IBM Power System S922

Future forward infrastructure for your mission critical data

Highlights

- IBM® Power Systems™ S922 server easily integrates into your organization's cloud & cognitive strategy and delivers superior price performance for your mission critical workloads.
- Gain insights faster from your data with up to 4 TB memory
- Designed for security, reliability and performance to face current and future security threats
- Live partition mobility capabilities help you migrating from previous Power Systems.
- Extend IBM i, a truly integrated operating system, and connect to the cognitive capabilities of the IBM Cloud using secure APIs
- Save on licensing cost with strongest per core performance in the industry

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IBM Power Systems S922 server easily integrates into your organization's cloud & cognitive strategy and delivers superior price performance for your mission critical workloads.

The next generation of IBM Power Systems, with POWER9™ technology, is built with innovations that deliver unprecedented security and reliability for data intense workloads of today's enterprises. POWER9 is designed from the ground up for data intensive workloads like Databases or Analytics. This new server generation comes along with twice the memory footprint than POWER8® making it an ideal platform for in-memory and data centric applications. Changes in the memory subsystem and the use of Industry Standard Memory DIMMs take POWER9 to the next level of price/performance leadership. Designed to run commercial, cognitive and database workload better than any other competitive Server Platform, customers are trusting POWER Servers as the robust and secure backbone of their IT infrastructure. Most of the Fortune 500 companies are using POWER technology in their IT infrastructure down from the shop level to large Datacenter deployments.

The IBM Power System S922 server (9009-22A) is a powerful 2-socket server that ships with up to 20 activated cores and I/O configuration flexibility to meet today's growth and tomorrow's processing needs. The server features:

- The following fully activated IBM POWER9 processor module configurations in a 19-inch rack-mount, 2U (EIA units) form factor.
  - 4-core Typical 2.8 to 3.8 GHz (max) POWER9 Processor
  - 8-core Typical 3.4 to 3.9 Ghz (max) POWER9 Processor
  - 10-core Typical 2.9 to 3.8 Ghz (max) POWER9 Processor

- Up to 4096 GB of DDR4 memory
- Storage backplane options:
  - Base Storage Backplane 8 SFF-3 Bays
  - Split feature to 4+4 SFF-3 Bays: Add a second SAS Controller
  - Expanded Function Storage Backplane 8 SFF-3 Bays/ Single IOA with Write Cache
- Optional PCIe3 NVMe carrier card with two M.2 module slots
- Expansion capabilities for the EXP12SX/EXP24SX SFF Gen2 bay Drawer
- Hot-plug PCIe Gen4 and Gen3 slots
- Integrated:
  - Service processor
  - EnergyScale technology
  - Hot-plug and redundant cooling
  - USB 3.0 ports
  - Two HMC ports
- One system port with RJ45 connector
- Two hot-plug, redundant power supplies
- 19-inch rack-mounting hardware (2U)

The new S922 – Large memory footprint of up to 4 TB in a dense form factor delivering highest security and reliability now Cloud enabled with integrated Virtualization capabilities

Power System S922 (9009-22A) at a glance	
System configurations	
Microprocessors	Up to 2x POWER9 CPUs 4, 8, 10 cores
Level 2 (L2) cache per core	512 K
Level 3 (L3) cache per core	10 MB
RAM (memory)	Up to 4 TB, from 32 DDR4 IS DIMM @ 2666, 2400, and 2133 Mhz
Internal disk storage	SFF bays, one integrated SAS controller without cache, and JBOD RAID 0, 5, 6, or 10 • Optionally, split the above SFF-3 bays and add a second integrated SAS controller without cache. • Expanded Function Storage Backplane 8 SFF-3 Bays/Single IOA with Write Cache. • Optionally, attach an EXP12SX/EXP24SX SAS HDD/SSD Expansion Drawer to the single IOA.
Processor-to-memory bandwidth	Up to 170 GB/s per socket, 340 GB/s per system
L2 to L3 cache bandwidth	7 TB/s on chip bandwidth
Adapter slots	• PCIe slots with single processor: – One x16 Gen4 low-profile, half-length slot (CAPI) – One x8 Gen4 low-profile, half-length slot (with x16 connector) (CAPI) – Two x8 Gen3 low-profile, half-length slots (with x16 connectors) – Two x8 Gen3 low-profile, half-length slots (one of these slots is used for the required base LAN adapter) • PCIe slots with two processors: – Three x16 Gen4 low-profile, half-length slots (CAPI) – Two x8 Gen4 low-profile, half-length slots (with x16 connectors) (CAPI) – Two x8 Gen3 low-profile, half-length slots (with x16 connectors) – Two x8 Gen3 low-profile, half-length slots (one of these slots is used for the required base LAN adapter)

