



NEWS RELEASE

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Curtiss-Wright Debuts NVIDIA® Jetson® AGX Xavier-based Rugged Small Form Factor Mission Computer for AI/Neural Network Applications

New Parvus® DuraCOR® AGX-Xavier brings high performance NVIDIA® GPU-accelerated processing to deployable rugged mission computer for aerospace and defense applications

AUSA NOW Virtual Conference – October 13, 2020 – Curtiss-Wright's Defense Solutions division, a proven leading supplier of [ultra small form factor \(USFF\) mission computing](#) and [networking solutions](#), has announced the newest addition to its Parvus DuraCOR family of size, weight, power and cost (SWaP-C) optimized rugged mission computers. The new [Parvus DuraCOR AGX-Xavier](#) delivers supercomputer performance coupled with the artificial intelligence (AI), machine learning (ML), deep learning (DL), and machine vision (MV) capabilities of the NVIDIA Jetson AGX Xavier System on Module (SoM). This modular and scalable compact (<150 in³), lightweight (<6 lb) unit is packaged pre-qualified to extensive demanding military and aerospace MIL-STD and DO-160 qualification testing for environmental, EMI, and power conditions required for use onboard aircraft and ground vehicles. This high FLOPS per watt mission computer (peak performance is estimated at 11 TeraFLOPS [FP16] or up to 32 TOPs [int8]) is ideal for system integrators seeking a high-performance embedded computing (HPEC) solution for deploying new AI, ML, DL and MV-based compute-intensive applications without adding undue SWaP burden to space- and weight-constrained platforms. Designed for use in defense and commercial aviation programs, the ITAR-free, CE Mark DuraCOR AGX-Xavier is readily exportable.

“Our Parvus DuraCOR family of small form factor rugged mission computers sets the bar for deployable SWaP-optimized processing,” said Lynn Bamford, President, Defense and Power. “With the introduction of our new DuraCOR AGX-Xavier mission computer, which integrates NVIDIA's innovative Jetson AGX-Xavier technology in a MIL-grade small form factor, military and aerospace

integrators can now deploy high performance NVIDIA GPU, DL, and AI technologies on-board demanding SWaP-constrained embedded vehicle and aircraft platforms that must deliver optimal performance in the harshest conditions.”

Performance Features:

- NVIDIA Jetson AGX Xavier SoM
 - 8-core ARMv8.2 CPU
 - 512-core CUDA-capable Volta GPU
 - 64 Tensor Cores, 2x DL Accelerators
- SWaP-optimized form factor:
 - Small size: <150 in³
 - Lightweight: <6 lb (2.72 kg)
 - Power: <50W (typ)
- Rugged IP67 fanless chassis with MIL performance circular connectors
- Modular I/O architecture: M.2, PCIe104, and Mini-PCIe card slots (for storage, avionics, and avionics I/O scalability)
- Wide input MIL-1275/704/DO-160 power supply for aircraft and ground vehicles; optional 50ms power hold-up
- Qual testing for extreme MIL-STD-810G/DO-160 thermal, shock, vibration, altitude, humidity; also MIL-STD-461F/DO-160G EMI/EMC

Fully complemented to adapt to a wide range of C5ISR sensors, the DuraCOR AGX-Xavier supports high-speed network connectivity with 10G Ethernet optical interfaces, high-speed I/O connectivity with USB 3.1 interfaces, and high-resolution video outputs with HDMI 2.0 and DisplayPort interfaces. In addition to its comprehensive base system I/O (multiple Ethernet, CAN, serial, USB, video, audio, GPIO), the system can be readily modified with an extensive range of mini-PCIe and PCIe104 expansion card options. The unit features native eMMC Flash memory, and supports both high-speed NVMe-based M.2 SSD and removable U.2 NVMe Flash SSD storage.

Optimized for Deep Learning and Neural Network Inference Applications

The DuraCOR AGX-Xavier is the embedded industry’s most rugged and modular system solution based on the NVIDIA Jetson AGX-Xavier SoM, which NVIDIA describes as the "World’s first AI computer for autonomous machines." The mission computer is designed to use the industrial version of the NVIDIA Jetson AGX-Xavier module, which supports a far wider temperature range

and provides significantly longer lifecycle and reliability compared to solutions based on the current commercial-temperature version. The Jetson AGX-Xavier SoM features an 8-core ARMv8 CPU, 512-core NVIDIA Volta GPU with Tensor Cores, and NVIDIA Deep Learning Accelerators, along with a large array of high-speed interfaces.

Sales inquiries: Please forward all sales and reader service inquiries to ds@curtisswright.com.

For more information about the Curtiss-Wright Defense Solutions division, please visit www.curtisswrightds.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 is headquartered in Davidson, N.C. and employs approximately 8,900 people worldwide. For more information, visit www.curtisswright.com.

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