# DiGiCOR

# SUPERMICRO AMD EPYC 7003

(MILAN SERIES)
PORTFOLIO









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## **AMD EPYC 7003**

AMD has released their new game-changing generation of CPU processor, the AMD 3rd Generation EPYC Milan, featuring 15 new processors focusing on features such 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.



MODEL	CORES	THREADS	FREQ	FREQ (UP)	TDP (W)	MIN (W)	MAX (W)	CACHE	СН	DPC	PCIE4
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	x 128
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

#### **PERFORMANCE**



3rd Gen EPYC™ Processors bring industry-leading performance so you can do more, faster with faster processing, higher throughput and lower TCO.

#### **SECURITY**



3rd Gen EPYC™ Processors have AMD Infinity Guard, which delivers an advanced modern security feature-set that helps decrease potential attack surfaces as software is booted, executed and processes your critical data.

#### **BUILT FOR SOLUTIONS**



3rd Gen EPYC<sup>™</sup> Processors bring power, efficiency and security features to a broader range of use cases, whether in your data centre or in the cloud.



# **Supermicro A+**

We provide Supermicro's broad range of A+ Systems powered by 3rd Gen AMD EPYC Processors. Browse the ideal solution to your application paired with the powerful Milan.



## **How A+ Systems Empowered by 7003 Can Benefit You**

#### **ENTERPRISE**

3rd Gen EPYC<sup>™</sup> SoCs deliver up to 2X the performance on integer and Java-based server workloads

#### VIRTUALISED IT

Deliver 2.8X the VMmark 3.1 performance for both SAN6 and vSAN

#### VDI

Up to ~2.1X the "maximum knowledge worker" desktop sessions while meeting Login VSI™ rating of "very good" QoS response times

#### **DATABASE**

Better database performance with ~19% more HammerDB OLTP per minute9

#### **DATA ANALYTICS**

Outperforms the competition by ~25% on Hadoop Sort SPARK 1TB

#### **HPC**

AMD EPYC<sup>™</sup> 72F3: The World's Highest Performance-Per-Core Processor for HPC applications

## **EPYC 7003 Portfolio**

#### **A+ SUPERBLADE**

Performance and Density Optimised

#### **ADVANCED A+ GPU SYSTEMS**

Maximum Acceleration for AI, Deep Learning, and HPC

#### A+ 2-NODE MULTI-GPU SYSTEMS

Large-Scale Data Centre GPU Solution

#### **A+ BIGTWIN**

Dense, Scalable Multi-node Architecture

#### A+ CLOUD DC

Rapid Cloud Deployment, Easy Maintenance

#### **A+ ULTRA SERVERS**

Best-in-class Server Features

# Advanced A+ GPU Systems

The A+ GPU Systems are highly optimised with GPU-to-GPU Interconnect architecture, allowing for the highest performance and reliability. The advanced GPU interconnect options provide the best efficiency and lowest latency in a system. NVIDIA Certified including NVIDIA HGX platform with NVLink and NVSwitch.

#### **Key Points**

- New faster PCI-e performance with high-speed networking support includes Mellanox HDR InfiniBand.
- Maximum system performance from GPUDirect RDMA and 1-1 mapping between network cards and each GPU.
- Leveraging the latest generation of NVIDIA NVLink technology.
- The AS-4124GS-TNR is a popular DiGiCOR product.



#### EPYC 7003 Advanced A+ GPU Portfolio



#### AS-4124GS-TNR

Use Cases: Al / Deep Learning, High-Performance Computing, Cloud Gaming, Molecular Dynamics Simulation

**4U** form factor dual socket system supports the following:

**GPU:** 8x double-width GPUs

CPU: Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; 8TB ECC DDR4-3200MHz

**Networking:** 2GbE LAN ports

**Drive:** Up to 24x Hot-swap 2.5" drive bays; 2x 2.5" SATA, 4x 2.5"

**NVMe** 

**PSU:** 2000W Redundant Power Supplies Titanium Level (96%)



#### **INVIDIA.** CERTIFIED/



#### AS-4124GO-NART

Use Cases: High-Performance Computing, AI / Deep Learning

**4U** form factor dual socket system supports the following:

GPU: Supports 8x NVIDIA A100 GPUs; Highest GPU

communication

**NVIDIA NVLink** 

CPU: Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; 8TB ECC DDR4-3200MHz

PCI-E: 8 PCI-E 4.0 x16 via PCI-e switch, 1 PCI-E 4.0 x16 and 1

**PCI-E 4.0 x8 LP** 

**Networking:** Flexible Networking via AIOM **Drive:** 6x Hot-swap U.2 NVME 2.5" drive bays

**PSU:** 3000W Redundant Power Supplies Titanium Level (96%)



#### **AS-2124GQ-NART**

**Use Cases:** AI/ML, Deep Learning Training and Inference, Highperformance Computing (HPC), Cloud Computing, Research Laboratory/National Laboratory, Autonomous Vehicle Technologies, Molecular Dynamics Simulation

