從核心到雲端 從碳中和到碳負排

Lenovo與AMD共築AI基礎設施

黃國柱 Andrew Huang 全球機架式伺服器 產品管理總經理 WW Rack Servers Product Management Director



FAGENDA

- ➤ Lenovo & ISG 簡介
- ➤ 從核心到雲端 AMD & AI 產品介紹
- > 從碳中和到碳負排 水冷方案介紹
- > Q&A

智能為一切可能

Lenovo 解決方案讓世界更美好

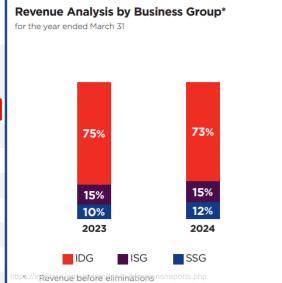
#196 2025 Fortune Global 500

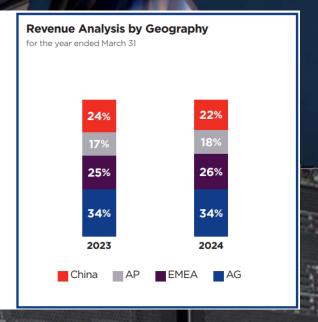
Lenovo Jumps 52 Spots on 'Fortune Global 500' List Following Strong FY2024/25 Performance

2024年全球前五大品牌個人電腦廠商出貨量、市佔率及年成長率

(出貨量單位為百萬台)

	2024 出貨量	2024 市佔率	2023出貨量	2023市佔率	2024/2023
品牌廠商					年成長率
1. Lenovo	61.8	23.5%	59.1	22.7%	4.7%
2. HP Inc.	53.0	20.2%	52.9	20.3%	0.1%
3. Dell Technologies	39.1	14.9%	40.0	15.4%	-2.2%
4. Apple	22.9	8.7%	21.9	8.4%	4.5%
5. Asus	17.9	6.8%	16.8	6.5%	6.4%
其他	68.0	25.9%	69.5	26.7%	-2.1%
總計	262.7	100.0%	260.2	100.0%	1.0%
來源: IDC Quarterly Personal Computing Device Tracker, January 9, 2025					







AMD Runs Best on Lenovo – ThinkSystem Portfolio

Powered by 4th and 5th Generation AMD EPYC[™] processors

Edge as a Location GPU-Rich Al System High Performance Computing

SE455 V3 ST45 V3 SR685a V3 SR685a V3 SD665 V3 SD665-N V3

General Purpose 1S and 2S



Hyper-Converged



High Density



SD535 V3

AMD ThinkSystem/ThinkAgile Performance Benchmarks

281 Current World Records on ThinkSystem & ThinkAgile

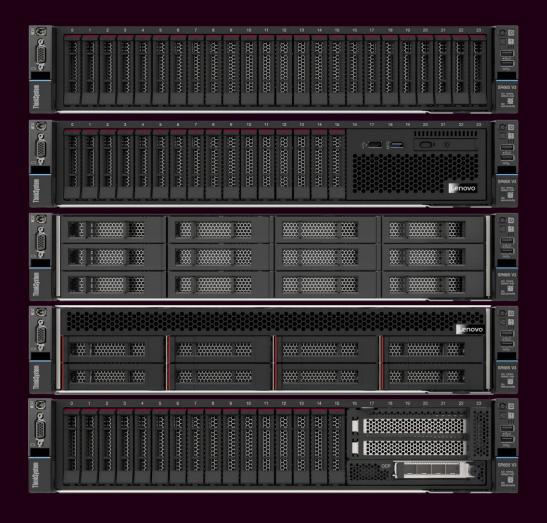
SAP	Transaction Processing & Decision Support	Virtualization	Compute	Energy Efficiency	Data Analytics	JAVA Application	High Performance Computing	Artificial Intelligence Computing
1	8	2	24	15	0	24	140	67
SD2T BWoH Q2C	TPC-E TPC-H	SPECvirt SPECvirt Datacenter VMmark	SPEC CPU	SPECpower SAP Q2C-Power	STAC-M3	SPECjbb	SPEC MPI SPEC OMP SPEC ACCEL SPEChpc	* MLPerf TPCx-Al

^{*} Note: Most Al benchmarks depend on accelerator (GPU) performance, not CPU performance. The Al WRs shown by CPU indicate the system type/generation used.



