

Ideal solution as an application, mid-sized database or Linux consolidation server



## IBM Power 550 Express server



Power 550 Express deskside and rack-mount servers

### Highlights

- **For UNIX®, IBM i (formerly known as i5/OS®) and Linux® ERP/CRM application servers**
- **For mid-size database servers**
- **For consolidation of UNIX, IBM i, and x86 Linux workloads**
- **For medium to large-sized businesses running the IBM i operating system**

The IBM Power™ 550 Express™ delivers the outstanding performance of the POWER6™ processor—the world's fastest chip. The performance and virtualization capabilities of the Power 550 Express make it an ideal system as a mid-size database or application server. The Power 550 delivers the performance to run applications faster and more efficiently, which can result in business advantages.

For mid-size database servers, the Power 550 Express provides outstanding performance, capacity and near-continuous application availability. Mid-sized companies can access data faster, keep their applications running around the clock, and focus attention on growing their business.

The Power 550 Express supports an extensive portfolio of proven solutions by supporting multiple operating systems: AIX®, IBM i, Linux for Power and x86 Linux applications. This flexibility in operating environments lets you deploy the applications your business demands.

As a consolidation server, the Power 550 Express provides the flexibility to use leading-edge AIX, IBM i, Linux for Power and x86 Linux applications all on the same system. PowerVM™ Editions offers comprehensive virtualization technologies designed to aggregate and manage resources while helping to simplify and optimize your IT infrastructure and reduce server sprawl.



For a scalable, complete integrated business system, the Power 550 Express allows the mid-sized company seeking simplicity to avoid increased spending and staffing requirements while becoming more responsive to their customers, improving their productivity and keeping their data secure.

The Power 550 Express is a 2-, 4-, 6- or 8-core entry server utilizing 3.5, 4.2 or 5.0 GHz processors and includes tremendous configuration flexibility to meet most capacity and growth requirements. The Power 550 Express offers a choice of operating

environments in either a desktside or 4U rack-mount form factor. The platform is designed to deliver outstanding business value to medium-sized businesses with the leadership performance of POWER6 processors, choice of operating systems, proven virtualization capabilities of PowerVM, and support for innovative energy management technologies to help conserve energy and reduce costs. Whether you need a scalable complete business system with integrated database and application server, reliable and efficient server consolidation platform or a high

performing system for application or database serving, the Power 550 Express server can fulfill your requirements with the AIX, IBM i or Linux operating systems.

**Leadership POWER6 performance**

The leadership performance of the POWER6 processor—the world’s fastest chip—makes it possible for applications to run faster and be more responsive, which can result in business advantages and higher client satisfaction. In addition, a single system can now run more applications and can reduce the number of required servers reducing infrastructure costs.

<b>Feature</b>	<b>Benefits</b>
<b>Leadership POWER6 performance</b>	<ul style="list-style-type: none"> <li>• Access data faster and improve response time</li> <li>• Do more work with fewer servers and experience infrastructure cost savings from a reduction in the number of servers and software licenses</li> </ul>
<b>Outstanding scalability and capacity</b>	<ul style="list-style-type: none"> <li>• Easily grow the system as your business grows</li> <li>• Consolidate UNIX and Linux workloads utilizing PowerVM Editions</li> </ul>
<b>Application availability</b>	<ul style="list-style-type: none"> <li>• Broad portfolio of proven solutions with support for AIX, IBM i, Linux for Power and x86 Linux operating systems</li> <li>• Keep applications up and running and focus on growing your business</li> </ul>
<b>Flexibility and choice of AIX, IBM i, and Linux operating systems</b>	<ul style="list-style-type: none"> <li>• Choose the operating system that best suits your application and business needs</li> <li>• Easily grow the system as your business grows</li> </ul>
<b>Improved utilization and energy efficiency through PowerVM and EnergyScale™ technologies</b>	<ul style="list-style-type: none"> <li>• Better utilize IT assets while avoiding the costs of deploying a new server every time the business needs another application</li> <li>• Go green and save with innovative energy management capabilities</li> </ul>
<b>Integration and simplicity</b>	<ul style="list-style-type: none"> <li>• Deploy applications faster and maintain systems more efficiently with fewer staff</li> <li>• Integrated business platform that allows all the applications to access the data they need to improve productivity</li> </ul>

The improved performance with POWER6 also enables clients to get more processing power with fewer processors resulting in lower per core software licensing costs.

### **Outstanding scalability and capacity**

The IBM Power 550 Express offers tremendous configuration flexibility to meet most capacity and growth requirements. Supporting up to four POWER6 processor cards with each card having up to 64 GB of memory results in a maximum configuration of eight processor cores and 256 GB of memory. Combining the capacity capabilities of the Power 550 Express with PowerVM technology may help simplify and optimize your IT infrastructure, reduce server sprawl and improve energy efficiency.

### **Application availability**

The Power 550 Express is designed with capabilities to deliver near-continuous 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 can be redirected to alternate processors, all without disruption to application execution.

### **Flexibility and choice of operating environments**

The flexibility to use leading-edge AIX, i, Linux for Power and x86 Linux applications in a rack-mount or desk-side form factor broadens the application offerings available and increases the ways clients can manage growth, complexity and risk. Leverage these easy-to-manage, easy-to-secure, and highly reliable operating systems to run thousands of proven industry solutions that are sure to fit the needs of almost any business.

