



Highlights

- Reliable, secure distributed application server or consolidation server that is designed to handle today's compute-intensive combination of business transactions along with social and mobile activity for UNIX, IBM i and Linux operating environments
 - IBM i delivers a highly scalable and virus-resistant architecture with a stable database and middleware foundation for efficiently deploying business processing applications
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IBM Power 720 Express server

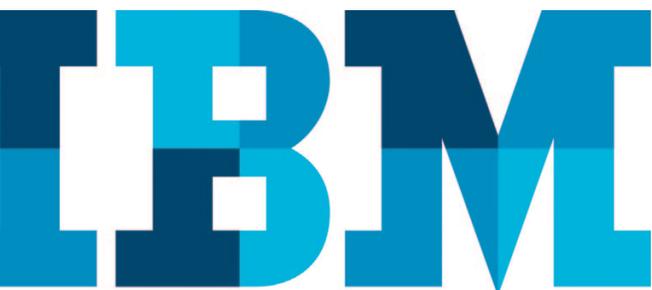
Reliable, secure, and flexible 4U rack or tower server ideal for midsized business solutions

Everyone knows what “performance” meant for IT in the past. Built on the foundation of POWER7® processor technology, our Power Systems Express servers continue to excel and extend industry leadership in the traditional benchmarks of performance.

But today we are in the midst of an important technology shift driving growth and innovation – built on the confluence of big data, cloud, mobile devices and social business. As processes become more interrelated and complex, IT is being called upon to solve challenging new problems—and implement new IT projects, delivering them with both higher service levels and in a more cost effective manner. This era presents a defining moment for IT organizations to reshape the value they deliver through the customer experience.

The emerging measures of IT performance today are around agility and the ability to help the business capitalize on new opportunities. IT is measured on providing an infrastructure that can handle rapid growth and manage business risk while meeting higher required service levels. And of course it is expected that new services will be delivered with tighter budget constraints—with IT expected to do more with less and find the lowest cost solutions possible.

Like many companies, you may be facing the challenge of an overly complex IT environment. As your business grows, your computing needs increase. Implementing and managing new applications can mean adding more servers, which increases spending and staffing requirements. Now more than ever, you need a system that can help you become more responsive to your customers, improve productivity, operate without interruption and secure your data and systems—all without making large



upfront investments in time, skills or money. You need a business system that is there when you need it and grows with your business. A system that can be tomorrow-ready today, with the infrastructure that will allow you to master big data, social, mobile, analytics and the flow of critical information.

As a distributed application server, the IBM® Power® 720 Express is designed with capabilities to deliver leading-edge application availability and enable more work to be processed with less operational disruption for branch office and in-store applications. As a consolidation server, PowerVM™ Editions provide the flexibility to use leading-edge AIX®, IBM i, Linux, and x86 Linux applications and offer comprehensive virtualization technologies designed to aggregate and manage resources while helping to simplify and optimize your IT infrastructure and deliver one of the most cost-efficient solutions for UNIX, IBM i and Linux deployments.

The Power 720 Express with IBM i provides a technology foundation with proven reliability and security for the small or midsized company seeking a complete, integrated business system. The Power 720 allows you to avoid increased spending and staffing requirements while becoming more responsive to your customers, improving productivity and keeping data secure. IBM i integrates features to simplify your IT environment and delivers a complete, cost-effective business system that can grow with a business. And the Power 720 delivers the performance and capacity to run new and existing core business applications on a single server, to greatly integrate and simplify your IT environment.

Learn why so many clients are moving to IBM Power Systems™. Reliable and secure, the Power 720 Express is a one-socket server that supports up to eight POWER7+™ cores in a flexible 4U rack-optimized or tower form factor. The performance, availability, and flexibility of the Power 720 can enable you to focus on running your business, utilizing a proven solution from thousands of ISVs that support the AIX, IBM i and Linux operating systems.



Power 720 Express tower and rack-mount servers

Power is the performance that delivers business advantage

The leadership performance of the POWER7+ processor makes it possible for applications to run faster with fewer processors, resulting in lower per core software licensing costs. In addition, a single system can now run more applications and reduce the number of required servers, lowering infrastructure costs. The latest model of the Power 720 Express adds increased memory capacity, higher performance POWER7+ processors, and additional high bandwidth Generation 2 PCI-Express slots to provide even greater performance capabilities.

