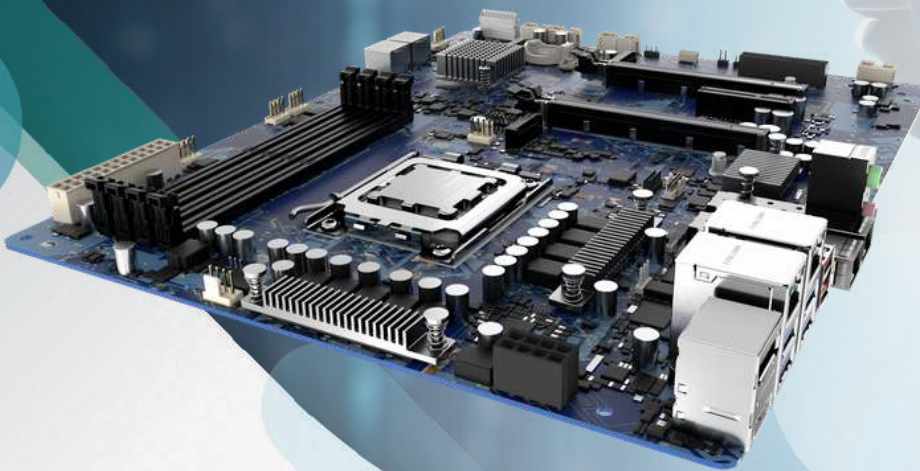


CT-AR701

ATX Industrial Motherboard

Powered by AMD EPYC 4005/ 4004 &
Ryzen™ 9000/7000 Series Processors



High-Performance ATX Industrial Motherboard for Modern Edge Infrastructure

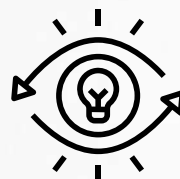
The CT-AR701 is an industrial-grade ATX motherboard built for high-performance edge computing, AI infrastructure, and data-intensive industrial applications. Powered by the AMD B650 platform, it supports AMD Ryzen™ 9000/7000 Series desktop processors and AMD EPYC™ 4005/4004 processors, delivering enterprise-class networking, flexible PCIe expansion, and scalable performance for AI inference, machine vision, industrial networking, and on-premises AI deployments.



Edge Computing



AI Inference



Machine Vision



Industrial IoT



Powering High-Performance Multicore Computing with AMD Ryzen™ and EPYC™ Processor Support

The CT-AR701 is an ATX industrial motherboard built on the scalable AMD AM5 platform, supporting AMD Ryzen™ 9000/7000 Series desktop processors as well as AMD EPYC™ 4005/4004 processors for compute-intensive edge workloads.

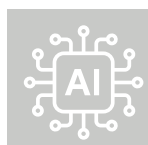
Built on the AMD B650 chipset, the CT-AR701 combines high-capacity DDR5 memory, dual 10GbE SFP+ networking, PCIe Gen 5 expansion, and versatile storage connectivity. Its ATX design provides the expansion capacity required for GPUs, AI accelerators, networking cards, storage controllers, and other application-specific add-in cards.

Key Features

- Supports AMD EPYC 4005/ 4004 & Ryzen™ 9000/7000 Series Processors
- 4x DDR5 UDIMM, up to 5600 MT/s, Max. 192GB (Non-ECC)
- 2x 10GbE SFP+ and 2x 1GbE RJ45
- Dual independent displays supported: DP, HDMI
- 2x M.2 M key 2280 NVMe, 1x M.2 E key 2230
- 2x PCIe x16 Gen 5, 1x PCIe x4 (Open End), 1x PCIe x4 (x1 Lane)
- 4x Dual SATA 3.0 ports
- 6x USB 3.2 Gen 2 x1 (10Gbps), 2x USB 3.2 Gen 1 (Internal), 4x USB 2.0-Ports (Internal)
- Watchdog timer 1~255 sec. System reset
- TPM 2.0 Supported



On-Prem AI &
Data Edge
Systems



Edge AI Cluster



Generative AI
Edge Systems



Custom OEM/ODM
Physical AI
Systems



Industrial Data
Processing



Local Storage
Systems



Scalable AMD Ryzen™ & EPYC™ Performance on the AM5 Platform

Supporting AMD Ryzen™ 9000/7000 Series and AMD EPYC™ 4005/4004 processors, the CT-AR701 provides flexible processing options that scale from high-performance edge computing to server-class industrial infrastructure, allowing system integrators to optimize performance for diverse deployment requirements.

