



---

## Highlights

- Designed for memory-intensive workloads
  - Allow clients the ability to consolidate their workloads and help to reduce the footprint in their data center
  - Gain insights faster from data with up to 4 TB memory
  - Easily integrates into the organization's cloud and cognitive strategy and delivers industry leading price performance for mission critical workloads.
  - Designed for security, reliability and performance to face current and future security threats
  - Live partition mobility capabilities help to migrate from previous Power Systems™
  - Save on licensing cost with strongest per core performance in the industry
- 

# IBM Power System H922

*Future-forward Infrastructure for your Mission Critical SAP HANA Workloads*

## IBM Power Systems H922

IBM® Power Systems H922 for SAP HANA® is designed for clients to gain the greatest benefit from their SAP HANA® environments. Optimized for in-memory workloads, these systems deliver increased performance as compared to the prior generation, while delivering virtualization and unmatched flexibility to help clients run multiple SAP HANA® production workloads concurrently including production and non-production (dev/test) in a single system. In addition, IBM Power Systems for SAP HANA® allow concurrently running virtualized SAP HANA® side-by-side with other Linux, AIX® or IBM i workloads. It is an infrastructure that supports today's mission-critical workloads and has the capabilities required to support new workloads of the future.

The H922 is based on the next generation of IBM Power Systems, with POWER9™ technology, which is built with innovations that deliver exceptional security and unprecedented 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 provides 33 percent more memory per socket than the latest generation x86 servers, making it an ideal platform for in-memory and data centric applications. 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.

The IBM Power System H922 server (9223-22S) 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 2.3 GHz
  - 8-core 3.0 GHz
  - 10-core 2.5 GHz



**IBM Power Systems**  
Data Sheet

- 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 H922 - Highest flexibility and reliability with exceptional security and best-in-class integrated Virtualization for SAP HANA® workloads*

---

**Power System H922 (9223-22S) 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 <ul style="list-style-type: none"> <li>• Optionally, split the above SFF-3 bays and add a second integrated SAS controller without cache.</li> <li>• Expanded Function Storage Backplane 8 SFF-3 Bays/Single IOA with Write Cache.</li> <li>• Optionally, attach an EXP12SX/EXP24SX SAS HDD/SSD Expansion Drawer to the single IOA.</li> </ul>
Processor-to-memory bandwidth	Up to 172 GB/s per socket, 344 GB/s per system
L2 to L3 cache bandwidth	7 TB/s on chip bandwidth
Adapter slots	PCIe slots with two processors: <ul style="list-style-type: none"> <li>– Three x16 Gen4 low-profile, half-length slots (CAPI)</li> <li>– Two x8 Gen4 low-profile, half-length slots (with x16 connectors) (CAPI)</li> <li>– Two x8 Gen4 low-profile, half-length slots (with x16 connectors)</li> <li>– <b>Four</b> x8 Gen4 low-profile, half-length slots (one of these slots is used for the required base LAN adapter)</li> </ul>

---

**Power System H922 (9223-22S) at a glance**

---

**System configurations**

<p>Integrated Standard Features Adapter slots</p>	<ul style="list-style-type: none"> <li>• Service processor <ul style="list-style-type: none"> <li>- EnergyScale technology</li> <li>- Hot-plug and redundant cooling</li> <li>- Two front USB 3.0 ports</li> <li>- Two rear USB 3.0 ports</li> <li>- Two HMC 1 GbE RJ45 ports</li> <li>- One system port with RJ45 connector</li> <li>- Two hot-plug, redundant power supplies</li> <li>- 19-inch rack-mounting hardware (2U)</li> </ul> </li> <li>• one High Speed 25 Gb/s per socket</li> </ul>
<p>Connectivity support (optional) I/O ports Standard features</p>	<ul style="list-style-type: none"> <li>• One front USB 3.0 ports <ul style="list-style-type: none"> <li>- Two rear USB 3.0 ports</li> <li>- Two HMC 1 GbE RJ45 ports</li> <li>- One system port with RJ45 connector</li> </ul> </li> </ul> <p>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</p>
<p>Advanced POWER Virtualization</p>	<p>PowerVM® integrated</p>
<p>RAS features</p>	<p>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</p>
<p>Operating systems</p>	<p>Primary:</p> <ul style="list-style-type: none"> <li>• SUSE Linux Enterprise Server 12 Service Pack 3</li> <li>• SUSE Linux Enterprise Server for SAP with SUSE Linux Enterprise Server 11 Service Pack 4</li> <li>• SUSE Linux Enterprise Server for SAP with SUSE Linux Enterprise Server 12 Service Pack 3</li> <li>• Red Hat Enterprise Linux 7 for Power LE, 7.4</li> <li>• Red Hat Enterprise Linux for SAP with Red Hat Enterprise Linux 7 for Power LE, 7.4</li> </ul> <p>Secondary: AIX and IBM i</p>
<p>Power requirements</p>	<p>Operating voltage: 1400 W PSU: 200 - 240 V AC Operating frequency: 47/63 Hz</p>
<p>System dimensions</p>	<p>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)</p>
<p>Warranty</p>	<p>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.</p>

## Why IBM?

With IBM's cutting-edge innovation with enterprise dependability, a roadmap designed for big data and in memory workloads, as well as a trusted and differentiated infrastructure built for the future, IBM is a partner to rely on to support your future business demands. IBM's strong 40+ year partnership with SAP delivers continuous alignment on roadmaps and offerings. IBM Power Systems' advantage combines the highest flexibility and reliability with exceptional security and best-in-class integrated Virtualization for SAP HANA® workloads.

## For more information

To learn more about the Power System H922 please contact your IBM representative or IBM Business Partner, or visit the following website: [ibm.com/us-en/marketplace/small-enterprise-servers-hana](https://ibm.com/us-en/marketplace/small-enterprise-servers-hana)

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](https://ibm.com/financing)

IBM Systems Lab Services can provide on-site professional services to help clients build their SAP HANA® solutions using a tailored data center infrastructure strategy. For more information on Lab Services offerings, clients should contact their IBM representative or go to the [Lab Services Power Systems](#) website.



---

© Copyright IBM Corporation 2020

IBM Systems  
New Orchard Road  
Armonk, NY 10504

Produced in the United States of America  
October 2020

IBM, the IBM logo, ibm.com, Power Systems, and POWER are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at [ibm.com/legal/copytrade.shtml](https://ibm.com/legal/copytrade.shtml)

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

SAP HANA® is a registered trademark of SAP SE in Germany and in several other countries.

NVIDIA, NVIDIA Volta, NVIDIA NVLink are trademarks of NVIDIA Corporation in the United States, other countries, or both.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

Actual available storage capacity may be reported for both uncompressed and compressed data and will vary and may be less than stated.



Please Recycle

---