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## Highlights

- Consolidation of UNIX, IBM i and Linux workloads and ideal for virtualized application servers
  - Analytics application and small to mid-size Database can run on the same server
  - Gain faster insights with the IBM® POWER8™ processor and smart acceleration enabled by Coherent Accelerator Processor Interface (CAPI) technologies
  - Reduce energy consumption utilizing advanced energy control
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# IBM Power System S824

*Open Technology Server for faster insights from data*

## Power Systems: Innovation to put data to work New innovation brings faster insight to the point of impact for today's data hungry applications

Built with innovation that puts data to work, 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 (Coherent Accelerator Processor Interface) technologies such as FPGA 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 and 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 and can flexibly scale to support the demands of rapidly growing data for mid-market businesses.

### Delivering open innovation by revolutionizing the way IT is developed and delivered

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 S824

IBM newest Power S824 server for existing customers is designed to put data to work. With a strong commitment to optimizing AIX and IBM i workloads, these new systems deliver better the performance of our prior generation of systems and additionally offer unmatched price/performance value for integrated Linux applications.

IBM Power Systems based 1 & 2 socket servers provide the ideal foundation for private and public cloud infrastructure. The new Power S824 server based on POWER8 processors deliver superior throughput of Intel based offerings for comparable workloads and provide superior economics for scale-out deployments. For customers looking to deploy advanced analytics, Power can now deliver superior response time for sorting and querying unstructured big data sets and deliver superior number of business reports per hour for typical business analytics over competing solutions built on x86.

**IBM Systems**  
**Data Sheet**

**Power System S824 at a glance**

System configurations	Model 8286-42A
<b>Processor and Memory</b>	
Microprocessors	One or Two 6-core 3.89 GHz POWER8 processor cards or One or Two 8-core 4.15 GHz POWER8 processor cards or Two 12-core 3.52 GHz POWER8 processor cards
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
Memory Min/Max	16 GB, 32 GB, 64 GB and 128 GB 1600 MHz DDR3 module, 32 to 1 TB (1S) 32 to 2 TB (2S) Active Memory Sharing
Processor-to-memory bandwidth	192 GBps per socket
<b>Storage and I/O</b>	
Standard backplane	12 small form factor (SFF) bays for Hard Disk Drive (HDD)/Solid State Disk (SSD)
With dual IOA higher function backplane	18 SFF bays for HDD/SSD plus 8 1.8-inch bays for SSD
Media bays	One slim line DVD
Integrated SAS Controller	Standard RAID 0,5,6,10. Optional: 7200 MB <sup>†</sup> cache & Easy Tier function
Adapter slots	Included one x8 PCIe slots must contain a 4-port 1 Gb Ethernet LAN available for client use Eleven PCIe Gen3 slots with concurrent maintenance: four x16 plus seven PCIe Gen3 x 8 Two CAPI adapters per processor module
I/O Bandwidth	96 GBps per socket
<b>Expansion features (Optional)</b>	
Max PCIe Gen3 I/O drawer	2
<b>Power, RAS, system software and physical characteristics and warranty</b>	
Power supply	100 V to 240 V
RAS features	Processor instruction retry Alternate processor recovery Selective dynamic firmware updates Chip kill 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, IBM i and Linux on POWER
System dimensions	427.5 W x 173 H x 750.5 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.

## For more information

To learn more about the IBM Power System S824, please contact your IBM representative or IBM Business Partner, or visit the following website:

[ibm.com/systems/power/hardware/s824/index.html](http://ibm.com/systems/power/hardware/s824/index.html)

For more information on hardware maintenance, software support, solution support and managed support, visit:

[ibm.com/services/maintenance](http://ibm.com/services/maintenance)

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IBM Systems  
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Produced in the United States of America  
April 2015

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Statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

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

\* See facts and features document for detailed OS level support.

† 1.8 GB write cache with compression up to 7.2 GB effective



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