

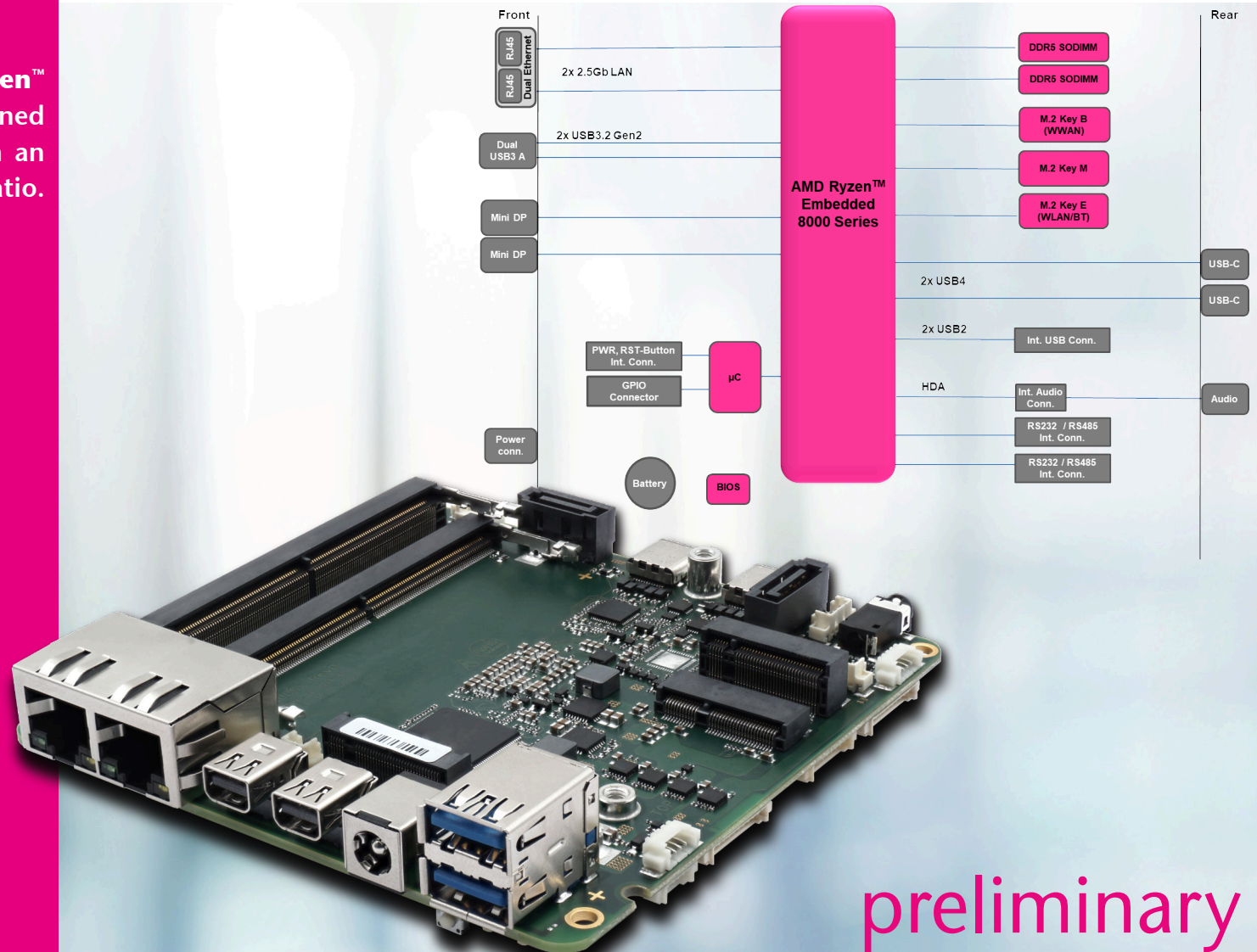
# PROFIVE® NUCU



## APPLICATIONS

The **PROFIVE® NUCU** with **AMD Ryzen™ Embedded 8000 Series** was designed as a low power eNUC board with an excellent performance-per-watt ratio. It is ideally suited for:

- \_ CV Compute Vision
  - \_ High-Performance Workstations
  - \_ AI Systems
  - \_ Medical Solutions
  - \_ ML Machine Learning
  - \_ Robotics
  - \_ Micro-Server
  - \_ Rugged Industrial Systems
  - \_ IoT
- edge / fog gateway



preliminary

HIGH QUALITY  
MADE IN GERMANY

**AMD**  
**RYZEN**  
Embedded



10 years availability  
according to CPU  
manufacturers  
specification

**E.E.P.D.**  
...just embedded!

# eNUC 102x102

Specification	
CPU / GPU	AMD Ryzen™ Embedded 8000 Series, max. 54 W supported   AMD RDNA3 Radeon™ Graphics and XDNA Neural Processing Unit for AI Inferencing
BIOS	UEFI
Max. memory	Up to 2 x 32 GB dual channel up to DDR5-5600 SO-DIMM memory with ECC support
Ethernet ports	2x Intel® I226-LM with 2,5 Gbit/s with IEEE1588   TSN-support   Wake-On-Lan supported by one port
M.2 socket	1 x Key M, 2280, PCIe Gen4 x4 NVMe 1 x Key B, 3042, PCIe Gen4 x2 / USB 2.0, e.g. WWAN 1 x Key E, 2230, PCIe Gen4 x1 or x2 / USB 2, e.g. WLAN/Bluetooth
I/O´s	Max. 4x GPIO (3.3V) and max. 3x GPIO with PWM (3,3V/50kHz)
Display output	2x Mini Display Port, up to 4096 x 2160 @ 60 Hz   2x USB C Alt Mode, up to 4096 x 2160 @ 60 Hz (only as a secondary monitor)
USB-A port	Front: 2x USB 3.2 Gen2 (10Gb/s, OCP = 1500mA each)
USB-C port	Rear: 2x USB-C 3.2 Gen2 (10Gb/s, OCP = 1500mA each) or USB C Alt Mode
USB internal	2x internal USB 2.0 (480 Mb/s, OCP = 900mA each) on Molex (PicoBlade)
Serial port	2 x RS-232/485 (HDX/FDX) on Molex (PicoBlade)
Audio	High Definition Audio Codec with MIC in   Headphone out at a 3,5 mm Audio Jack   Line in   Line out at an internal Molex connector (PicoBlade)
fTPM / TPM	AMD® firmware Trusted Platform Module   TPM 2.0 support (Infineon SLB 9670)
Status / control LEDs	Power and status LEDs
Hardware monitoring and management	Controllable FAN (PWM and Tacho); Temperature Sensor, Power Supply Voltage Monitoring, Watchdog
Power supply	Min. 10.8 V / max. 26.4 V (DC), Min. 120 W, fused to: 10 A   Power Connector: CUI Devices Power Plug ID 2.5 mm, AD 5.5 mm
Operating temperature	0°C to +60°C ambient commercial grade Adequate cooling provided, depending on variant and cooling system, CPU throttling may occur at higher ambient temperatures
Storage temperature	-40°C to +85°C; non-condensing
Max. relative humidity	95% @ 40°C, non-condensing while stored   89% while working
Cooling	Fanless cooling / passive cooling options available Optional CPU fan, 5 V/12 V (depends on variant) Optional SSD fan, 5 V/12 V (depends on variant)
Size approx.	102 mm x 102 mm
Weight approx.	110g + options
OS support	Microsoft® Windows® 11  Linux Ubuntu 22.04 LTS

Supported CPU types
AMD Ryzen™ 7 Embedded 8845HS 8C   16T   3.8 GHz - 5.1 GHz   35 - 54 W Operating temperature: 0°C to +60°C
AMD Ryzen™ 5 Embedded 8645HS 6C   12T   4.3 GHz - 5.0 GHz   35 - 54 W Operating temperature: 0°C to +60°C
AMD Ryzen™ 7 Embedded 8840U 8C   16T   3.3 GHz - 5.1 GHz   15 - 30 W Operating temperature: 0°C to +60°C
AMD Ryzen™ 5 Embedded 8640U 6C   12T   3.5 GHz - 4.9 GHz   15 - 30 W Operating temperature: 0°C to +60°C

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OCP = Overcurrent Protection

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