CURTISS-WRIGHT

Solutions Aligned to the SOSA™ Technical Standard and CMOSS

Trusted. Proven. Leader.

curtisswrightds.com

Leaving Proprietary Point Solutions in the Past

The Modular Open Systems Approach (MOSA) to technology is becoming increasingly important in the defense and aerospace industries – so much so that the U.S. military's 2019 tri-services memo explicitly mandates that "future weapon system modifications and new start development programs should include MOSA-supporting standards in all requirements, programming, and development activities to the maximum extent possible."

It's not hard to see why. After decades of proprietary point solutions, defense and aerospace organizations face significant interoperability, flexibility, size, weight, power, and cost (SWaP-C) challenges on ground, air, and naval platforms.

Technical standards like The Open Group Sensor Open Systems Architecture™ (SOSA) and the C5ISR/EW Modular Open Suite of Standards (CMOSS) are designed specifically to alleviate these challenges and deliver a variety of benefits to C5ISR systems.

Commitment to Open Standards

With a long history of industry collaboration and open standards development, Curtiss-Wright is a significant contributor to the development of the VITA VPX™ and OpenVPX™ standards, which are the baseline technology in the SOSA, CMOSS, and Hardware Open Systems Technology (HOST) technical standards.

Our mission in developing modular COTS solutions based on an open standards architecture prioritizes:

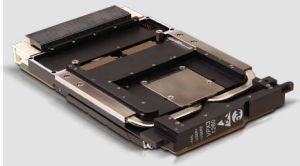
- Delivering Ruggedized Solutions: COTS solutions are designed to withstand harsh environments, ensuring reliability and security. The solutions align with key industry standards such as SOSA, Vehicle Integration for C4ISR/EW Interoperability (VICTORY), CMOSS, and Modular Open Radio Frequency Architecture (MORA).
- Leading Open Standards Adoption: Actively contributing to, developing solutions, and promoting the use of open standards, ensures industry collaboration, increases interoperability, and drives innovation.
- Enhancing Customer Access: This commitment to open standards enables faster and easier technology refreshes and expanded system functionality to protect customer investments.

Curtiss-Wright solutions reduce risks, lower costs, and speed the deployment of essential applications warfighters need most. Some of our most sophisticated, ruggedized COTS processing solutions are developed in alignment with the SOSA Technical Standard and CMOSS.

Processor Cards

VPX3-1262

100 GbE-enabled 3U VPX Intel® Core™ i7 13th Gen 14-core Hybrid Processor



VPX3-1260

3U VPX 9th Gen Intel Xeon® Processor Card I/O Intensive and Payload Profiles

CHAMP-XD4

100 GbE-enabled 6U VPX Dual Intel Xeon D-2700 and Cognitive DSP Processor

CHAMP-XD3

High-Performance 40 GbE 3U VPX Intel Xeon D-1700 Processor Card

FPGA I/O and Co-Processors

CHAMP-FX7

100 GbE-enabled 6U VPX Dual AMD Versal™ Premium Adaptive SoC Processor Card

Radial Clock A-PNT Card

VPX3-673A

A-PNT VPX Card with Alternative RF Navigation and pntOS Radial Clock Profile

Switch Cards

VPX3-6816

100 Gigabit Ethernet Switch

VPX3-663

PCIe® Gen 3 & 10G Ethernet Hybrid Switch

GPU Card

VPX3-4937

3U VPX NVIDIA RTX™ 5000 Ada GPU Card

Systems

PacStar VPX Smart Chassis

Combines PacStar® 400-Series products with VPX

8-Slot CMOSS/SOSA Enclosure

Select 3U VPX Plug-in Cards for Ground Vehicle Applications

CMOSS/SOSA Starter Kit

Includes a Processor Card, Ethernet Switch, and an A-PNT Card

These open standards-based solutions are available individually, as fully integrated subsystems, or as program-specific solutions designed by our system integration experts to incorporate hardware and software from Curtiss-Wright and third party vendors.