Power is a secure and auditable system

Security has become a major concern for all IT shops. Not only do the business systems need to be secure, the business needs the ability to know that they are secure. The Power 720 can utilize PowerSC to provide a security and compliance solution to protect data centers virtualized with PowerVM. PowerSC simplifies management by automating monitoring and providing immediate visibility to administrators when compliance profiles are altered.

Power is availability you can count on

The Power 720 Express is designed with capabilities to deliver leading-edge application availability and allow more work to be processed with less operational disruption. RAS capabilities include recovery from intermittent errors or failover to redundant components, detection and reporting of failures and impending failures, and self-healing hardware that automatically initiates actions to effect error correction, repair or component replacement. In addition, the Processor Instruction Retry feature provides for the continuous monitoring of processor status with the capability to restart a processor if certain errors are detected. If required, workloads are redirected to alternate processors, all without disruption to application execution.

The Power 720 Express implements Light Path diagnostics, which provide an obvious and intuitive means to positively identify failing components. This allows your system engineers and administrators to easily and quickly diagnose hardware problems. Hardware failures that may have taken hours to locate and diagnose can now be detected in minutes, avoiding or significantly reducing costly down time.

Power is effortlessly balancing workload performance

POWER7+ Intelligent Threads technology enables workload optimization by automatically switching between one, two and four execution threads per processor core in order to optimize application throughput. In addition, the POWER7+ technology further enhances Active Memory™ Expansion to enable the effective maximum memory capacity to be much larger than the true physical memory without the complexity and cost of installing additional memory devices. These workload-optimizing capabilities can improve application performance return on investment from the server.

Power is dynamic energy optimization

EnergyScale™ Technology offers Intelligent Energy management features, which can dramatically and dynamically conserve power and further improve energy efficiency. These Intelligent Energy features enable the POWER7+ processor to operate at a higher frequency if environmental conditions permit, for increased performance and performance per watt; or alternatively, operate at a reduced frequency if user settings permit, for significant energy savings.

Feature	Benefits
Leadership POWER7+ performance	<ul style="list-style-type: none"> • Access data faster and improve response time • Do more work with fewer servers and benefit from infrastructure cost savings from a reduction in the number of servers and software licenses
RAS Features	<ul style="list-style-type: none"> • Keep applications up and running so you can focus on growing your business
Light Path Diagnostics	<ul style="list-style-type: none"> • Easily and quickly diagnose hardware problems, reducing service time
PowerVM Virtualization	<ul style="list-style-type: none"> • Easily add workloads as your business grows • Utilize the full capability of the system to reduce infrastructure costs by consolidating workloads running the AIX, IBM i or Linux operating systems. Up to 20 partitions per core can be supported. • Provides ability to handle unexpected workload peaks by sharing resources
Intelligent Threads	<ul style="list-style-type: none"> • Optimize performance by selecting the suitable threading mode for your application
Active Memory Expansion	<ul style="list-style-type: none"> • Enables more work to be done with existing server resources. Enhanced for even greater performance via hardware accelerators with POWER7+ processors.
Flexibility and choice of AIX, IBM i and Linux operating systems	<ul style="list-style-type: none"> • Choose the operating environment that best suits your application and business needs
IBM Systems Director Active Energy Manager™ with EnergyScale Technology	<ul style="list-style-type: none"> • Dramatically and dynamically improve energy efficiency and lower energy costs with innovative energy management capabilities • Enables businesses to continue operations when energy is limited

