

IBM Power S1024

Create business agility with a flexible and secure hybrid cloud infrastructure

Highlights

- Get on average 33% more performance per core compared to IBM Power S924
 - Co-locate workloads on fewer servers and increase system utilization with 2.5X more cores
 - Only pay for what you need with flexible consumption models
 - Active Memory Mirroring increases uptime and improves availability
 - Support for quantum-safe cryptography and fully-homomorphic encryption
 - 4 Matrix Math Accelerators per core for faster AI inferencing at the point of data
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The core applications, data stores and processes that run your business simply cannot go down, no matter what. With accelerated digital adoption, the demands on these applications are increasing, along with security risks. Your IT needs to be modernized to meet the challenges of today while staying ahead of your needs. This requires an infrastructure platform that efficiently scales to meet demand, protects your applications and data with pervasive and layered defense, and enables you to transform data into insights quickly.

IBM® Power® S1024 delivers on key enterprise needs:

- Respond faster to business demands with world record performance scalability for core enterprise workloads and frictionless hybrid cloud experience
- Protect data from core to cloud with accelerated encryption and new in-core defense against Return-Oriented Programming attacks
- Streamline insights and automation with in-core AI inferencing and machine learning
- Maximize reliability and availability with Open Memory Interface (OMI) attached memory DDIMMs



IBM Power S1024

The IBM Power S1024 is a 2-socket, 4U Power10 processor-based server designed for business-critical workloads on AIX, IBM i or Linux. With more than double the cores compared to Power9 processor-based servers, workloads can be consolidated on fewer systems, reducing software licensing, electrical, and cooling costs. Only pay for what you need and share resources across systems, including previous generation. Data is secured from end-to-end with memory encryption on the processor. Minimize downtime with industry-leading reliability and availability with Active Memory Mirroring.

Protect data from core to cloud:

With data residing in an increasingly distributed environment, you cannot set a perimeter to it anymore. This reinforces the need for layered security across IT stack. Power10 family of servers introduces a new layer of defense with transparent memory encryption. All data in memory remains encrypted when in transit between memory and processor. Since this capability is enabled at the silicon level, there is no additional management setup and performance impact. Power10 also includes 4X more crypto engines in every core compared to Power9 to accelerate encryption performance across the stack.

With these innovations along with new in-core defense for Return-Oriented Programming attacks and support for Post Quantum Encryption and Fully Homomorphic Encryption, IBM Power S1024 makes the server platform that is among the most secure even better.

Streamline insights and automation:

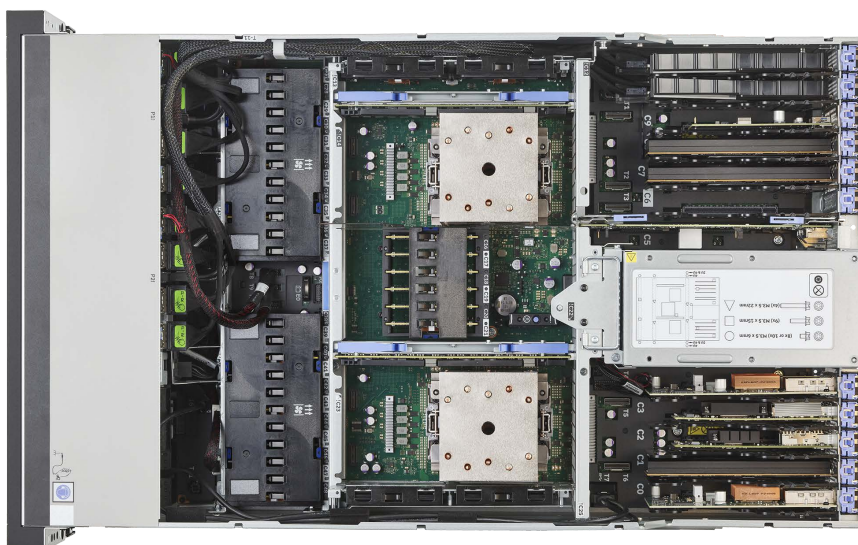
As more AI models are deployed in production, the challenges around the AI infrastructure are coming to the fore. The typical AI deployment involves sending data from an operational platform to a GPU system. This usually induces latency and may even increase security risks with more data in network. Power10 addresses this challenge with in-core AI inferencing and machine learning. The Matrix Math Accelerator (MMA) in Power10 core provides the computational strength (at multiple levels of precision) and data bandwidth to tackle demanding AI inferencing and machine learning.

Maximize reliability and availability:

With Power S1024 we are making the most reliable server platform in its class even better with advanced recovery, diagnostic capabilities, and Open Memory Interface (OMI) attached advance memory DDIMMs. The continuous operations of today's in-memory systems depend on memory reliability because of their large memory footprint. Power10 DDIMMs deliver 2X better memory reliability and availability than industry standard DIMMs. Increase uptime and improve availability even more by implementing Active Memory Mirroring.

	S1024 MTM: 9105-42A
Processor Module Offerings	12, 16, 24 Power10 Cores
Processor Interconnect	4x2B @ 32 Gbps
Memory Channels per System	32 OMI Channels
Memory Bandwidth per System (peak)	818 GB/s w/ 16, 32, 64GB DDIMM
DIMMs per System	32 DDIMMs
Memory Capacity per System (max)	8 TB (4Q22 GA)
Acceleration Ports	6 ports @ 25 Gbps
PCIe Lanes per System (max)	128 PCIe G4 lanes @ 16 Gbps
PCIe Slots per System	4 PCIe G4 x16 or G5 x8 slots 4 PCIe G5 x8 slots 2 PCIe G4 x8 slots
Slots for Internal Storage Cntrlr	General Purpose
Internal Storage	16 NVMe U.2
I/O Expansion Drawers (max)	2
Service Processor	Enterprise BMC (eBMC)
RAS	Active Memory Mirroring Support
Security	Main Memory Encryption

IBM Power S1024 at a glance



Why IBM?

Companies want IT infrastructure to help them be agile and flexible, efficient, and cyber resilient. IBM® Power® S1024 is designed to address these requirements and enables you to:

- Get on average 33% more performance per core compared to IBM Power S924
- Co-locate workloads on fewer servers and increase system utilization with 2.5X more cores
- Only pay for what you need with flexible consumption models
- Support for quantum-safe cryptography and fully-homomorphic encryption
- 4 Matrix Math Accelerators per core for faster AI inferencing at the point of data

Next steps

→[IBM Power S1024 product page](#)

For more information

To learn more about the IBM Power S1024, please contact your IBM representative or IBM Business Partner, or visit the [product page](#). Additionally, IBM provides numerous payment options to help you acquire the technology you need to grow your business. We provide full lifecycle management of IT products and services, from acquisition to disposition. For more information, visit IBM Global Financing.

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