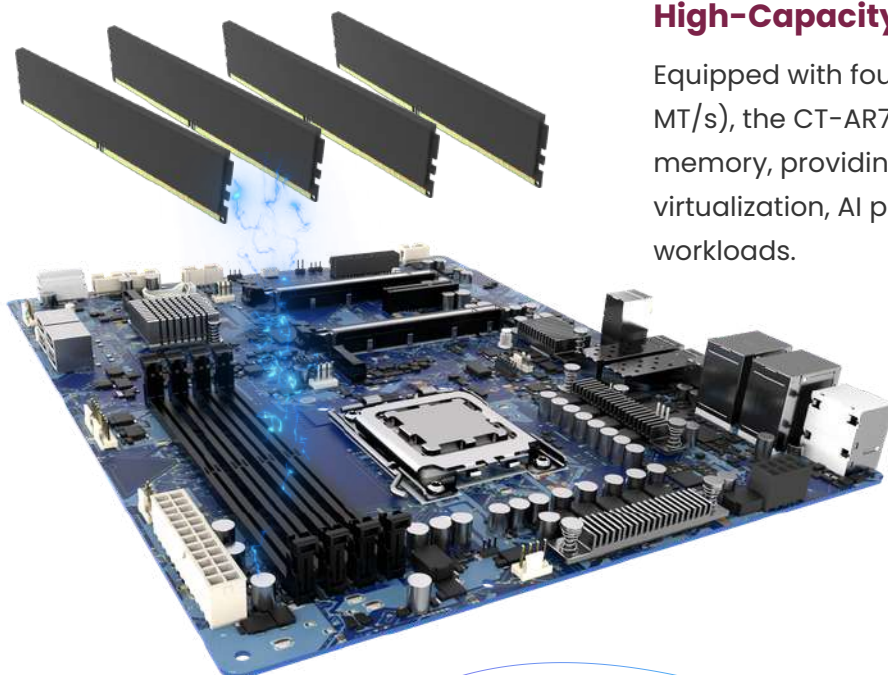
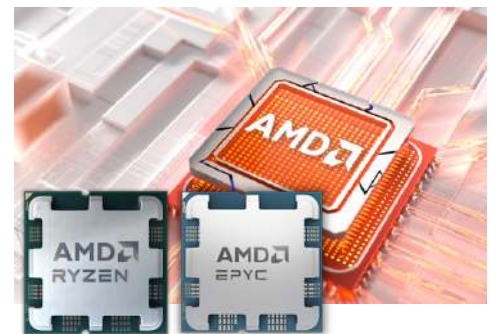
The platform delivers:

- Up to 16 cores / 32 threads, processor dependent
- Ryzen™ options for high-performance edge and AI workloads
- EPYC™ options for server-oriented and multi-workload deployments
- PCIe Gen 5 and DDR5 support for scalable system performance

For workloads requiring additional acceleration, the CT-AR701 can integrate discrete GPUs, AI accelerators, storage controllers, and other high-performance add-in cards through its PCIe expansion interfaces.

AMD
RYZEN

AMD
EPYC



High-Capacity DDR5 Memory

Equipped with four DDR5 5600 UDIMM slots (up to 5600 MT/s), the CT-AR701 supports up to 192GB of system memory, providing greater headroom for multitasking, virtualization, AI processing, and other memory-intensive workloads.



High-Bandwidth Networking with Dual 10GbE SFP+

Designed for long-distance, low-latency, and EMI-resistant data transmission for reliable on-premises system, the CT-AR701 delivers high-speed networking for AI, edge computing, and data-intensive applications.

- 2x 10GbE SFP+ for high-speed fiber or direct-attach networking
- 2x 1GbE RJ45 for standard copper Ethernet connectivity

Powered by the Broadcom BCM57412 controller, the dual 10GbE interfaces provide high-throughput connectivity for networked storage, edge computing, machine vision, and data-intensive industrial workloads.

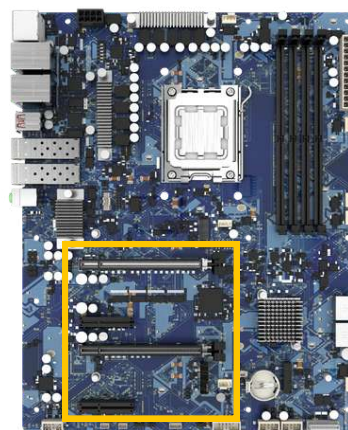


PCIe Gen 5 Expansion for High-Performance Systems

The CT-AR701 provides flexible PCIe expansion for GPUs, AI accelerators, network adapters, frame grabbers, storage controllers, and other add-in cards.

