EPIC PC

A partnership that accelerated game development

EPIC PC is a respected Australian computer company, formed and operated by a group of professional enthusiasts. It specializes in the manufacture and supply of technology products to professional markets and users, from servers and workstations to custom desktops and laptops. The company has successfully deployed its systems to multi-award-winning companies in creative industries, as well as tool manufacturers, global Internet of Things (IoT) technology groups and next-generation online game-developing teams.

The problem: A creativity bottleneck caused by under-powered rendering

A leading software-development firm was in the midst of creating a next-generation online adventure game. This endeavor relied heavily on CPU-driven rendering, with dozens of in-game characters requiring significant numbers of renders for every single adjustment. As its current system was struggling with the processing load, the company sought to build a 'render farm' to drive V-Ray® for 3ds Max, a production-proven, software-based rendering solution.

It was at this point the game developer commissioned to EPIC PC. It wanted a custom-built, CPU-based server that would contribute to a significant reduction in rendering time and accelerate the overall development speed.

The solution: A high-core-count CPU server from ASUS

EPIC PC has long worked in collaboration with ASUS on projects of this nature, so it had a thorough understanding and appreciation of our best-in-class designs for hardware and usability. It also had first-hand experience of the exceptional pre- and after-sales service and support offered by ASUS.

For these reasons, EPIC PC decided that ASUS was its first choice for this latest venture. Having identified the AMD EPYC™ platform as offering the highest core count and clock speed, EPIC PC reached out to ASUS. We recommended and later supplied **ASUS RS700A-E11-RS12U.** This is a 1U server that offers support for dual-socket AMD EPYC 7003 processors, along with up to 12 NVMe® slots, one dual-slot GPU, three PCI Express® (PCIe®) 4.0 slots, OCP 3.0, M.2, dual 10 Gbps Ethernet and a 1600-watt redundant PSU. It is also compatible with **ASUS ASMB10-iKVM**, an intelligent module for out-of-band server management.

RS700A-E11-RS12U is a mature product that offers performance presets in the BIOS to fit a wide variety of usage scenarios. ASUS technicians also supplied a qualified vendor list (QVL) for parts that had already been tested on the RS700A-E11-RS12U, ensuring no issues with compatibility. The server holds a slew of world records, including:

World's No.1 on V-Ray 5 Benchmark	World's No.1 on Cinebench R23 Multi Core 128x CPU rank	World's No.1 on Cinebench R23 Multi Core for dual EPYC 7763 processors	World's No. 2 on Cinebench R23 Multi Core for mix world rank
Score 109,248	Score 103,443	Score 103,443	Score 103,443

ASUS Performance Boost technology

ASUS servers feature exclusive Performance Boost technology to achieve the best server performance and agility by tuning servers to match the requirements of workloads, letting you gain greater control of your server environment.

This technology improves workload throughput by maximizing processor frequency and boost power. In the BIOS you can choose from pre-configured server profiles optimized for specific workloads, maximizing overall performance and reducing server-configuration time.

Personal and team best Cinebench - R23 Multi Core with BenchMate score

BEST OF	RANK	RESULT	NAME	FREQUENCY	HARDWARE	COOLING	POINTS
Team	1.	103443 cb	🇦🇺 EPIC PC AU OC CLUB	3560.2 MHz	2x AMD Epyc 7763		53.7 GTPP
User	1.	103443 cb	🇦🇺 epicpc	3560.2 MHz	2x AMD Epyc 7763		0 GP

