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ASUS
AMD EPYC 7003
(MILAN SERIES)
PORTFOLIO



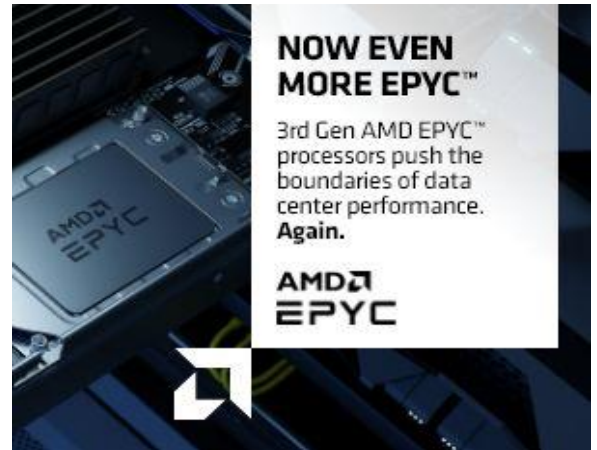
AMD
EPYC

ASUS

March 2021

AMD EPYC 7003

AMD has released their new game-changing generation of CPU processor, the AMD 3rd Generation EPYC Milan. Featuring 15 new models of processors within the series focusing on features such as core performance, core density and TCO. In addition, AMD introduced the world's highest performing server processor, the EPYC 7763, with a boost clock of up to 3.5 GHz and 280 TDP.



EPYC 7003 Family

| Model | Cores | Threads | FREQ | FREQ (UP) | TDP (W) | MIN (W) | MAX (W) | CACHE | CH | DPC | PCIE 4 |
|-------|-------|---------|------|-----------|---------|---------|---------|-------|----|------|--------|
| 7763 | 64 | 128 | 2.45 | 3.5 | 280 | 225 | 280 | 256 | 8 | 3200 | x128 |
| 7713 | 64 | 128 | 2 | 3.675 | 225 | 225 | 240 | 256 | 8 | 3200 | X128 |
| 7713P | 64 | 128 | 2 | 3.675 | 225 | 225 | 240 | 256 | 8 | 3200 | X128 |
| 7663 | 56 | 112 | 2 | 3.5 | 240 | 225 | 240 | 256 | 8 | 3200 | x128 |
| 7643 | 48 | 96 | 2.3 | 3.6 | 225 | 225 | 240 | 256 | 8 | 3200 | x128 |
| 75F3 | 32 | 64 | 2.95 | 4 | 280 | 225 | 280 | 256 | 8 | 3200 | x128 |
| 7543 | 32 | 64 | 2.8 | 3.7 | 225 | 225 | 240 | 256 | 8 | 3200 | x128 |
| 7543P | 32 | 64 | 2.8 | 3.7 | 225 | 225 | 240 | 256 | 8 | 3200 | X128 |
| 7513 | 32 | 64 | 2.6 | 3.65 | 200 | 165 | 200 | 128 | 8 | 3200 | x128 |
| 7453 | 28 | 56 | 2.75 | 3.45 | 225 | 225 | 240 | 64 | 8 | 3200 | x128 |
| 74F3 | 24 | 48 | 3.2 | 4 | 240 | 225 | 240 | 256 | 8 | 3200 | x128 |
| 7443 | 24 | 48 | 2.85 | 4 | 200 | 165 | 200 | 128 | 8 | 3200 | x128 |
| 7443P | 24 | 48 | 2.85 | 4 | 200 | 165 | 200 | 128 | 8 | 3200 | X128 |
| 7413 | 24 | 48 | 2.65 | 3.6 | 180 | 165 | 200 | 128 | 8 | 3200 | X128 |
| 73F3 | 16 | 32 | 3.5 | 4 | 240 | 225 | 240 | 256 | 8 | 3200 | x128 |
| 7343 | 16 | 32 | 3.2 | 3.9 | 190 | 165 | 200 | 128 | 8 | 3200 | x128 |
| 7313 | 16 | 32 | 3 | 3.7 | 155 | 155 | 180 | 128 | 8 | 3200 | X128 |
| 7313P | 16 | 32 | 3 | 3.7 | 155 | 155 | 180 | 128 | 8 | 3200 | X128 |
| 72F3 | 8 | 16 | 3.7 | 4.1 | 180 | 165 | 200 | 256 | 8 | 3200 | x128 |