The Benefits of Open Standards vs. Proprietary Solutions

	Proprietary Solutions	Open Standards Approach
Interoperability	Technology designed to operate in isolation is difficult and time-consuming to deploy on platforms where systems must work together.	Technology takes advantage of shared building blocks to improve communication and sharing, reducing integration complexity and timelines.
Flexibility of Choice	Defense and aerospace organizations are often “locked in” with specific vendors, and technology selection is influenced by what’s easiest to configure with existing systems.	Organizations have the freedom to choose the best technology to meet their requirements from a variety of vendors, and vendors must better demonstrate their value in a more competitive landscape.
Adding Functionality	Adding functionality to a platform requires a new dedicated system or subsystem, taking up more physical space and resources, consuming more power, and generating more heat.	New capabilities can be integrated into existing systems due to the interoperability between open standards-based components.
Refreshing and Replacing Technology	Deployed systems are challenging to upgrade. Replacing existing components requires time-consuming development and integration.	Once the system is deployed, open standards compliance and interoperability enable faster and easier technology refresh cycles. Modules and components can be swapped out for updated versions with reduced effort and revalidation.
Investment Protection	An organization’s technology investment is at the mercy of the vendor’s supply chain and business practices, limiting control over lifecycle management.	As business conditions and the lifecycle of modules change, it is less difficult to acquire compatible parts from another qualified vendor, significantly lowering the risks in lifecycle management.

Related Content

White Papers

Why an Open Standards Approach Is Essential in Defense and Aerospace:
Exploring MOSA, SOSA, FACE™, VICTORY, and more

Applying Open Standards Electronics Architectures for Ground Vehicles

Why Open Standards Like CMOSSS and SOSA Are the New Normal

Open Standards Support

Modular Open Standard Architecture (MOSA)

Sensor Open Systems Architecture (SOSA)

OpenVPX (VITA 65) Standard

Vehicle Integration for C4ISR/EW Interoperability (VICTORY)

Future Airborne Capability Environment (FACE)

C5ISR/EW Modular Open Suite of Standards (CMOSS)

Products Developed in Alignment with CMOSS and the SOSA Technical Standard

VPX3-1262
Intel Core i7 13th Gen “Raptor Lake” 14-core Hybrid Processor

VPX3-1260
3U VPX 9th Gen Intel Xeon “Coffee Lake” SBC

CHAMP-XD3
3U VPX DSP Card with Intel Xeon D-1700 and AMD Zynq™ UltraScale+™ FPGA

VPX3-663
3U VPX PCIe® Gen 3 and 10G Ethernet Hybrid Switch

VPX3-6816
3U VPX 100 Gigabit Ethernet Switch

VPX3-4937
3U VPX NVIDIA RTX™ 5000 Ada Generation GPU Card

PacStar VPX Smart Chassis

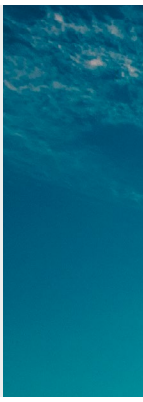
8-Slot CMOSS/SOSA Enclosure

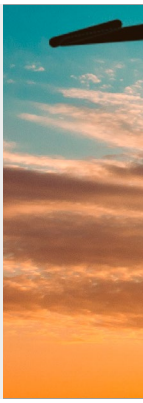
CMOSS/SOSA Starter Kit

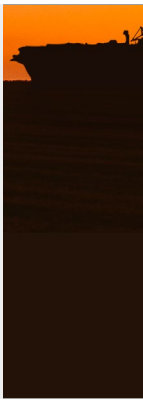
CHAMP-XD4
6U VPX Cognitive DSP Card with Intel Xeon D-2700 and AMD Zynq UltraScale+ FPGA

CHAMP-FX7
6U VPX (VPX6-476) AMD Versal Premium Adaptive SOC Processor

VPX3-673A
A-PNT VPX Card with Alternative RF Navigation and pntOS







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