



NEWS RELEASE

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New “Game Changing” SOSA Aligned FPGA Module Combines High-Density Fiber Optic I/O with AI Engines

New VPX3-536 3U VPX module features AMD Versal Premium Adaptive SoC

ASHBURN, Va. – February 11, 2025 – [Curtiss-Wright's Defense Solutions Division](#) has announced the market's highest performance SOSA aligned 3U VPX FPGA plug-in-card (PIC) module, the VPX3-536 Adaptable Processor. The [VPX3-536](#), the newest addition to Curtiss-Wright's comprehensive and industry leading Fabric100™ ecosystem of 100 Gigabit Ethernet (GbE)/PCIe Gen 4 system modules, uniquely combines an AI-enabled accelerated compute architecture, dual 400G high-speed crypto engines, and up to 28 high-speed backplane fiber optic links. Designed for use in demanding sensor processing applications, such as latency-sensitive radar, EW and SIGINT digital signal processing (DSP), the size, weight and power (SWaP) optimized 3U VPX form factor module can securely and simultaneously ingest, process and egress up to 784 Gbps of optical sensor or Ethernet data over the system backplane (100 GbE/Serial/Aurora interfaces) using high-density, high-performance VITA 66.5 interfaces (28 lanes/full-duplex/28 Gbps).

The flexible, user programmable board features AMD's highest performance heterogeneous Adaptive Compute Acceleration Platform (ACAP) architecture. The AMD Versal™ Premium VP2502 ASoC (Adaptive System-on-Chip) integrates a very large FPGA array (3.7M logic cells), two dual-core Arm processors, and powerful DSP engines (7,392 slice) to eliminate the need for a daughtercard or potentially discrete

processor card to manage it. What's more, this top-of-the-line Versal device provides 472 Adaptive Intelligence Engines (157 TOPS) to support AI, Machine Learning (ML) and 5G signal processing. Overall application performance can be greatly enhanced by splitting signal processing workloads between the board's DSP and AI engines. The module's built-in crypto engine supports line-rate MACSec, IPSec and bulk encryption.

"Curtiss-Wright is proud to introduce a truly game-changing heterogeneous architecture FPGA engine that unleashes unmatched compute power and throughput for deployed sensor processing applications," said Brian Perry, Senior Vice President and General Manager, Curtiss-Wright Defense Solutions Division. "No other SOSA aligned 3U VPX card on the market offers the breakthrough combination of FPGA, CPU, DSP processing, AI acceleration and fiber optic backplane throughput delivered by our new VPX3-536 module."

The module's AMD (formerly Xilinx) Versal Premium ASoC device enables customers to leverage and protect their investment in Xilinx architecture solutions. Thanks to its low latency Network on Chip (NoC) and powerful multi-core Arm processor architecture, the VPX3-536 can serve as a standalone, single-slot "system on a board" running the PetaLinux operating system. It can also be used as a co-processing resource in multi-board embedded VPX systems with other system elements such as Curtiss-Wright's CHAMP-XD3 Intel® processor and Fabric100 VPX3-1262 Intel processor and VPX3-6816 Network Switch modules.

For additional information about Curtiss-Wright Defense Solutions products, please visit www.curtisswrightds.com and LinkedIn.

About Curtiss-Wright Corporation

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long tradition of providing innovative solutions through trusted customer relationships.
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