

AMD Ryzen R8000 SOM

- Dimension : 91 mm x 83 mm x 12.7 mm
- AMD Ryzen Embedded Ryzen 7 Pro 8845HS / 8840U, 8C/16T 3.8GHz Base and 5.1GHz Boost
- AMD Ryzen XDNA NPU 16 TOPs, 4 Display pipes, 4nm FinFET
- Integrated Graphics – Radeon RDNA3 up to 6xWGPs
- Embedded Grade Longevity - 10 Years Guaranteed Availability



Built in AI



**High-Performance
AI Analytics**



**Enhanced Image
Processing**



**Flexible and Secure
System**



**Comprehensive
Software Suite**



Overview

The SolidRun System on Module (SoM) featuring AMD Ryzen™ Embedded 8000 Series processors delivers next-generation performance and efficiency for industrial applications. Built on AMD's advanced Zen 4 architecture and 4nm process, this SoM integrates cutting-edge computing and graphics capabilities alongside powerful AI inferencing technologies.



High Performance Computing and Advanced Graphics:

Based on AMD Zen 4 architecture, offering eight cores and 16 threads, with Thermal Design Power (TDP) options ranging from 15W to 30W or 35W-54W, and integrated AMD RDNA™ 3 Radeon™ graphics supporting demanding visual processing and rendering tasks.



Enhanced AI Capabilities

First AMD Embedded processors to include Neural Processing Units (NPUs) based on AMD XDNA™ architecture, delivering significant AI inferencing power supporting up to 16 trillion operations per second (TOPS) for scalable AI performance, with total processor performance scaling up to 39 TOPS, ideal for diverse and demanding industrial workloads.