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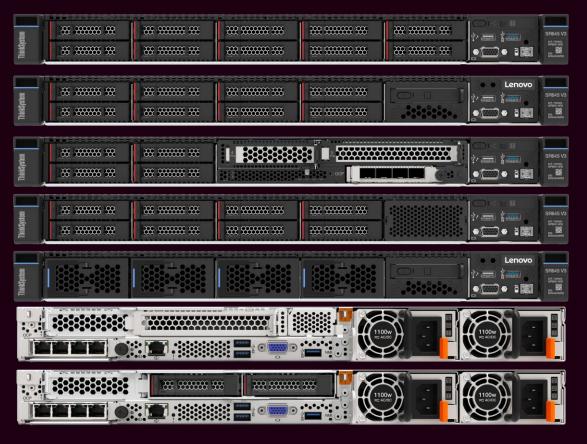
ThinkSystem SR665 V3



Product Name(s)	ThinkSystem SR665 V3	
Form Factor	2U rack server	
Processors	Up to 2x 4th or 5th Generation AMD EPYC™ Processors	
Memory	Up to 24x TruDDR5 memory slots Maximum 6TB using 256GB 3DS RDIMMs; up to 1DPC at 6400MHz	
Drive Bays	Up to 20x 3.5" or 40x 2.5" drives	
Expansion Slots	Up to 12x PCIe slots (9x PCIe 5.0) 1x OCP 3.0 adapter slot	
GPU	Up to 8x single-width LP GPUs or 3x double-width GPUs	
Network Interface	OCP 3.0 mezz adapter, PCIe adapters	
Power	Dual redundant PSUs Titanium/Platinum to meet ErP Lot 9 standard	
Ports	Front: 1x USB 3.0 G1, 1x USB 2.0, 1x VGA (optional) Rear: 3x USB 3.1 G1, 1x Ethernet Management port, 1x Serial COM Port(Option)+1x VGA Port	
System Management	Lenovo XClarity Controller	
OS Support	Microsoft Windows Server, SUSE Linux Enterprise Server, Red Hat Enterprise Linux, VMware ESXi	
Limited Warranty	1- and 3-year customer replaceable unit and onsite services, next business day 9x5; optional service upgrades	



ThinkSystem SR645 V3



Product Name(s)	ThinkSystem SR645 V3
Form Factor	1U rack server
Processors	Up to 2x 4th or 5th Generation AMD EPYC™ Processors
Memory	Up to 24x TruDDR5 memory slots Maximum 6TB with support for 3DS RDIMMs; up to 1DPC at 6400MHz
Drive Bays	Up to 4x 3.5", 12x 2.5" drives, or 16x EDSFF E1.S drives
Expansion Slots	Up to 3x PCIe 4.0, 2x PCIe 5.0 slots 1x OCP 3.0 adapter slot
GPU	Up to 4x single-width GPUs
Network Interface	OCP 3.0 mezz adapter, PCIe adapters
Power	Dual Redundant AC & DC Supplies with Titanium/Platinum for ErP Lot9 Compliance
Ports	Front: 1x USB 3.1 G1, 1x USB 2.0 with XCC connection for mobile device, 1x VGA (optional), Optional external Diagnostic Port Rear: 3x USB 3.1 G1, 1x VGA Port, 1x Serial port (optional), System ID LED, Error LED, NMI Button
Systems Management	Lenovo XClarity Controller
OS Support	Microsoft Windows Server, SUSE Linux Enterprise Server, Red Hat Enterprise Linux, VMware ESXi
Limited Warranty	1- and 3-year customer replaceable unit and onsite services, next business day 9x5; optional service upgrades



ThinkSystem SR675 V3

Scalable, GPU-rich Artificial Intelligence System

Targeted Workloads

- Al Training: Machine Learning & Deep Learning
- Visualization applications
- Real Time Natural Language Processing (NLP)
- Digital Twins & other large scale Omniverse[™] apps

