

# IBM Power System S822LC high performance computing

*Accelerate your analysis of big data and deliver  
waitless results fast*



---

## Highlights

- Drive competitive advantage by gaining insights from the data high performance computing customers create
  - Maximize the value of high performance computing customers' software investment
  - Increase server and workload density and reduce floor space requirements
  - Take advantage of our strong innovation roadmap for GPUs
- 

It is no secret at this point that disruptive trends in technology are rapidly remaking how organizations do business. Technology is advancing so rapidly, in fact, that dynamic communities of collaboration are forming just to harness it all. The growing torrent of data—from within and outside your organization, mobile employees, and customers and prospects—presents an unprecedented opportunity to gain valuable insights and apply these insights at the best point of impact to improve your business results.

Making the transition to advanced capabilities requires an integrated infrastructure that supports your key IT initiatives. Our investments to bring new optimized solutions in the area of advanced analytics, cloud and mobile access are designed to simplify and accelerate your journey to address today's market opportunities.

The next generation of IBM® Power Systems™, with IBM POWER8® technology, is the first family of systems built with innovations that transform the power of big data and analytics, mobile and cloud into competitive advantages in ways never before possible. Our new scale-out systems provide a powerful, scalable and economical means of putting data to work for you.



## The waitless world demands open innovation

Power Systems are designed for big data and deliver the performance and throughput of POWER8 combined with the cost optimization of industry standardization—all without the wait.

### Designed for the demands of big data and analytics

Businesses are amassing a wealth of data and Power Systems can store it, help secure it and, most importantly, extract actionable insight from it in a timeframe that matters. Power Systems are designed for big data. From predictive analytics and data warehouses to unstructured big data processing and cognitive IBM Watson™ 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.

### IBM Power System S822LC

Built on industry standards and incorporating community innovation from the OpenPOWER Foundation, the Power S822LC delivers high application performance and throughput based on its built-for-big-data architecture incorporating POWER8 processors, tightly coupled FPGAs and accelerators, and faster I/O using CAPI. Ideal for clients that need more processing power while simultaneously increasing workload density and reducing datacenter floor space requirements, the Power S822LC offers a modular design to scale from a single rack to hundreds, simplicity of ordering, and a strong innovation roadmap for GPUs.



### Why IBM?

IBM is honored to be recognized by readers of the Linux Journal as the winner of the “Best Linux Server Vendor” category in the 2013 Readers’ Choice Awards. This recognition demonstrates the value of IBM’s continued commitment to industry-leading collaboration and revolutionary technology.

Recently, IBM announced a new USD 3 billion research and development investment to create the next generation of chip technologies that will fuel the systems required for cloud, big data and cognitive computing. More specifically, these new materials include carbon nanotubes, graphene and nanophotonics to create system features at seven nanometers and beyond.

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

---

**Power System S822LC high performance computing at a glance**

---

System configurations	Model 8335-GTA
-----------------------	----------------

**Processor and Memory**

Microprocessors	Two 8-core 3.32 GHz POWER8 processor card or two 10-core 2.92 GHz POWER8 processor card
Level 2 (L2) cache	512 KB L2 cache per core
Level 3 (L3) cache	8 MB L3 cache per core
Level 4 (L4) cache	Up to 64 MB per socket
Memory Min/Max	4 GB, 8 GB, 16 GB and 32 GB 1333 MHz DDR3 module, 128 GB, 256 GB, 512 GB and 1 TB only
Processor-to-memory bandwidth	115 GBpsec per socket, 230 GBpsec per system (Max sustained memory bandwidth to L4 cache from SCM) 170 GBpsec per socket, 340 GBpsec per system (Max peak memory bandwidth to DIMMs from L4 cache)

**Storage and I/O**

Standard backplane	2 small form factor (SFF) bays for hard disk drives or solid state disks (SSDs)
Media bays	n/a
RAID option	Hardware RAID comes from integrated PCIe adapter
Adapter slots	Five PCIe Gen3 slots: two x16 support GPU, one x16 and two x8 PCIe Gen3 Two NVIDIA GPUs are available
I/O Bandwidth	64 GBps

**Power, RAS, system software and physical characteristics and warranty**

Power supply	200 V to 240 V
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*	Linux on POWER
System dimensions	441.5 W x 86 H x 822 D mm
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.

## For more information

To learn more about the IBM Power System S822LC high performance computing, please contact your IBM marketing representative or IBM Business Partner, or visit the following website:

[ibm.com/marketplace/cloud/high-performance-computing/us/en-us](http://ibm.com/marketplace/cloud/high-performance-computing/us/en-us)

Additionally, IBM Global Financing can help you acquire the IT solutions that your business needs in the most cost-effective and strategic way possible. For credit-qualified clients we can customize an IT financing solution to suit your business requirements, enable effective cash management, and improve your total cost of ownership. IBM Global Financing is your smartest choice to fund critical IT investments and propel your business forward. For more information, visit:

[ibm.com/financing](http://ibm.com/financing)



---

© Copyright IBM Corporation 2015

IBM Systems  
Route 100  
Somers, NY 10589

Produced in the United States of America  
October 2015

IBM, the IBM logo, ibm.com, Power Systems, POWER8, Power, and Watson 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](http://ibm.com/legal/copytrade.shtml)

Linux is a registered trademark of Linus Torvalds 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 discussed herein is presented as derived under specific operating conditions. Actual results may vary.

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.

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.



Please Recycle