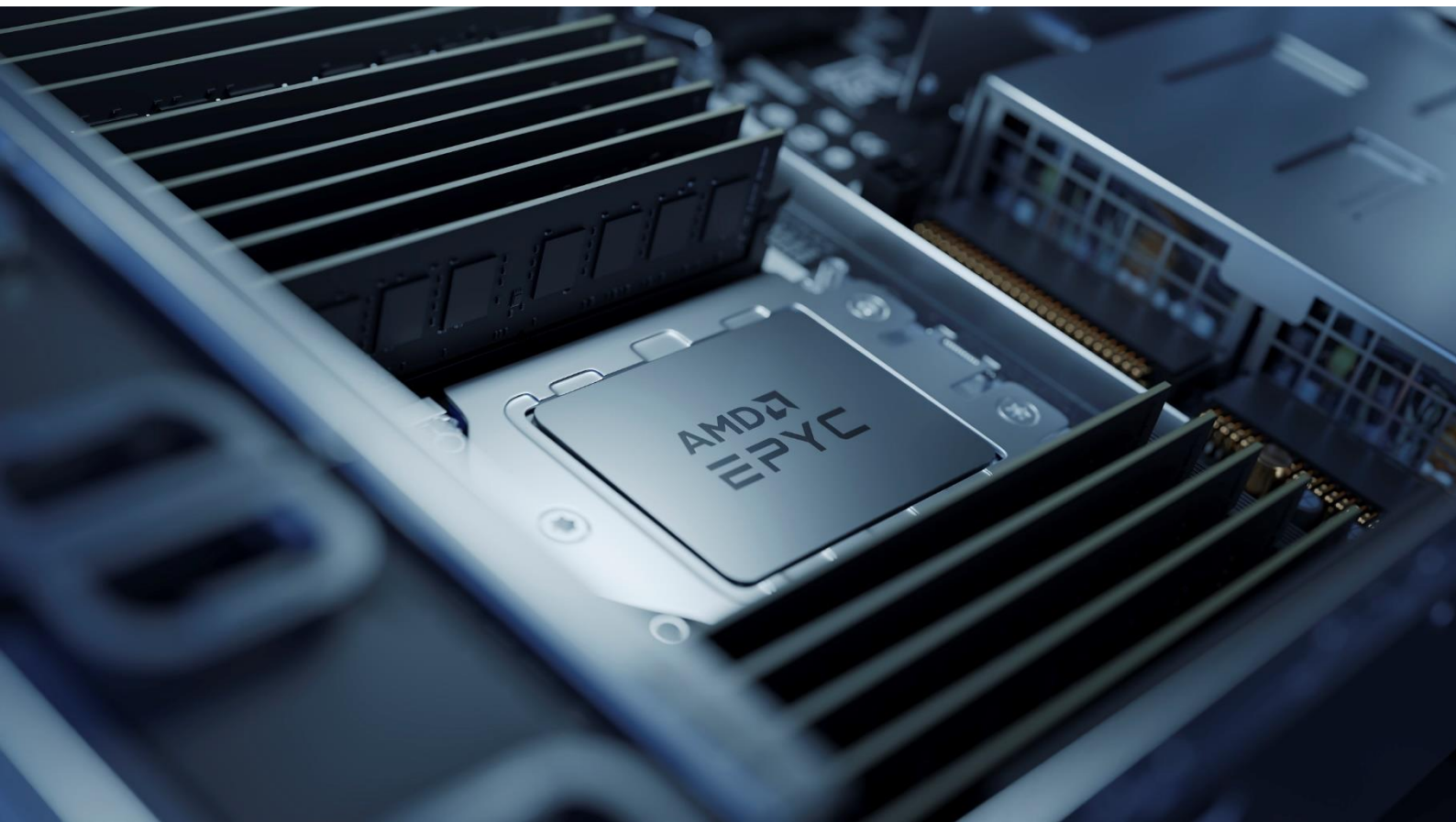


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# **AMD EPYC 7003**

## **(MILAN SERIES)**



**AMD** 

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

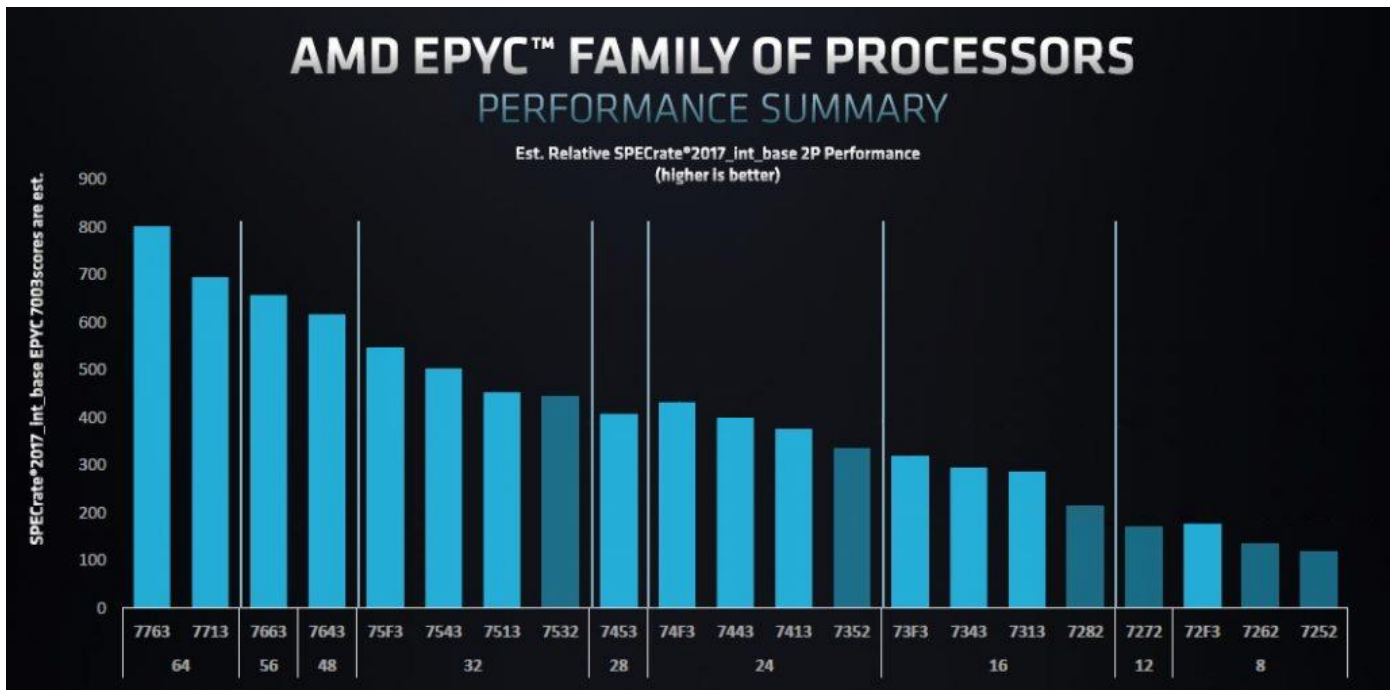


The integration of “Zen 3” core and AMD Infinity Architecture within the new AMD EPYC 7003 Series, has provided a full range of industry leading features across I/O, 7nm x86 CPU technology and a more integrated security processor.