Key Capabilities

- 2S 3U rack mount system with up to 8 full size GPUs
- Two 4th Gen or 5th Gen AMD EPYC[™] processors
- Supports NVIDIA Hopper, Lovelace and Ampere datacenter portfolio and AMD Instinct™ MI Series GPUs
- GPU Direct NVMe drives connect directly to GPUs for increased storage performance
- One model with four socketed H100s cooled with Neptune™ Liquid to Air (L2A) heat exchanger delivers the benefits of Neptune in an air-cooled system



5 PFLOPS

Al performance per rack

700+

HPC apps supported with NVIDIA® CUDA®

2-8X

Higher storage bandwidth with GPU Direct

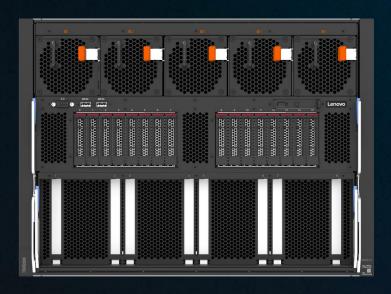
728

GPU instances per rack with NVIDIA Multi-Instance GPU (MIG)

**When comparing V3 vs V2

ThinkSystem SR685a V3

A 2-socket, 8U system built for AI performance with AMD processors and GPUs



Ideal for both AI and HPC

- <u>Industries:</u> Financial services, healthcare, energy, climate science, and transportation
- Al Workloads: Model development, training and retraining, Machine Learning, Deep Learning, LLMs
- HPC workloads: Modeling and simulation, rendering, financial tech, scientific research

Industry-leading 4th and 5th Gen AMD EPYC[™] processors

Performance:

- Maximum GPU Performance w/ AMD Instinct™ MI300x
- Fastest Interconnect for an ultra-fast transfer rate with AMD Infinity Fabric[™] at 896 GB/sec
- 3 TB Storage with 24x DDR5

Flexible

- Choice of AMD MI300X, NVIDIA H100 / H200/B100 GPUs
- Drop-in upgrade to AMD next-gen processor
- Easy to manage and simplified deployment with Lenovo XClarity System Management Software
- Fits into industry-standard 19-inch racks

Advanced Thermals

- Designed with additional thermal headroom to accommodate future, high powered, GPUs
- Advanced Air-Cooled Design

What is Lenovo TruScale Infrastructure as a Service

Lenovo TruScale Infrastructure as a Service (laaS) delivers the power and strategic advantage of the latest datacenter hardware through a pay-as-you-go business model with solutions for data management, hybrid cloud, HPC, VDI, and AI.

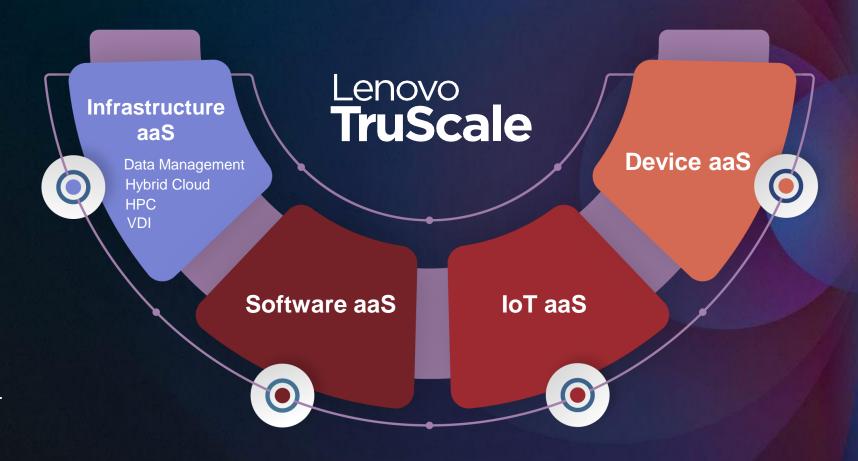
Industry's broadest portfolio from pocket to cloud delivered as a service.

Single unified framework to easily manage day-to-day IT operations with full visibility and accountability.

Global scale capability to rapidly and securely provision global teams – anytime, anywhere.

Flexible consumption models fixed or metered pay-as-you-go model that

fixed or metered pay-as-you-go model that frees-up capital with minimal up-front costs.



Smarter technology for all Smarter

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