**2U** form factor dual socket system supports the following:: **GPU:** Supports 4x NVIDIA HGX A100 GPUs; Highest GPU communication NVIDIA NVLink

CPU: Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; 8TB ECC DDR4-3200MHz

Networking: IPMI 2.0 + KVM 10G LAN

Drive: 4x Hot-swap 2.5" (NVME/SAS3/SATA3 hybrid) drive bays;

4x PCI-E Gen 4 x16



#### AS-4124GO-NART+

**Use Cases:** High-Performance Computing, AI / Deep Learning

4U form factor dual socket system supports the following:

GPU: Supports 8x NVIDIA A100 GPUs; Highest GPU

communication NVIDIA NVLink

CPU: Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; 8TB ECC DDR4-3200MHz

PCI-E: 8 PCI-E 4.0 x16 via PCI-e switch, 1 PCI-E 4.0 x16 and 1

PCI-E 4.0 x8 LP

**Networking:** Flexible Networking via AIOM **Drive:** 6x Hot-swap U.2 NVME 2.5" drive bays

**PSU:** 3000W Redundant Power Supplies Titanium Level (96%)



#### AS-2124GQ-NART-LCC

**Use Cases:** Al/ML, Deep Learning Training and Inference, Highperformance Computing (HPC), Cloud Computing, Research Laboratory/National Laboratory, Autonomous Vehicle Technologies, Molecular Dynamics Simulation

**2U** form factor dual socket system supports the following:

GPU: Supports 4x NVIDIA A100 GPUs; Highest GPU

communication NVIDIA NVLink

CPU: Dual AMD EPYC 7003/7002 Series Processor

**RAM:** 32 DIMMs; 8TB ECC DDR4-3200MHz **PCI-E:** 4 PCI-E 4.0 x16, 1 PCI-E 4.0 x8 LP **Networking:** IPMI 2.0 + KVM 10G LAN

**Drive:** 4x Hot-swap 2.5" drive bays (SAS/SATA/NVMe Hybrid) **PSU:** 2x2200W Smart Redundant Power Supplies Platinum Level



#### **AS-2114GT-DNR**

**Use Cases:** Media/Video Streaming, AI Inference and Machine Learning, Cloud Gaming, Industrial Automation, Retail, Smart Medical Expert Systems

Two nodes in a **2U** form factor. Each node supports the following:

CPU: Single AMD EPYC 7003/7002 Series Processor

RAM: 8 DIMMs: 2TB ECC DDR4-3200MHz

PCI-E: Up to 6 PCI-E 4.0 x16 AIOM slot, 1 PCI-E 4.0 x16 AIOM slot

**Networking:** Integrated IPMI 2.0 + KVM with dedicated LAN **Drive:** 2x front Hot-swap 2.5" U.2 NVMe Gen 4 drive bays **PSU:** 2600W Redundant Power Supplies Titanium Level (96%)



## **A+ WIO Servers**

The A+ WIO Servers provide a flexible and wide range of I/O options, with the best configurability of stage and networking options for the perfect fit of custom applications.

#### **Key Points**

- Optimised for: Enterprise applications, networking, general purpose computing and cloud.
- The AS-1114S-WTRT is a popular DiGiCOR product.



#### **EPYC 7003 WIO Servers Portfolio**



#### **AS-1014S-WTRT**

Use case: DB
Processing & Storage,
Data Centre
Applications, Firewall
Applications.

**1U** form factor single socket system supports the following:

**CPU:** Single AMD EPYC 7003/7002 Series Processor **RAM:** 8 DIMMs; Up to 2TB ECC DDR4-3200MHz

**Networking:** Integrated IPMI 2.0 + KVM LAN ports

**Drive:** 4x Hot-swap 2.5" SATA drive bays

(optional 4x NVMe) **PSU:** 500W Redundant

Power Supplies Platinum

Level



#### AS-1114S-WTRT

**Use case:** DB Processing & Storage, Data Centre Applications, Firewall Applications.

**1U** form factor single socket system supports the

**following:CPU:** Single AMD EPYC 7003/7002 Series

Processor

RAM: 8 DIMMs; Up to 2TB ECC DDR4-3200MHz

**Networking:** Integrated IPMI

2.0 + KVM LAN ports **Drive:** 10x Hot-swap 2.5"