Leading Workload Performance



Powering on-prem and off-prem solutions in the cloud, containers or VMs. The AMD EPYC 7003 Series provides triple-digit improvements across the wide range of industry standard use cases, providing faster time to results for businesses.

Innovative Architecture



The integration of “Zen 3” core and AMD Infinity Architecture within the new AMD EPYC 7003 Series, has provided a full range of industry leading features across I/O, 7nm x86 CPU technology and a more integrated security processor.

Advanced AMD Data Security




AMD has architected a secure solution within their processors to keep processes all the way to data safe. AMD Infinity Guard is a variety of advanced security features build within the processor silicon, to defend against potential internal or external threats on data.

ASUS AMD EPYC 7003 Servers

ASUS has announced their introduction of a comprehensive server portfolio based on the latest AMD EPYC 7003 series processors. This will feature their new single and dual socket servers in 1U and 2U form factors with new architecture and modular design to improve the systems flexibility and scalability. In addition to driving high performance and improved TCO through supporting PCIe 4.0, OCP 3.0 and BMC technologies.



 **RS700A-E11-RS12-U**
1U All-Flash
GPU Server



ESC4000A-E10
2U GPU Server



RS500A-E10-RS12-U
1U Balanced Server



RS720A-E11-RS24-U
2U All-Flash
Performance Server



Why ASUS EPYC 7003 Servers?

ASUS CPU-Balanced Architecture

The new ASUS servers integrate a CPU-balanced architecture that enables secure and optimal CPU-performance efficiency. This design extends the full bandwidth to both dual and single CPU configurations, improving computing capability and overall power efficiency for compute-intensive workloads.

Scalable Storage Solutions

ASUS servers based on the EPYC 7003 processors support maximum performance in data-centre flexibility. With flexible NVMe drives on the front panel, the servers enable extensive storage and high-throughput performance.

Versatile Modular Design

The latest ASUS servers feature a new modular design that enables easy scale-up of configurations to meet ever-growing data-centre workloads. For example, the design of the on board LAN module provides simple accessibility in replacing and switching modules, enabling data centre-grade transfer speeds of up to 200GB/s.

Remote IT-Infrastructure Management

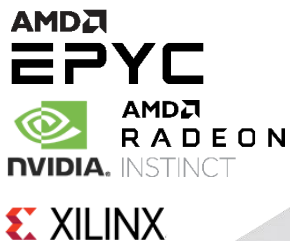
With this new AMD EPYC generation, ASUS has introduced their new ASUS ASMB10-iKVM server-management solution. This delivers up to 39% faster BMC boot time compared to the 2500 chipset.

ASUS AMD EPYC 7003 Portfolio

ASUS GPU Servers

These ASUS AMD EPYC 7003 servers provide many powerful performance features for GPU application. This includes:

- GPU and FPGA Support – The servers supports NVIDIA A100, Tesla or Quadro GPUs plus features NVIDIA NVLink Bridge to enable scaling of performance to meet the demands of AI, HPC and virtualisation.
- Xilinx Alveo-qualified Server - provides optimised acceleration for workloads across cloud and on-premises data centres and hybrid cloud environments in financial computing, ML, computation storage and data search and analytics.



RS700A-E11-RS12-U (ALL FLASH)

Xilinx Alveo Validated System

Use Case: AI, HPC, virtualisation, cloud, financial computing, machine learning, computational storage, data search and analytics.