Power System S922 (9009-22A) at a glance	
Integrated Standard features Adapter slots	• Service processor – EnergyScale technology – Hot-plug and redundant cooling – Two front USB 3.0 ports – Two rear USB 3.0 ports – Two HMC 1 GbE RJ45 ports – One system port with RJ45 connector – Two hot-plug, redundant power supplies – 19-inch rack-mounting hardware (2U) • one High Speed 25Gb/s per socket
Connectivity support (optional) I/O ports Standard features	• One front USB 3.0 ports – Two rear USB 3.0 ports – Two HMC 1 GbE RJ45 ports – One system port with RJ45 connector – 1x USB 3.0 front, 2x USB 3.0 rear, 2x HMC 1 GB Eth RJ45 ports, one system port with RJ45 connector, 2x High Speed 25 Gb/s ports
Advanced POWER Virtualization	PowerVM Enterprise integrated
RAS features	Processor instruction retry Selective dynamic firmware updates Chip kill memory ECC L2 cache, L3 cache Service processor with fault monitoring Hot-swappable disk bays Redundant cooling fans
Operating systems	AIX 7.2 TL2 AIX 7.2 TL0, TL1 (P8 Compatibility Mode) AIX 7.1 TL4, TL5 (P8 Compatibility Mode) AIX 6.1 TL9 (P7 Compatibility Mode) IBM i 7.3 TR4 IBM i 7.2 TR8 Ubuntu 16.04.4 LTS (P8 Compatibility Mode) RedHat RHEL 7.4 LE (P8 Compatibility Mode) SuSE SLES 11 SP4 (P8 Compatibility Mode) SuSE SLES 12 SP3
Power requirements	Operating voltage: 1400 W PSU: 200 - 240 V AC Operating frequency: 47/63 Hz
System dimensions	Width: 482 mm (18.97 in.) Depth: 766.5 mm (30.2 in.) Height: 86.7 mm (3.4 in.) Weight: 30.4 kg (67 lb)
Warranty	3-year limited warranty, CRU (customer replaceable unit) for all other units (varies by country) next business day 9am to 5pm (excluding holidays), warranty service upgrades and maintenance are available.

Why IBM?

IBM is leading the Cognitive and Cloud space—Integrated Cloud capabilities in POWER9 go in line with IBMs cloud strategy and enable to connect current enterprise data with Cloud based AI or Analytics offerings like Watson. IBM gives you best in class on premise Cloud deployment possibilities with this announcement in addition to the off-premise portfolio already maintained. And we're applying that innovation to cognitive infrastructure, helping our customers on their journey to AI.

IBM aligns cutting-edge innovation with enterprise dependability—IBM has over 105 years of aligning continuous innovation with our customers' business needs.

The POWER9 Scale Out family will be the first set of entry servers that will come completely cloud enabled out of the box with integrated PowerVM® Enterprise capabilities. Additional we introduce on chip Analytics and Algorithms helping customers running their workloads at an always optimized processor frequency for performance and throughput. In combination with the new memory footprint of 4TB IBM provides right now Systems to clients that are unmatched by competition in terms of memory scaling as well as core to memory ratio needed for data centric and in-memory workloads. Live partition mobility capabilities are built in, to cloud-enable your POWER9 infrastructure and help you migrate from previous Power Systems. Every new S922 also has the option of a temporary PowerVM license for your old server to support a seamless move of workloads to POWER9. The new S922 has built in security and is ready for current and future security threats.

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For more information

To learn more about the Power System S922 please contact your IBM representative or IBM Business Partner.

Additionally, IBM Global Financing 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.com**/financing

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