SATA drive bays

(optional 2 U.2 NVMe) **PSU:** 500W Redundant

Power Supplies Platinum

Level



#### **AS-1114S-WN10RT**

**Use case:** Virtualization, Cloud Computing, All Flash Storage

**1U** form factor dual socket system supports the following:

**CPU:** Single AMD EPYC 7003/7002 Series Processor **RAM:** 16 DIMMs; Up to 4TB

ECC DDR4-3200MHz

Networking: Integrated IPMI

2.0 + KVM LAN ports **Drive:** 10x Hot-swap U.2

NVMe4/Nvme3/SATA3

(fully hybrid drive support) **PSU:** 750W Redundant

Power Supplies Platinum

Level



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# A+ BigTwin

The A+ BigTwin systems provide a dense, scalable multinode architecture to bring cost-optimised and resource saving benefits with the best efficiency and TCO in a solution. Supporting flexible storage options such as all NVMe and hybrid NVMe/SAS3/SATA3.

#### **Key Points**

- Superior performance and scalability for a variety of HPC workloads.
- Best suited for product design, physics simulations, data analytics and complex scientific research.



## **EPYC 7003 Big Twin Portfolio**





#### **AS-2124BT-HNTR**

**Use Cases:** Compute Intensive Applications, HPC, Data Center, Enterprise Server, Hyperscale / Hyperconverged

Four nodes in a **2U** form factor. Each node supports the following:

**CPU:** Dual AMD EPYC 7003/7002

Series Processor

RAM: 16 DIMMs; Up to 4TB ECC

DDR4-3200MHz

Networking: Integrated IPMI 2.0 +

KVM LAN ports

**Drive:** 6x Hot-swap 2.5" SATA drive bays (4 NVMe Gen 3 + 2 SATA or 6

SATA)

**PSU:** 2200W Redundant Power Supplies Titanium Level (96%)



#### AS-2124BT-HTR

**Use Cases:** Compute Intensive Applications, HPC, Data Center, Enterprise Server, Hyperscale / Hyperconverged

Four nodes in a **2U** form factor. Each node supports the following: **CPU:** Dual AMD EPYC 7003/7002

Series Processor

RAM: 16 DIMMs; Up to 4TB ECC

DDR4-3200MHz

Networking: Integrated IPMI 2.0 +

KVM LAN ports

**Drive:** 6x Hot-swap 2.5" SATA drive

avs

**PSU:** 2200W Redundant Power Supplies Titanium Level (96%)



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# A+ SuperBlade

The SuperBlade is designed with resource saving architecture that features the highest performance with advanced networking up to EDR InfiniBand and NVMe, available in 8U, 7U, 6U and 4U enclosures with hot-swap NVMe support.



#### **Key Points**

- 30% performance gain from EPYC Rome to Milan.
- Single socket low licensing cost and high core count which supports many users.
- High core count, high memory bandwidth at the lowest costs.

## **EPYC 7003 SuperBlade Portfolio**



SBA-4119SG 100 CPUs per 42U Rack

Each single socket blade supports the following:

**CPU:** Single AMD EPYC 7003/7002 Series Processor

**TDP:** Up to 280W

RAM: 8 DIMMs; up to 2TB 3DS

DDR4-3200MHz

Networking: IPMI 2.0, KVM over

IΡ

Drive: 2x Hot-plug 2.5"

NVME/SAS3/SATA3 drive bays;

2x PCI-E x4 M.2



**SBA-4119S-C2N** 100 CPUs per 42U Rack

Each single socket blade supports the following:

**CPU:** Single AMD EPYC 7003/7002 Series Processor

TDP: Up to 280W

RAM: 8 DIMMs; up to 2TB 3DS

DDR4-3200MHz

Networking: IPMI 2.0, KVM over

IΡ

Drive: 2x Hot-plug 2.5"

NVME/SAS3/SATA3 drive bays;

2x PCI-E x4 M.2



SBA-4119S-T2N 100 CPUs per 42U Rack

Each single socket blade supports the following:

**CPU:** Single AMD EPYC 7003/7002 Series Processor

**TDP:** Up to 280W

RAM: 8 DIMMs; up to 2TB 3DS

DDR4-3200MHz

Networking: IPMI 2.0, KVM over

IΡ

**Drive:** 2x Hot-plug 2.5"

NVME/SAS3/SATA3 drive bays;

2x PCI-E x4 M.2



## A+ CloudDC

The A+ CloudDC is an ideal system for rapid cloud deployment with simple maintenance. It is an extremely versatile platform which can also be used for AI training and deep learning, with an overall increase in performance per dollar in CPU, memory and storage.

#### **Key Points**

- Supports up to 2x full-size double-width GPUs such as the latest NVIDIA A100 or 4x single-width GPUs such as the NVIDIA T4.
- 12x U.3 Gen4 NVMe drives provides faster speed and performance versus traditional SATA SSD at a competitive price.