Cinebench - R23 Multi Core with BenchMate CPU Worldwide Overall Ranking

Member ranking | Team ranking

RECALCULATE RANKING

	SCORE	USER	FREQUENCY		HARDWARE	COOLING	HW	GL
1.	105170 cb	🇺🇸 Splave	5225.9 MHz		AMD Ryzen Threadripper 3990X	LN2	2.9pts	0pts
2.	103443 cb	🇦🇺 epicpc	3560.2 MHz	2x	AMD Epyc 7763		2.5pts	0pts
3.	102349 cb	🇨🇳 思聪来王者象棋找东柠	4254.9 MHz		AMD Threadripper PRO 3995WX	Chilled	0pts	0pts
4.	100496 cb	🇬🇷 OGS	4950 MHz		AMD Ryzen Threadripper 3990X	LN2	1.7pts	0pts
5.	98256 cb	🇨🇳 haswelliris	3525 MHz	2x	AMD Epyc 7T83		2.5pts	0pts
6.	97305 cb	🇨🇳 rog-fisher	3560.4 MHz	2x	AMD Epyc 7763	Stock	1.5pts	0pts
7.	97305 cb	🇨🇳 象棋党晓阳	3525.1 MHz	2x	AMD Epyc 7T83		0.9pts	0pts
8.	97126 cb	🇨🇳 s1c0ng	3245.4 MHz	2x	AMD Epyc 7763		0.9pts	0pts
9.	92357 cb	🇮🇹 Mr_Boh	3325.4 MHz	2x	AMD Epyc 7H12		2.5pts	0pts
10.	91526 cb	🇺🇸 HyperBCS	3300 MHz	2x	AMD Epyc 7H12		1.5pts	0pts
11.	91200 cb	🇨🇭 OVIZ Hardware Lab	4375.4 MHz		AMD Ryzen Threadripper 3990X	AIO	0.9pts	0pts
12.	90866 cb	🇦🇺 scrankai	3293.9 MHz	2x	AMD Epyc 7H12		1.5pts	0pts
13.	85807 cb	🇨🇳 Brainstein	3300.3 MHz	2x	AMD Epyc 7H12		0.5pts	0pts
14.	84009 cb	🇨🇳 鸿叶666	4297.1 MHz		AMD Ryzen Threadripper 3990X	Stock	0.5pts	0pts
15.	83681 cb	🇺🇸 WalkInThe	4079.9 MHz		AMD Ryzen Threadripper 3990X		0.5pts	0pts
16.	82199 cb	🇬🇧 Leo Atreides	3455.4 MHz		AMD Ryzen Threadripper 3990X	Stock	2.5pts	0pts

The outcome: An ASUS-powered render farm that is 35X faster than its predecessor

To date, EPIC PC has deployed 10 RS700A-E11-RS12U units to its game-developer client. Each is specified with an AMD EPYC processor with 128 cores and 256 threads, delivering total compute power of 1280 core and 2560 threads. With the hands-on help of ASUS sales and support staff, all this was achieved in a very tight, 2.5-month timeframe – meeting the demands of EPIC PC's client.

As a result of this project, powered by ASUS hardware, the game-development firm is achieving rendering times that are nearly 35X faster than its previous system. This has significantly reduced rendering efforts, ensuring that the development teams are able to use their time efficiently, creating the broader game – and not being held up waiting for rendering tasks to complete.

And the EPIC PC partnership with ASUS is about to step up to the next level. For a upcoming project, EPIC PC has chosen to implement an **ASUS RS720A-E11-RS24U** dual-socket server, along with up to four NVIDIA A6000 GPUs – with the intention of building a GPU-based render farm for further applications. This server features up to 24 NVMe® slots, nine PCIe 4.0 slots, support for OCP 3.0 and a 2400-watt redundant PSU. It's also designed to accommodate a liquid-cooling solution.

"It was a great experience working with ASUS on this project," commented Tim Lan, Managing Director of EPIC PC "The ASUS team have been a great help sourcing the right equipment for this job, as well as supplying on schedule and delivering stellar support throughout."

What ASUS currently recommends

RS700A-E11-RS12U

AMD EPYC™ 7003 1U dual-socket server that supports up to 32 DIMM, one dual-slot GPU, 12 NVMe, 3 PCIe 4.0 slots, OCP 3.0 and M.2

RS720A-E11-RS24U

AMD EPYC™ 7003 2U dual-socket server that supports up to 32 DIMM, four dual-slot GPUs, 24 NVMe, nine PCIe 4.0 slots, OCP 3.0 and M.2

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