1U form factor dual socket system supports the following:

GPU: Supports 4x double-slot or 8x single-spot GPUs, including NVIDIA Quadro RTX 8000/6000

CPU: Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; up to 64GB DDR4-3200MHz

PCIe: Up to 3x PCIe 4.0 slots

Drive: Up to 12x Hot-swap 2.5" all-flash NVMe drives (SAS/SATA optional) and 2x M.2

Networking: 1x Quad Port Intel i350-AM4 1G LAN Controller, 1x Dual Port Intel X710-AT2 Gigabit 10G LAN Controller

Power Supply: 1200W/1600W Redundant Power Supplies Platinum level



ESC4000A-E10

NVIDIA RTX and Xilinx Alveo Validated System

Use Case: Production rendering, visualisation, AI, Deep Learning, HPC, big data, edge deployment

1U form factor single socket system supports the following:

GPU: Supports 4x double-slot or 8x single-spot GPUs, including NVIDIA A100, Tesla T4 or Quadro

CPU: Single AMD EPYC 7003/7002 Series Processor

RAM: 8 DIMMs; up to 256GB DDR4-3200MHz

PCIe: Up to 11x PCIe 4.0 slots

Drive: Up to 12x Hot-swap 2.5" SATA/SAS/NVMe drive bays and 1x M.2 22110 SSDs

Networking: Dual Port Intel i350-AM2 Gigabit LAN Controller, OCP 3.0 mezzanine card

Power Supply: 2200W Redundant Power Supplies Platinum level

ASUS Balanced Server

This ASUS AMD EPYC 7003 RS500A-E10-RS12-U server provides many performance and cost optimised features for HPC application. This includes:

- Rich I/O expansion with PCIe 4.0 - which doubles the bandwidth of PCIe 3.0 and delivers lower power consumption, better lane scalability and backwards compatibility.
- Ultrafast connectivity for HPC applications - through the server's two embedded Gigabit Ethernet ports that supports up to 100G or higher interconnect speeds with the addition of a PCIe 4.0 for its OCP 2.0 mezzanine card.
- Thermal Radar 2.0 - energy efficiency featured by two innovative intelligent detection technologies and multi-fan zone design that places different sensors on the CPU, GPU, DIMM, HDD to collect heating information to designate automatic dedicated fan flow.
- Comprehensive IT infrastructure management - features an embedded iKVM module which is bundled with ASUS Control Centre and provides comprehensive out-of-band and in-band management features for small and mid-size businesses.

AMD
EPYC

RS500A-E10-RS12-U

Use Case: HPC, Enterprise, Applications that require high-bandwidth, low latency network support.

1U form factor single socket system supports the following:

CPU: Single AMD EPYC 7003/7002 Series Processor

RAM: 16 DIMMs; Up to 2TB ECC DDR4-3200MHz

Drive: Up to 12x Hot-swap 2.5" SATA/SAS/NVMe drive bays and 1x M.2 22110 SSDs

Networking: Dual onboard LAN plus optional OCP 2.0 mezzanine card supporting up to 100G or higher ultrafast speed for HPC

Power Supply: 650W Redundant Power Supplies Platinum level



ASUS Performance Server

The ASUS AMD EPYC 7003 RS720A-E11-RS24-U server is a scalable and hybrid All-Flash storage solution that includes:

- Up to 24 NVMe hot swap SSDs for increased IOPS. Optimised for low latency with a direct connection between the CPU and PCIe storage devices, providing faster data transfers for the best performance in advanced computing applications.
- Ultrafast connectivity for HPC applications - through the server's two embedded Gigabit Ethernet ports that supports up to 100G or higher interconnect speeds with the addition of a PCIe 4.0 for its OCP 2.0 mezzanine card.
- Thermal Radar 2.0 - energy efficiency featured by two innovative intelligent detection technologies and multi-fan zone design that places different sensors on the CPU, GPU, DIMM, HDD to collect heating information to designate automatic dedicated fan flow.
- Comprehensive IT infrastructure management - features an embedded iKVM module which is bundled with ASUS Control Centre and provides comprehensive out-of-band and in-band management features for small and mid-size businesses.



