core, etc.), Pi toolsets, and programming frameworks (i.e., Python, Java, C, and C++).

The Raspberry Pi and HAT Module Ecosystem

In the ten years since it was first introduced, over 40 million of the credit-card sized RPi modules have been sold around the globe, creating the single largest user community for any open architecture. The RPi ecosystem provides system designers with immediate access to vast amounts of pre-existing open-source code and a multitude of HAT expansion modules, enabling system designers to jumpstart their application development and speed deployment.

To download the DuraCOR Pi product sheet, please click here. For information about availability of development boards to support your program needs, please contact us at ds@curtisswright.com, visit our website at www.curtisswrightds.com, or contact your local Curtiss-Wright sales representative.

For additional information about Curtiss-Wright MOSA technologies, please visit www.curtisswrightds.com, LinkedIn, and Twitter @CurtissWrightDS.

A Leader in Open Standards

Curtiss-Wright is an active contributor to the definition and advancement of the open standards included in CMOSS and those being defined in The Open Group Sensor Open Systems Architecture™ (SOSA). Curtiss-Wright has been a leading participant in the development of the CMOSS and SOSA standards since the inception of both initiatives and is a key participant in several SOSA™ Consortium working groups (including holding a chair position in the SOSA Consortium). In addition, the company has been a leading contributor to the VITA Standards Organization (VSO) that oversees the definition of the OpenVPX, PMC, XMC, and FMC form-factor standards that provide the foundation of both CMOSS and SOSA technical standards. This makes Curtiss-Wright ideally positioned to work with customers to help guide the development and success of their CMOSS- and SOSA-aligned applications.

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. Headquartered in Davidson, N.C., we leverage a workforce of 7,800 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 has a long tradition of providing innovative solutions through trusted customer relationships. For more information, visit www.curtisswright.com.

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