- 2x PCIe x16 Slots Gen5 Supported
- 1x PCIe x4 open-end slot
- 1x PCIe x4 (x1 Lane)

Dual PCIe x16 slots provide scalable expansion for discrete acceleration and multiple high-bandwidth cards across AI, vision, networking, and data-processing applications.



Efficient Storage for Data-Intensive Workloads

The CT-AR701 provides versatile storage and wireless expansion options for modern industrial and edge systems:

- 2x M.2 M-Key 2280 slots for PCIe NVMe storage
- 1x M.2 E-Key 2230 slot for Wi-Fi and Bluetooth
- 4x SATA 3.0 ports for data-intensive applications with RAID support

These storage options enable high-speed NVMe storage, high-capacity SATA storage, and wireless connectivity within a single configurable platform.



High-Speed I/O Connectivity

- 6x USB 3.2 Gen 2 ports with transfer speeds up to 10Gbps
- 2x internal USB 3.2 Gen 1 and 4x internal USB 2.0 ports
- Line-in and line-out audio connectivity

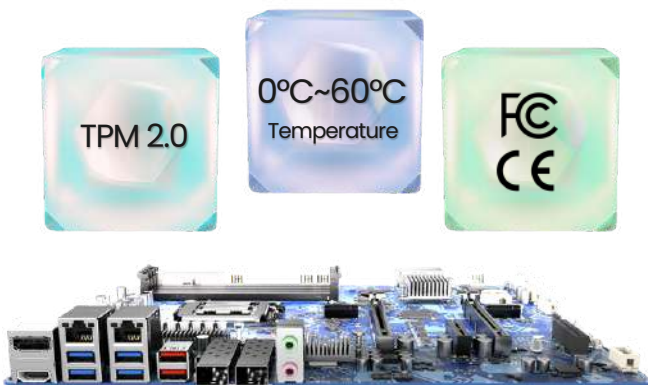
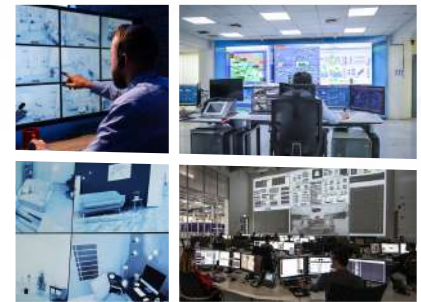
These interfaces provide high-speed connectivity for cameras, storage devices, sensors, networking equipment, and other peripherals.



Dual Independent 4K Display Outputs

The CT-AR701 supports two independent 4K displays for monitoring, visualization, control, and operator interface applications. Dual-display capability allows operators to view system data, dashboards, and application interfaces simultaneously.

- 1x DisplayPort 1.4a, up to 4096 x 2304 @60Hz
- 1x HDMI 2.0, up to 4096 x 2160 @60Hz



Industrial Reliability for Long-Term Deployment

The CT-AR701 is designed for dependable operation in industrial systems and continuous edge workloads. Key industrial features include:

- Operating temperature range of 0°C to 60°C
- CE / FCC Class B certification
- TPM 2.0 for hardware-based security
- Programmable watchdog timer with 1-255 second timeout

Designed for Real-World Applications



On-Prem AI and LLM Systems



Machine Vision and Industrial Data Processing



Edge Server and Network Infrastructure



Custom OEM/ODM Edge AI Servers and Workstations

We Design,
Manufacture, and
Service Customers
Around the World



CT-AR701 ATX Industrial Motherboard



Model	CT-AR701
CPU	AMD Ryzen™ 9000/7000 Series Desktop Processors & EPYC™ 4005/4004 Processors
Memory	4x DDR5 UDIMM, up to 5600 MT/s, Max. 192GB (Non-ECC)
Storage	2x M.2 M-Key (2280, PCIe x2) support for NVMe
Expansion	1x M.2 E-Key (2230, PCIe x1, USB 2.0) support for Wifi/Bluetooth 2x PCIe x16 Slots Gen5 Supported 1x PCIe x4 open end slot 1x PCIe x4 (x1 Lane)
Display	1x DP 1.4a up to 4096×2304 @60Hz 1x HDMI 2.0, up to 4096 x 2160 @60Hz
Rear I/O	2x 1GbE RJ45 LAN, 2x 10GbE SFP+ LAN, 6x USB 3.2 Gen 2 (10Gbps), 1x Line In / Out
Internal I/O	4x USB 2.0 Headers 2x USB 3.2 Gen 1 (5Gbps)
Operating Systems	Windows 10/11 Ubuntu 22.04 / 24.04 LTS
Operating Temperature	0°C to 60°C
TPM	TPM 2.0
Certification	CE, FCC Class B
Dimensions	305mm x 244mm x 1.6mm