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VORAGO Technologies Announces Space Grade Edge Computing Microprocessor

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AUSTIN, TX - July 16, 2024 -
Austin, Texas - VORAGO VA7230 Arm® Cortex®-A72 MPU is designed for high performance edge computing applications in space.

VORAGO Technologies today introduced the VA7230 edge computing microprocessor, the first Arm®-based microprocessor (MPU) with an embedded graphics processor (GPU) targeted at space applications. Per McKinsey, the global space market is projected to grow to $1.8 trillion, up from $630 billion in 2023. Much of this growth can be attributed to the emergence of the commercial space industry, combining efforts of the public and private sectors. New Space, as many refer to it, has accelerated the deployment of edge processing workloads, such as artificial intelligence (AI), machine learning (ML), image processing and advanced networking, typically found in the commercial sectors.

The VA7230 offers two powerful Arm Cortex-A72 cores running up to 1.5 GHz. The embedded graphics processor enables more than ten billion floating-point operations per second of power-efficient performance to comfortably address the most challenging use cases including autonomous navigation and remote sensing earth observation examples such as wildfire prediction, sea surface temperatures and ice cover.

?Previously, the most demanding space workloads could only be achieved with field programmable gate array (FPGA) or discrete graphics processors, requiring higher cost and power solutions. The VA7230 will transform the high-performance edge by offering a power and performance-optimized applications microprocessor capable of supporting on-board computing, payload processing, as well as satellite imagery compression and processing,? said Bernd Lienhard, CEO of VORAGO. ?The additional benefit of deploying an Arm MPU is the ability to leverage the vast Arm software ecosystem.?

?The addition of the VA7230 to VORAGO?s product portfolio affirms our commitment to the Arm architecture and strengthens our ability to support our customers? missions by adding a radiation-tolerant high performance MPU to complement our array of radiation-hardened Arm Cortex MCUs,? said Ken Obuszewski, Vice President of Business Development and Product at VORAGO. ?With advanced security and embedded ethernet TSN [time sensitive networking] our customers have expressed excitement about the ability to support use cases such as secure boot, cryptographic acceleration and time triggered ethernet,? Obuszewski added.

Development boards with Linux board support package (BSP) are currently available. Engineering samples are forthcoming later in Q3 2024, with production of QML Class B qualified parts expected in Q4 2024.

Key features of the VORAGO VA7230 include:

Dual 32/64-bit, up to 1.5 GHz Arm® Cortex®-A72 Cores with L1 and shared 1 MB L2 caches (w/ ECC), NEONTM SIMD and FPU, Integrated 3D GPU (OpenCL 1.2, OpenGL ES 3.1) with 256KB on-chip SRAM, 32-bit DDR3L/DDR4 SDRAM Controller with SECDED ECC, Security Engine with Cryptographic Offload and Secure Boot, Arm TrustZone®, 6 total Ethernet Interfaces up to 2.5Gbps, including 4-port TSN switch, High speed interfaces: PCIe 3.0, USB 3.0, and SATA, and 2x CAN-FD.

In addition to rad tolerant products like the VA7230, VORAGO also offers a comprehensive line of rad hard microcontroller solutions designed to meet the technical requirements of space missions with durability and resilience. Our product range is tailored for space and industrial applications, providing hi-rel performance in extreme conditions.

Learn more or contact VORAGO Technologies for more information.

ABOUT VORAGO

VORAGO empowers customers to achieve their mission with its portfolio of Arm®-based components supporting the most demanding Aerospace, Defense, and Industrial applications in extreme temperature and

high radiation environments. VORAGO?s patented technology portfolio (HARDSIL®) easily incorporates exceptional radiation hardening capability into standard semiconductor IC creation. VORAGO primarily serves Aerospace & Defense customers in North America and Europe and has a deep flight heritage. VORAGO is a privately held company based in Austin, Texas. The company has been recognized multiple times on the INC 5000 list and in 2023 made its debut appearance among the Deloitte Technology Fast 500?. Learn more on their website.

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VORAGO Technologies

VORAGO Technologies is a leading provider of radiation hardened and radiation tolerant components for Aerospace, Defense, and Industrial applications.

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