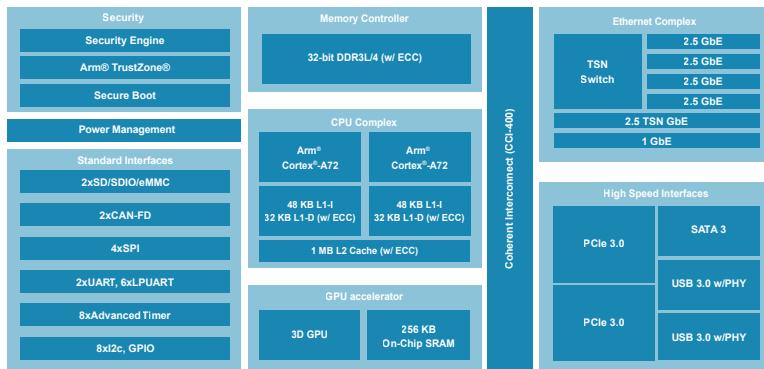


VORAGO SpaceGrade Arm® Cortex®-A72

Edge Computing Microprocessor

VA7230



Radiation Performance (Target):

Total Ionizing Dose (TID):

a) ≥ 30 krad(Si) @100 rad(Si)/sec (HDR)

b) ≥ 100 krad(Si) @210 rad-(SI)/hr (LDR)

Single-Event Latch Up (SEL) Immunity: > 60 (MeVcm²) /mg (@ T=125°C)x

Product Availability:

Development Board with Linux BSP – Now

Engineering Samples — Q1 2025

Production Qualified — QML Class N qualified – Q2 2025

Applications:

Primary processing workloads

Edge computing and local server/router

AI/neural networks and number crunching workloads

Image processing and compression

Communications payloads

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TECHNOLOGIES

Key Features:

- Dual 32/64-bit, up to 1.5 GHz Arm®-Cortex®-A72 Cores with L1 and shared 1 MB L2 caches (w/ ECC), NEON™ SIMD and FPU
- Integrated 3D GPU (OpenCL 1.2, OpenGL ES 3.1, 10.4 GFLOPS) with 256KB on-chip SRAM
- 32-bit DDR3L/DDR4 SDRAM Controller with SECDED ECC

Ethernet Interfaces

- TSN capable 4-port embedded switch
- 6 total Ethernet Interfaces up to 2.5Gbps (10/100/1000/2500 Mb/s)

Security

- Security Engine with Cryptographic Offload
- ARM TrustZone
- Secure Boot

High Speed Interfaces

- 2 x PCIe® Gen 3.0 controllers
- Up to four SerDes lanes running at 8 GHz root, complex and endpoint support
- 2 x USB 3.0 interfaces with integrated PHY host and device mode support
- SATA 6 Gbit/s

Standard Interfaces

- 2xCAN-FD
- 2xSD/SDIO/eMMC
- 4xSPI
- 2xUART, 6xLPUART
- 8xI2C, GPIO
- 8-ch Advanced Timer to support input capture, output compare and PWM

Operating Temperature

- -55 to +125°C, thermal monitoring unit

Package

- 448 pin FC-PBGA, 17x17 mm

Support

- VEB 1 - VA7230 Development Board with Linux
- VEB 2 - Addition of VA41630 MikroBUSTM

VORAGO SpaceGrade Arm® Cortex®-A72 Edge Computing Microprocessor **VA7230**

Transforming the high-performance edge.

Previously, GPU solutions were only possible with FPGA or discrete graphics processors, requiring higher cost and power solutions. VORAGO's first microprocessor, the VA7230, is the first Arm® MPU with an embedded graphics processor (GPU) targeted at space applications.

The VA7230 has dual Arm A72 cores running up to 1.5 GHz with an embedded graphics processor supporting 10.4 GFLOPS of power-efficient performance. With advanced security capabilities, Ethernet TSN and dual CAN-FD, the VA7230 can comfortably address the most challenging edge processing workloads, such as AI/ML and image processing and compression of satellite images.

About us:

VORAGO is a leading provider of microprocessors and microcontrollers for Aerospace, Defense, and Industrial customers operating in harsh environments where radiation and extreme temperatures pose significant challenges. VORAGO's SpaceGrade Arm®-based MPUs and MCUs enable mission-critical technology to support the most demanding applications in radiation-heavy environments, while our extreme temperature solutions are ideal for industrial applications.

Contact us:

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