



NEWS RELEASE

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Curtiss-Wright Expands Family of Rugged Assured-Positioning, Navigation & Timing Solutions for Military Ground Vehicles with Introduction of Vehicle Computer/Switch

New A-PNT vehicle computer and Gigabit Ethernet switch provides Chip Scale Atomic Clock, Inertial Measurement Unit and direct connection to real-time Global Positioning System (GPS)

ASHBURN, Va. – May 6, 2021 – Curtiss-Wright's [Defense Solutions division](#), a trusted, proven supplier of rugged open-standard solutions, has further strengthened its commitment to lead the industry in delivering solutions that provide [Assured-Positioning, Navigation and Timing \(A-PNT\)](#) functionality to military ground vehicles. The new [DBH-670A A-PNT Digital Beachhead](#) A-PNT vehicle computer and Gigabit Ethernet (GbE) switch uniquely integrates A-PNT functionality from complementary PNT sources into a single compact and rugged Line Replaceable Unit (LRU) that also hosts a [VICTORY](#) network switch and vehicle management computer. This approach delivers enhanced capabilities and significant size, weight, power, and cost (SWaP-C) benefits to ground vehicles. By integrating multiple different technologies into a single rugged LRU, the DBH-670A can effectively distribute A-PNT data across the entire vehicle in a trusted manner. Because it hosts the Defense Advanced GPS Receiver (DAGR) functionality within the VICTORY switch, the DBH-670A eliminates the need for a legacy DAGR LRU from the vehicle. Even better, because the A-PNT services are tightly integrated to the DBH-670A's vehicle network switch (which supports interfaces such as CANbus), there is no need for separate DAGRs dedicated to every on-vehicle device. That means a single Global Positioning System (GPS) receiver can now support the entire vehicle, enabling the removal of numerous redundant GPS receivers and antennae from the vehicle and further reducing SWaP-C.

"Our new DBH-670A A-PNT Digital Beachhead is a game changer. It integrates complementary PNT sources, the VICTORY vehicle network, and processing into a single rugged chassis," said

Chris Wiltsey, Senior Vice President and General Manager, Curtiss-Wright Defense Solutions. “The DBH-670A sets a new standard for delivering new capabilities to the warfighter, while drastically reducing the ground vehicle’s SWaP burden and costs. This innovative integrated system enables system designers to replace multiple legacy LRUs with a single, upgradeable compact unit.”

System designers are seeking deployable solutions that ensure delivery of accurate PNT information to the warfighter in GPS-denied environments. Curtiss-Wright’s DBH-670A uniquely integrates a multi-functional vehicle computer, a powerful GbE switch, and a power-efficient Arm® computer in a single rugged box. This Modular Open Systems Approach ([MOSA](#))-based unit provides a GPS-disciplined Chip Scale Atomic Clock (CSAC) and an on-board 10 degree of freedom inertial measurement unit (IMU). The DBH-670A also supports direct connection to an external GPS receiver (National Marine Electronics Association [NMEA], DAGR, or equivalent) for real-time GPS position and time data. It can be optionally configured with an on-board GPS receiver that supports M-Code and SAASM.

Range of A-PNT LRU and LRM Solutions

The DBH-670A joins the [VPX3-673 CMOSS A-PNT & Radial Clock 3U OpenVPX™ module](#) as the newest member of Curtiss-Wright’s growing family of deployed A-PNT solutions (soon to be joined by a new variant of the VPX3-673 module that is designed in alignment with The Open Group Sensor Open Systems Architecture™ [[SOSA](#)] Technical Standard). The VPX3-673 is a specialized single board computer and timing card designed to eliminate the need for multiple in-platform boxes to field new navigational capabilities and simplify the integration of complementary PNT sources on ground vehicles. The DBH-670A and VPX3-673 (and upcoming variant) share a common software baseline and both support pntOS (and pntOS plug-ins) for building PNT estimators.

Aligned with the U.S. Army’s C5ISR/EW Modular Open Suite of Standards ([CMOSS](#)) and OpenVPX Timing module standard, the SWaP-efficient VPX3-673 module delivers state-of-the-art technology services, including a GPS Receiver, CSAC, and an on-board IMU in a single 3U VPX slot. The VPX3-673 is also ideal for radial clock distribution applications and can provide a server for various low-power timing services.

The Open Standards Leader

Curtiss-Wright is an active contributor to the definition and advancement of the open standards included in CMOSS and those being defined by the SOSA™ Consortium. 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) which 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.

The DBH-670A product sheet is available for [download](#).

For additional information, please visit www.curtisswrightds.com, LinkedIn, and Twitter @CurtissWrightDS.

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 8,200 people worldwide. For more information, visit www.curtisswright.com.

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