#### **EPYC 7003 CloudDC Portfolio**



#### **AS-1114CS-TNR**

Use Cases: Financial Services, Cloud Computing, Network Appliance, Private Cloud, Content Delivery Network (CDN), Deep Learning Inferencing

**1U** form factor single socket system supports the following:

CPU: Single AMD EPYC 7003/7002

Series Processor

RAM: 16 DIMMs; Up to 4TB ECC DDR4-

3200MHz

Networking: Integrated IPMI 2.0 + KVM

LAN ports

**Drive:** 10x Hot-swap 2.5" SATA drive bays (optional 10x SAS/NVMe support) **PSU:** 860W Redundant Power Supplies

Platinum Level





#### AS-2014CS-TR

Use Cases: Financial Services, Cloud Computing, Network Appliance, Private Cloud, Content Delivery Network (CDN), Deep Learning Inferencing

**2U** form factor single socket system supports the following:

CPU: Single AMD EPYC 7003/7002

Series Processor

RAM: 16 DIMMs; Up to 4TB ECC DDR4-

3200MHz

**Networking:** Integrated IPMI 2.0 + KVM

LAN ports

**Drive:** 12x Hot-swap 3.5" SATA/SAS/NVMe drive bays

**PSU:** 920W Redundant Power Supplies

Platinum Level



## **A+ Ultra Servers**

The A+ Ultra Servers provide the best-in-class server features with a standard 8TB of memory capacity. This allows for a faster system with more concurrent users, increased sizing of database warehouses or simultaneously running/executing more software packages.



#### **Key Points**

- NVMe drives provide significant speed with 4x faster IOPS and scalable performance with 25x more data than SATA
- Particularly suited to deliver the highest performance in application such as Big Data Analytics, Cloud Computing, virtualisation, high-end enterprise applications.

#### **EPYC 7003 Ultra Servers Portfolio**





#### AS-1024US-TRT

**Use Cases:** Virtualization, Cloud Computing, High End Enterprise Server

 ${\bf 1U}$  form factor dual socket system supports the following:

CPU: Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; 8TB ECC DDR4-3200MHz

Networking: Dual 10GBase-T LAN ports via Intel X710-AT2

Drive: 4x Hot-swap 3.5" SATA/NVMe/SAS drive bays

**PSU:** 1000W Redundant Power Supplies Titanium Level (96%)



#### AS-2024US-TRT

**Use Cases:** Virtualization, Cloud Computing, High End Enterprise Server, Hyperconverged Storage, Flexible Networking Options

**2U** form factor dual socket system supports the following:

CPU: Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; 8TB ECC DDR4-3200MHz

**Networking:** Dual 10GBase-T LAN ports via Intel X710-AT2 **Drive:** 12x Hot-swap 3.5" SATA drive bays (8 SATA + 4 NVMe

optional)

**PSU:** 1600W Redundant Power Supplies Titanium Level (96%)



#### **AS-1124US-TNRP**

**Use Cases:** Virtualization, Cloud Computing, High End Enterprise Server

**1U** form factor dual socket system supports the following: **CPU:** Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; 8TB ECC DDR4-3200MHz

Networking: Dual 10GBase-T + 10G SFP+ via Intel X710-TM4 Drive: 12x Hot-swap 2.5" U.2 NVMe/SATA.SAS drive bays PSU: 1200W Redundant Power Supplies Titanium Level (96%)



#### **AS-2124US-TNRP**

**Use Cases:** Virtualization, Cloud Computing, High-End Enterprise Server, Hyperconverged Storage

**2U** form factor dual socket system supports the following:

CPU: Dual AMD EPYC 7003/7002 Series Processor

RAM: 32 DIMMs; 8TB ECC DDR4-3200MHz

Networking: Dual 10GBase-T + 10G SFP+ via Intel X710-TM4 Drive: 24x Hot-swap 2.5" U.2 NVMe/SATA.SAS drive bays PSU: 1600W Redundant Power Supplies Titanium Level (96%)

# TALK TO US TODAY

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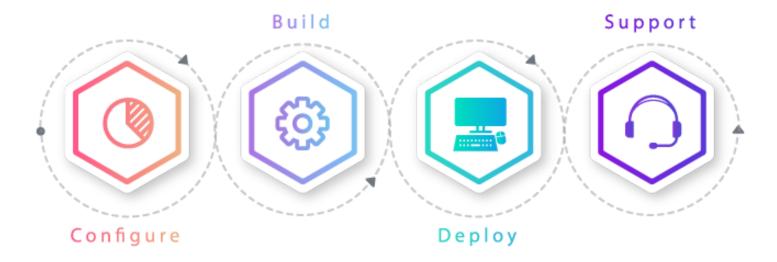
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#### Configure

- Our system configurator helps customers design 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 that 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 and 24/7 service available should you need it.

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