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
- Maximise 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 Graphics Processing Units (GPUs).

It is no secret at this point that disruptive trends in technology are rapidly remaking how organisations 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 organisation, 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 optimised 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 optimisation of industry standardisation – 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 optimised 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 as well as faster Input/Output (I/O) using CAPI. Ideal for clients that need more processing power while simultaneously increasing workload density and reducing Data Centre (DC) 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 honoured to be recognised 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 leading-edge 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 nanometres and beyond.

Power System S822LC high performance computing at a glance	
System configurations	Model 8335-GTA
Processor and Memory	
Microprocessors	Two 8-core 3.32 Gigahertz (GHz) POWER8 processor card or two 10-core 2.92 GHz POWER8 processor card
Level 2 (L2) cache	512 Kilobyte (KB) L2 cache per core
Level 3 (L3) cache	8 Megabyte (MB) L3 cache per core
Level 4 (L4) cache	Up to 64 MB per socket
Memory Min/Max	4 Gigabyte (GB), 8 GB, 16 GB and 32 GB 1333 Megahertz (MHz) Double Data Rate 3 (DDR3) module, 128 GB, 256 GB, 512 GB and 1 Terabyte (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 Input/Output (I/O)	
Standard backplane	2 Small Form Factor (SFF) bays for Hard Disk Drives or Solid State Disks (SSDs)
Media bays	n/a
Redundant Array of Independent Disks (RAID) option	Hardware RAID comes from integrated Peripheral Component Interconnect Express (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, Reliability, Availability and Serviceability (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 (OS)*	Linux on POWER
System dimensions	441.5 W x 86 H x 822 D mm
Warranty	3 year limited warranty, Customer Replaceable Unit (CRU) 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 (BP), or visit the following website:
ibm.com/marketplace/cloud/high-performance-computing/us/en-us

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

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