#### 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.



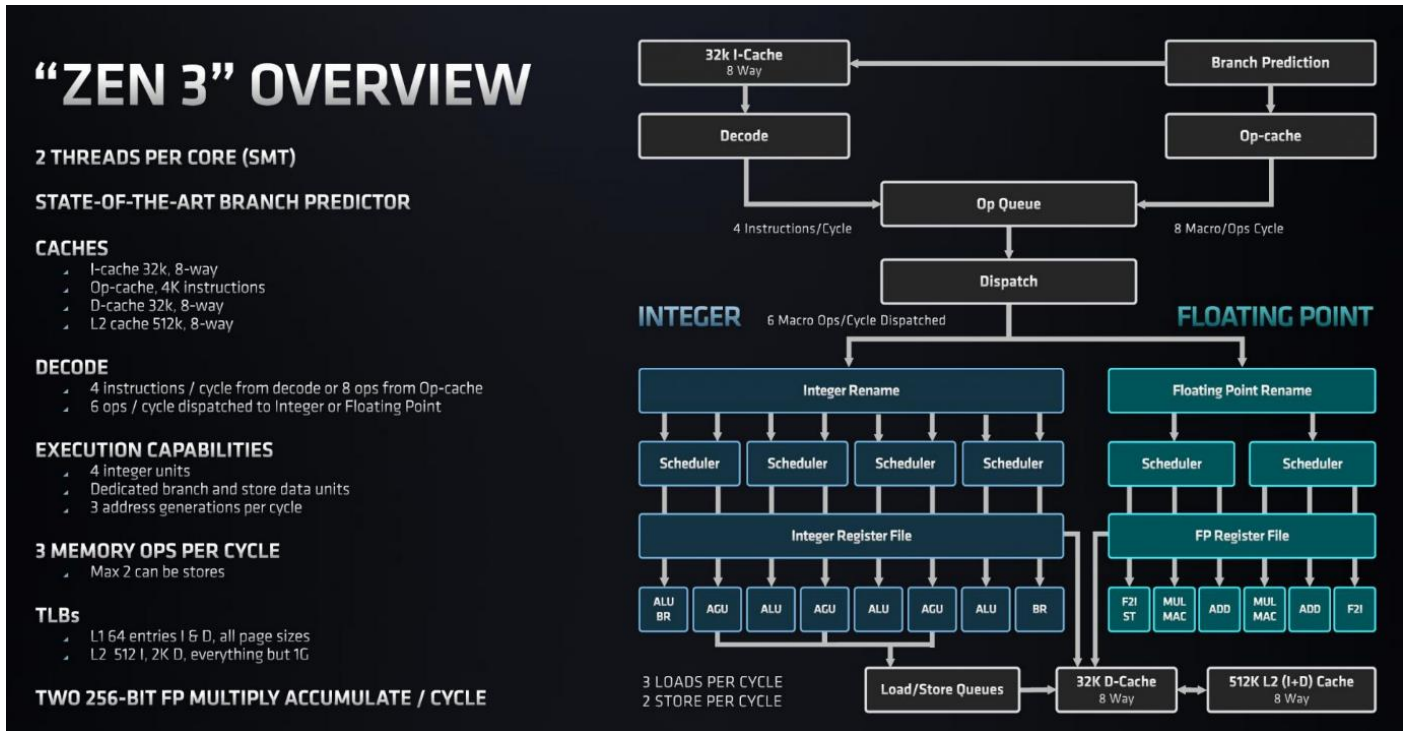
## AMD EPYC 7003 Comparison

The AMD Milan processors will provide up to 64 cores and 128 threads utilising the new Zen 3 cores. Similar to Rome, the processor is designed with eight chiplets of eight cores each, which are all connected, enabling a lower overall cache latency structure through an effective L3 cache design.

**From all AMD EPYC 7003 Series Processors you can expect:** 8 channels of DDR4-3200, 4TB memory capacity, 128 lanes PCIe 4, SMT & Turbo boost, 18G AMD Infinity Fabric, Secure Memory Encryption, Secure Encrypted Virtualisation, Synchronised fabric and memory clock speeds.

Overall, The EPYC 7003 series has similar TDP ranges, memory and PCIe support at many given core count than the older generation such as Rome, however providing higher performance, clock speeds and pricing. Therefore, clients should consider the new AMD EPYC 7003 series if they have a need for the best performance and clock speeds for their application.

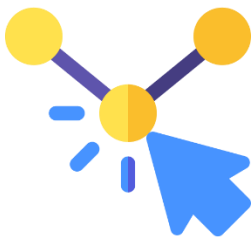
	EPYC 7001	EPYC 7002	EPYC 7003
<b>Name</b>	Naples	Rome	Milan
<b>Microarchitecture</b>	Zen	Zen 2	Zen 3
<b>Core Manufacturing</b>	14nm	7nm	7nm
<b>Max Cores/Threads</b>	32 / 64	64 / 128	64 / 128
<b>Core Complex</b>	4C + 8MB	4C + 16MB	8C + 32MB
<b>Memory Support</b>	8 x DDR4-2666	8 x DDR4-3200	8 x DDR4-3200
<b>Memory Capacity</b>	2 TB	4 TB	4TB
<b>PCIe</b>	3.0 X128	4.0 x128	4.0 x128
<b>Security</b>	SME/SEV	SME/SEV	SME/SEV/SNP
<b>Peak Power</b>	180W	240W	280W



## The New Zen 3 Architecture

AMD have introduced their new Zen 3 architecture to their EPYC 7003 series. These changes from Zen 2 to Zen 3 include: a larger L1 branch target buffer and multiple latency-reducing improvements throughout the core, a better design to improve bandwidth, the ability to perform 3 loads and 2 stores per cycle (compared to Zen 2’s 2L+1S design) a larger core complex and unified CCD resources.

