IBM Power System S812

Application server for small businesses and scale-out deployments

Highlights

- A foundation to core workloads in small footprints

- Very competitive price point

- Right fit for small businesses and scale-out deployments.

- The new entry model into the Power family

- Build for IBM i and AIX® workloads

- Energy efficient and easy to manage

New innovation brings faster insight to the point of impact for today's data hungry applications

Built with innovation that puts data to work, IBM® Power Systems™ deliver the foundation for organizations to bring insight to the point of impact 2x faster. These first generation systems push the physical and virtual boundaries of data center technology with innovation designed to drive faster and more efficient data-centric applications required for today's smarter enterprise.

With new innovations, Power Systems provide the ability to:

- Gain faster insights with the POWER8® processor and smart acceleration enabled by CAPI technologies such as accelerators for key workloads
- Achieve lower latency and smaller footprint with CAPI Flash
- Move data in and out of systems more quickly with twice the memory and I/O expansion
- Achieve greater speed and efficiency for database, transactional and other highly multi-threaded applications with transactional memory supported by 50 percent more cores and 2x the number of simultaneous threads per core

Designed and optimized for big data and analytics

Businesses are amassing a wealth of data. Power Systems, built with innovation that puts data to work, can scale to support growing workloads and help businesses find business insights faster. Power Systems are designed for big data. From operational business intelligence and data warehouses to predictive analytics solutions, Power servers are optimized for the compute intensive performance demands of database and analytics applications. They can flexibly scale to support the demands of rapidly growing data for mid-market businesses.

Delivering open innovation

With an architecture at the heart of the open server development community and the OpenPOWER Foundation, Power Systems' open technology platform presents a world of community created innovation, applications and technology components to deliver a broader set of applications and new technologies quickly. Leveraging open standards, Power Systems provides developers with tools tuned for a platform that boosts productivity and performance by removing

constraints imposed by commodity architecture. With continuous innovation built into the platform, Power Systems will enable future integrated hardware solutions that dramatically accelerate compute and data-intensive tasks.

IBM Power System S812

The Power System S812 server brings robust and solid business transaction processing with proven infrastructure for AIX and IBM i operating system environments. The S812 is a 1-socket, 2U system designed to meet compute demands of larger deployments, for example, in retail space and as an entry point for non-compute-intense workloads that require high reliability and stability. This 1-socket system can be ordered with one core for IBM i (up to 25 users) and up to four cores for AIX. The S812 provides the benefits of great performance per core and per socket, utilizing the POWER8 processor. It also provides resilient I/O capabilities, internal storage, and hot-plug PCI capabilities, along with greater reliability, availability, and serviceability.

IBM Power System S812 at a glance	
System configurations	8284-21A
Processor and Memory	
Microprocessors	1-core: POWER8 3 GHz 4-core: POWER8 3 GHz
Level 2 (L2) cache	512 KB L2 cache per core
Level 3 (L3) cache	8 MB L3 cache per core
Level 4 (L4) cache	16 MB per DIMM
1600 MHz DDR4 Memory Min/Max	1-core: 16 / 64 GB 4-core: 16 / 128 GB
Processor-to-memory bandwidth	Up to 192 GBps
Processor or I/O virtualization: None in S812, see S814 or S822 if needed. One partition per S812	

IBM Power System S812 at a glance

Storage and I/O

Backplane SAS controller options in system unit	Three: a) dual controllers with effectively up to 7.2 GB write cache b) single controller with no write cache or c) two controllers with no write cache (split back plane) RAID 0,5, 6,10 capability on all three options.
Disk or SSD in system unit	1-core: up to 8 4-core: up to 8 with write cache controllers or up to 12 with zero cache controllers
Easy Tier function in backplane	1-core: n/a 4-core: optional with write cache controllers.
Media bays	One slimline DVD
Adapter slots	Six PCIe Gen3 slots with concurrent maintenance: two x16 plus four PCIe Gen3 x8 One PCIe slot used to hold an Ethernet LAN adapter which is available for client use
I/O bandwidth	Up to 96 GBps

Expansion features (Optional)

Max PCIe Gen3 I/O drawer	0 (See Power S814/ S822 if required)
Max SAS Storage Enclosures	0 (1-core), up to 3 (4-core)

Power, RAS, system software, physical characteristics and warranty

Redundant power supplies	Single phase, 100-120V or 200-240 V
RAS features	Processor instruction retry Alternate processor recovery Selective dynamic firmware updates Chipkill memory Error correcting code (ECC) L2 cache, L3 cache Service processor with fault monitoring Hot-swappable disk bays Hot-plug concurrent maintenance PCIe slots Hot-plug and redundant power supplies and cooling fans Dynamic processor deallocation Extended error handling on PCI slots
Operating systems	AIX (4-core) or IBM i (1-core)
System dimensions	427.5 W x 86.5 H x 747.5 D mm
Warranty	3 year limited warranty, on site for selected components; CRU (customer replaceable unit) for all other units (varies by country), next business day 9x5 (excluding holidays), warranty service upgrades and maintenance are available.

Why IBM?

More than 2700 companies have moved to IBM since the beginning of 2010 from competitive UNIX platforms because we understand your requirement to maximize IT investments while reducing complexity, risk and costs. Power Systems performance can enable you to get work done with fewer and/or smaller systems. This advantage can help you to reduce the total cost of ownership with savings in software costs for products licensed by the core, energy costs, floor space, and other operational costs.

IBM offers a portfolio of integration, configuration and customization services for POWER8 based servers running IBM i, AIX or Linux. These Deployment-ready Services are designed to accelerate solution deployment and reduce resources and cost related solution deployment. You can take advantage of proven industry expertise in product assembly, testing and integration at an IBM location prior to install. Power Systems Deployment-ready Services are designed to let you focus on meeting business goals rather than solution deployment.

For more information

To learn more about the IBM Power System S812, please contact your IBM representative or IBM Business Partner, or visit the following website: **ibm.com**/systems/power/hardware/s812/

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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