RS720A-E11-RS24-U (ALL FLASH)

All Flash and Xilinx Alveo Validated System

Use Case: AI, HPC, virtualisation, cloud, financial computing, machine learning, computational storage, data search and analytics.

2U form factor dual socket system supports the following:

GPU: Supports 4x double-slot or 8x single-spot GPUs, including NVIDIA Quadro RTX 8000/6000

CPU: Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; up to 64GB DDR4-3200MHz

PCIe: Up to 9x PCIe 4.0 slots

Drive: Up to 24x Hot-swap 2.5" all-flash NVMe drives (SAS/SATA optional) and 2x M.2

Networking: 1x Quad Port Intel i350-AM4 1G LAN Controller, 1x Dual Port Intel X710-AT2 Gigabit 10G LAN Controller

Power Supply: 1600W/2400W Redundant Power Supplies Titanium/Platinum level



Our Partnership with ASUS



Established in 1989, ASUS is a multinational company that is well known for the world's best motherboards and high-quality servers. The company has revolutionized the PC and mobile industry, looking to rapidly develop virtual and augmented reality solutions as well as IOT devices and robotics technologies. In addition, ASUS is worldly renowned for their contribution to technology, awarded with many significant titles and certifications.

Configure ASUS Intel based workstations and ASUS AMD based servers on our website to meet your business application. We locally build, deploy our solutions and provide support, within Australia and New Zealand.

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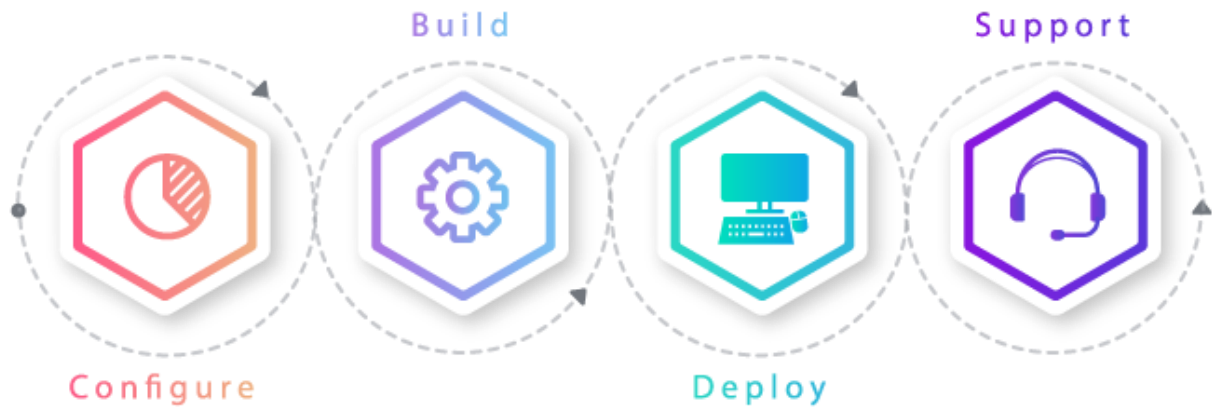
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Configure

- Our system configurator helps customers in designing a tailored computing solution that best fits their needs.
- The smart configurator provides helpful prompts to ensure that any design is validated.

Build

- Our strict quality assurance process during assembly and testing ensure systems leaving our build centre are free-from-defect and are operating as designed.

Deploy

- Our Australia & New Zealand wide deployment services and support network means that where ever you are, you experience a smooth deployment.

Support

- Our support team is available to assist in resolving and troubleshooting any issues, with additional warranty support options such as Next Business Day or 24/7 service available should you need it.

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