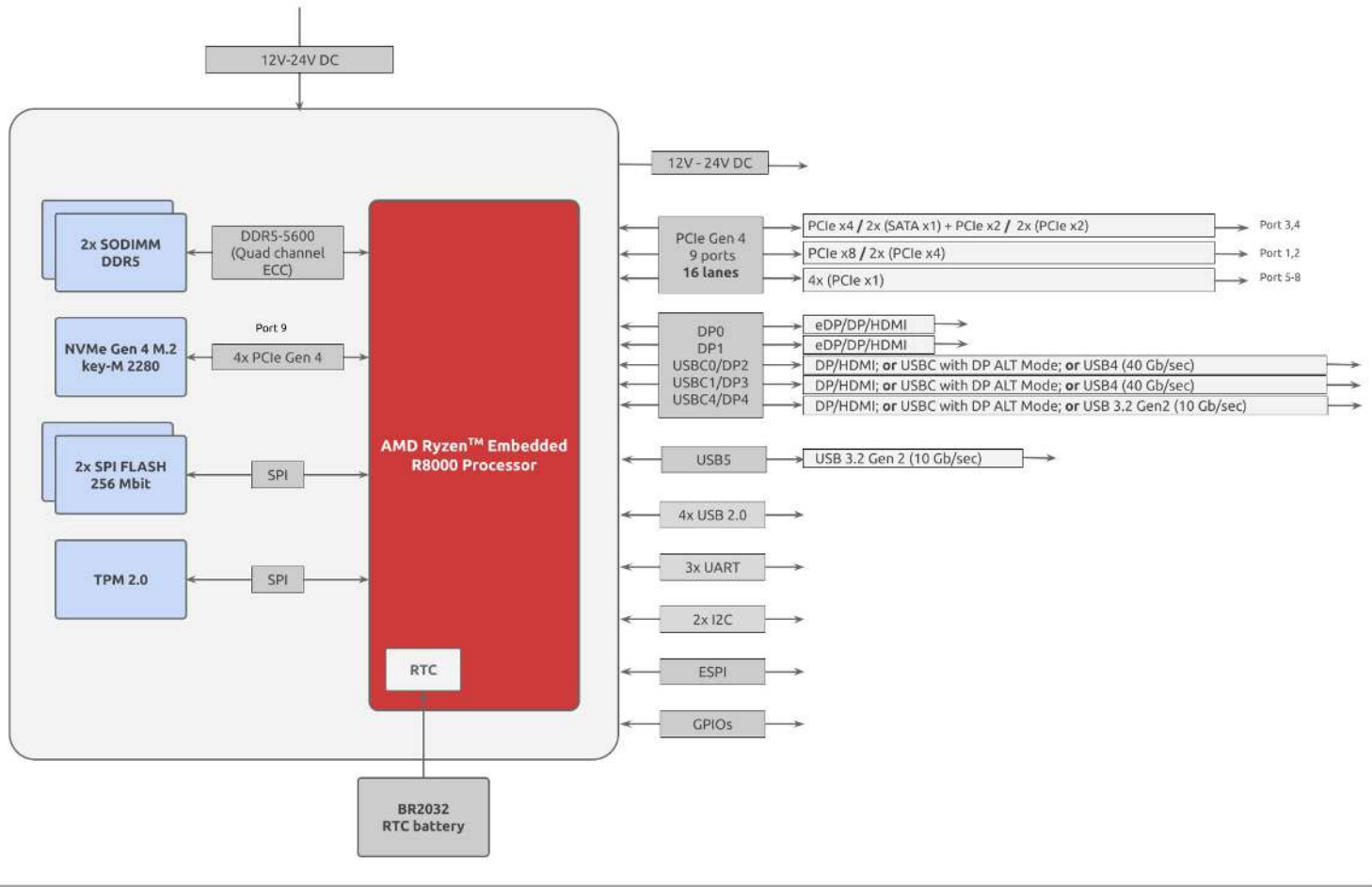


Versatile and Efficient

Optimized for applications in industrial PCs, automation, machine vision, robotics, and human-machine interfaces (HMI), with enhanced performance-per-watt efficiency for energy-conscious industrial systems, and onboard NPU integration providing targeted AI acceleration, reducing power consumption and improving computational agility compared to traditional GPU-driven AI.



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	AMD Ryzen R8000 SOM	Notes
CPU	AMD Ryzen™ 7 Pro 8845HS (8C / 16T / 35-54W - Default: 45W) AMD Ryzen™ 7 Pro 8840U (8C / 16T / 15-30W- Default: 28W)	
RAM	Dual channel DDR5-5600 up to 96 GB (ECC Supported)	2x SODIMM (2x32 bit each SODIMM)
AI Engine	AMD Ryzen™ AI 16 TOPs	
Storage	NVMe PCIe Gen4 x 4	M.2 key-M 2280
PCIe	9 Ports, 20 lanes PCIe Gen 4	[PCIe x8] / 2x[PCIe x4]/ 4x[PCIe x1] - (Port 1,2: 8 lanes) [PCIe x4] / 2x[SATA x1] + [PCIe x2] / 2x[PCIe x2] - (Port 3,4: 4 lanes) [PCIe x4] - (Port 5-8: 4 lanes) [PCIe x4] - (Port 9 : 4 lanes) - USED BY SOM NVME.
USB	2x USB4 (40 Gb/s) 2x USB 3.2 Gen 2 (10 Gb/s) 4x USB 2.0	USBC4/DP4 can be used as: USB 3.2 Gen 2 (10 Gb/sec)
Display	Display 1: eDP/DP/HDMI Display 2: eDP/DP/HDMI Display 3: DP/HDMI or USB-C with DP Alt-mode or USB4 Display 4: DP/HDMI or USB-C with DP Alt-mode or USB4 Display 5: DP/HDMI or USB-C with DP Alt-mode	Up to 4 x 4K displays can be output simultaneously.
BIOS	AMI Aptio V	Dual SPI FLASH for redundancy Console redirection
Operating Systems	Windows 10/11/IoT, Linux	Other x86 operating systems supported
Power	DC 12V-24V	
Temperature rating (T Junction)	0°C - 105°C	Commercial Use