Abaco Systems Launches its First VNX+ Product

Abaco Systems introduces the VNX382, the company's first VNX+ product, extending rugged embedded computing into size-, weight-, and power-constrained applications without compromising functional safety, security or edge processing. Aligned with the VITA 90 / VNX+ standard and built on the NXP i.MX95 system-on-chip, the VNX382 delivers high performance in a low-SWaP envelope.

Six lockstep-capable Arm Cortex-A55 cores, a dedicated Cortex-M7 safety domain, and support for multiple real-time operating systems make the architecture well suited to safety-oriented, mission-critical applications. An onboard Arm Mali GPU and integrated NPU add 2 TOPS of AI performance, running common edge inference tasks such as object detection, sensor fusion and situational awareness locally to reduce latency and

dependence on external compute.

The VNX382 supports a broad range of interfaces, including 1GbE and 10GbE networking with TSN, USB and CANbus. This makes it ideal for tactical edge computing, secure communications, autonomous systems, flight control, UAS/UAV payloads, electronic warfare, ISR, rugged displays and sensor fusion, deployable in uncrewed vehicles and portable or wearable platforms.

Security is built in. The i.MX95's NXP EdgeLock® Secure Enclave supports post-quantum cryptography and inline encryption of sensitive data at rest and in transit, and hardware-enforced resource partitioning addresses the isolation demands of mission-critical systems.

"The VNX382 answers a growing customer need for platforms that combine security, functional safety and AI acceleration within tightly constrained SWaP," said Simon Collins, Director of Product Management at Abaco Systems. "It also establishes the foundation for Abaco's broader VNX+ and certifiable systems roadmap."

Developed by VITA and the Open Group SOSA community and ratified by ANSI in 2026, VNX+ extends the open-standards approach of VPX into significantly lower-SWaP applications. The VNX382 is available as a SOSA-aligned VNX+ module in VITA 90.0 sidewall-cooled or VITA 90.4 wedgelock-cooled formats, or as a mezzanine System-on-Module (SOM) for the most size-constrained platforms.

Visit booth #751 at the AUSA Annual Meeting, October 12–14 in Washington, DC for a live demonstration. To request a briefing or evaluation unit, visit Abaco.com or contact your Abaco representative.

About Abaco Systems

Abaco Systems is a global leader in commercial open architecture computing and rugged embedded electronics. With

more than 40 years of experience in aerospace & defense, industrial, energy, medical, communications, and other critical sectors, Abaco’s innovative solutions align with open standards to accelerate customer success. Abaco Systems is a business unit of AMETEK, Inc., a leading global provider of industrial technology solutions serving a diverse set of attractive niche markets with annual sales of approximately $9.0 billion.