Power 720 Express at a glance

Configuration options	Model 8202-E4D
POWER7+ processor modules— one per processor card	4-core 3.6 GHz or 6-core 3.6 GHz or 8-core 3.6 GHz
Sockets	1
Level 2 (L2) cache	256 KB per core
Level 3 (L3) cache	10 MB per core
Memory	8 GB to 512 GB ¹ of RDIMM DDR3 Active Memory Expansion
Solid-state Drives (SSD)	Up to eight SFF drives or
Disk drives	Up to eight SFF SAS drives
Disk capacity	Up to 7.2 TB
Media bays	Slimline for DVD-RAM Half height for tape drive or removable disk
I/O	
PCI Adapter slots	Five PCI Express 8x Generation 2 plus optional four PCI Express Generation 2 low profile
Standard Ethernet	Four Ethernet 10/100/1000 Mbps ports
Integrated SAS controller	One controller for SAS DASD/SSD with RAID 10, and DVD-RAM Optional protected 175 MB cache with RAID 5, 6
High-performance PCI adapters (optional)	4-port 8 Gb Fibre Channel 2-port 16 Gb Fibre Channel 2-port 10GbE RoCE 10 Gigabit Ethernet 10 Gigabit Fibre Channel over Ethernet Dual Port Quad Data Rate IB 6 Gbps SAS RAID Controller
I/O expansion (available with 6-core or 8-core processors)	Up to 2 PCIe 12X I/O drawers – 20 PCIe slots Up to 4 PCI-X DDR 12X I/O drawers – 24 PCIX slots Up to 380 SFF disk slots
Other integrated ports	Three USB, two HMC, two system ports, two SPCN
GX slots (12X)	One GX++ ²
Other PCI adapters supported include	SAS, SCSI, WAN/Async, USB, Crypto, iSCSI

Power 720 Express at a glance

Virtual Machine technologies

POWER® Hypervisor™	Virtual Machines, LPAR, Dynamic LPAR, Virtual LAN (memory-to-memory interpartition communication)
PowerVM Express Edition (optional)	Up to three partitions on the server; virtualized disk and optical devices (VIOS); Integrated Virtualization Manager (IVM); Shared Dedicated Capacity
PowerVM Standard Edition (optional)	PowerVM Express Edition plus Micro-Partitioning® with up to 20 micropartitions per processor; Multiple Shared Processor Pools
PowerVM Enterprise Edition (optional)	PowerVM Standard Edition plus Live Partition Mobility (LPM) and Active Memory Sharing (AMS)
Security and Compliance	PowerSC™
High availability	IBM PowerHA™ family
RAS features	ECC memory with Chipkill Processor Instruction Retry Alternate Processor Recovery Service processor with fault monitoring Hot-plug disk bays Hot-plug and redundant power supplies and cooling fans Dynamic component Deallocation
Operating systems ³	AIX IBM i Linux for POWER
Power requirements	100 V to 240 V ac, single phase
System dimensions	Tower: 21.3 in. H x 7.2 - 12.9 in. W x 27.0 in. D (541 mm x 183 - 328.5 mm x 688 mm); weight: 106 lbs (48.2 kg) ⁴ Rack Drawer: 6.9 in. H x 17.3 in. W x 24.0 in. D (173 mm x 440 mm x 610 mm); weight: 82 lbs (37.3 kg) ⁴
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 720 Express server, please contact your IBM marketing representative or IBM Business Partner, or visit the following website: ibm.com/power/

IBM Maintenance and Technical Support solutions can help you get the most out of your IT investment by reducing support costs, increasing availability and simplifying management with integrated support for your multiproduct, multivendor hardware and software environment.

For more information on hardware maintenance, software support, solution support and managed support, visit: ibm.com/services/maintenance

Additionally, IBM Global Financing can help you acquire the IT solutions that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize an IT financing solution to suit your business goals, 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

All performance information was determined in a controlled environment. Actual results may vary. Performance information is provided "as is" and no warranties or guarantees are expressed or implied by IBM. Buyers should consult other sources of information, including system benchmarks, to evaluate the performance of a system they are considering buying.

When referring to storage capacity, total TB equals total GB divided by 1,000; accessible capacity may be less.

- ¹ 8 – 64 GB memory for Power 720 Model 8202-E4D with 4-core processor
- ² GX slot shares space with PCI Express 8x low profile slots. Available configuration options are dependent on the number of processor cores and other factors. Not available with 4-core processors. Contact IBM or your IBM Business Partner for specific configuration restrictions.
- ³ See facts and features document for detailed OS level support.
- ⁴ Weight will vary when disks, adapters and peripherals are added.



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