## How AMD EPYC 7003 Can Benefit Your Application



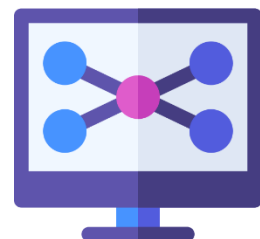
### For HPC Customers

AMD EPYC 7003 series processors enable faster time to discovery with more I/O and memory throughput and powerful Zen 3 cores that deliver up to twice the performance for HPC workloads.



### For Cloud Providers

With demand for compute density and security capabilities, the Milan series offers the highest core density, advanced security features and up to twice the performance.



### For Enterprises

The new processors increase transactional database processing by up to 19%, improve Hadoop big data analytic sorts by up to 60% and offer superior performance for flexible HCI, to support the new “Work from anywhere” environment.

## Our AMD EPYC Powered Portfolio



Introduced the AMD EPYC 7003 series processor through the new Supermicro A+ range of single and dual socket Ultra, FatTwin, SuperBlade, Storage and GPU Optimised systems.

[Read More](#)



Introduced the AMD EPYC 7003 series processor through the new ASUS range of single and dual socket All flash, GPU, balanced and performance systems.

[Read More](#)

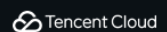
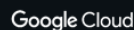
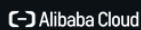
## AMD EPYC 7003 Compatibility

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### PLATFORMS



### INSTANCES



### SOLUTIONS



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## Our Partnership with AMD



AMD Technology offers a new generation of solutions that follows the philosophy of providing choice to customers. With the help of DiGiCOR, you can customise your own server and choose your AMD EPYC processor which can have from 8 to 64 cores, I/O memory can be selected regardless of the number of cores, and you can access 2 TB of high speed memory per socket across 8 memory channels.

- DiGiCOR partners with AMD to provide its embedded technology into our range of systems.
- We offer you flexibility in building your own server with the components that you choose highly compatible with 3rd generation AMD EPYC processors
- DiGiCOR provides limited warranty and services for each product to support you better with your choice.

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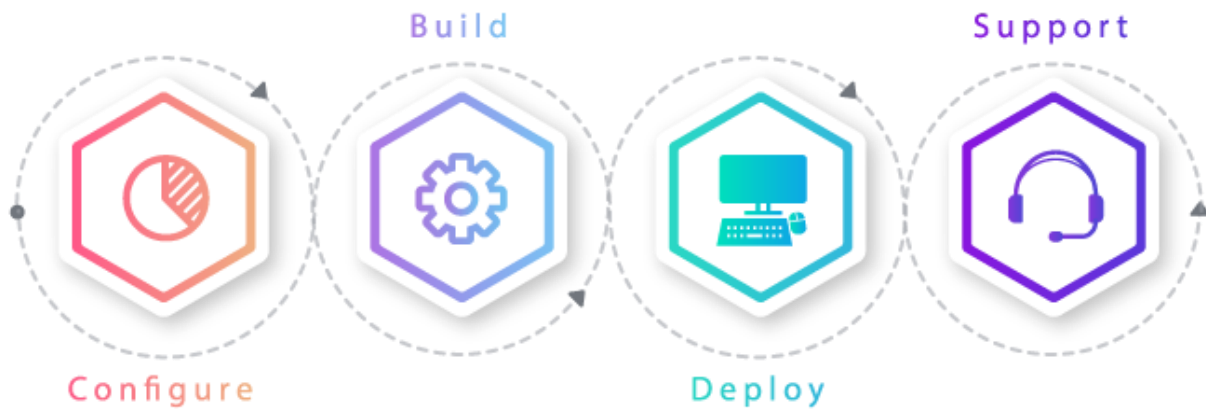
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- The smart configurator provides helpful prompts to ensure that any design is validated.

## 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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