### **Improved utilization and energy efficiency**

As the price of energy increases and resources are limited, energy efficiency through better utilization has become more important. The leadership performance of the IBM Power 550 Express translates into greater

computing power for applications.

Combine this leadership performance with PowerVM Editions to virtualize your infrastructure and improve server utilization and energy efficiency. Supported by the AIX, IBM i and Linux for Power operating systems, PowerVM Editions provide an innovative set of comprehensive systems technologies and services designed to enable you to easily aggregate and manage virtualized resources. Micro-partitions enable the Power 550 Express to be split into a flexible and highly utilized system. IBM Systems Director Active Energy Manager™ exploits POWER6 processor-based EnergyScale technology which monitors power/thermal utilization and conserves power by enabling power management features for improved system utilization and energy efficiency.

### **Integration and simplicity**

The Power 550 Express is designed to simplify your IT environment. The Power 550 Express can help you reduce the number of servers, reduce management costs and reduce maintenance and licensing costs, opening the door for reinvestment into business growth.

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## Power 550 Express at a glance

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### Configuration options

Processor cores	Two, four, six or eight 64-bit 3.5 GHz, 4.2 GHz or 5.0 GHz POWER6 with AltiVec™ SIMD and Hardware Decimal Floating-Point acceleration
Level 2 (L2) cache	8 MB per processor card
Level 3 (L3) cache	32 MB per processor card
RAM (memory)	3.5 GHz: 4 GB to 128 GB of DDR2 SDRAM 4.2/5.0 GHz: 4 GB to 256 GB of DDR2 SDRAM
Internal drive options	Six 3.5" SAS (146.8 GB, 300 GB, 450 GB 15K rpm) or Eight 2.5" SAS (73.4 GB 15K rpm; 146.8 GB 10k rpm) or Eight Solid State Drives (69 GB)
Internal disk storage	Up to 2.7 TB
Media bays	One slimline and one half-high
Adapter slots	Two PCI-X (266 MHz DDR); Three PCI Express 8x

### Standard I/O adapters

Integrated Virtual Ethernet	<ul style="list-style-type: none"><li>• Two Ethernet 10/100/1000 Mbps ports, or</li><li>• Four Ethernet 10/100/1000 Mbps ports, (option) or</li><li>• Two 10 Gigabit Ethernet ports (option)</li></ul>
Integrated disk	3G SAS controller (internal; RAID optional)
Other Ports	Three USB, two HMC, two system ports, two SPCN

### Expansion features (optional)

High-performance PCI adapters	4 Gigabit Fibre Channel; 10 Gigabit Ethernet
GX adapters	RIO-2, 12x GX <sup>1</sup>
GX slots	Two (each shares space with and replaces one PCI Express 8x slot)

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## Power 550 Express at a glance

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### PowerVM technologies

POWER Hypervisor™	LPAR, Dynamic LPAR, Virtual LAN (Memory to memory inter-partition communication)
PowerVM Express Edition (optional)	Up to three partitions on the server; PowerVM Lx86; virtualized disk and optical devices (VIOS); Shared Processor Pool; and Integrated Virtualization Manager (IVM)
PowerVM Standard Edition (optional)	PowerVM Express Edition plus Micro-Partitioning™ with up to 10 micro-partitions per processor; Multiple Shared Processor Pools; Shared Dedicated Capacity
PowerVM Enterprise Edition <sup>2</sup> (optional)	PowerVM Standard Edition plus Live Partition Mobility (LPM) and Active Memory™ Sharing (AMS)

### RAS features

IBM Chipkill™ ECC, bit-steering memory and cache  
Processor Instruction Retry  
Alternate Processor Recovery  
Service processor with fault monitoring  
Hot-plug disk bays  
Hot-plug PCI slots  
Hot-plug and redundant power supplies and cooling fans  
Dynamic Processor Deallocation  
Extended error handling on PCI-X slots

### Operating systems

AIX V5.3 or later  
IBM i 5.4 or later  
SUSE Linux Enterprise Server 10 SP1 for POWER™ (SLES10 SP1) or later; Red Hat Enterprise Linux 4.5 for POWER (RHEL4.5) or later; RHEL 5.1 or later

### High availability

IBM PowerHA™ family

### Power requirements

100v to 127v or 200v to 240v AC, -48v DC

### System dimensions

Deskside: 21.3"H x 7.2-11.1"W x 30.6"D (540 mm x 183-283 mm x 778 mm); weight: 120.0 lb (54.4 kg)<sup>3</sup>  
Rack drawer: 6.9"H (4U) x 17.3"W x 28.7"D (175 mm x 440 mm x 730 mm); weight: 120.0 lb (54.4 kg)<sup>3</sup>

### Warranty (limited)

9 hours per day, Monday through Friday (excluding holidays), next-business-day for one year at no additional cost; on-site for selected components; CRU (customer replaceable unit) for all other units (varies by country). Warranty service upgrades and maintenance are available.

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## For more information

To learn more about the IBM Power 550 Express server, please contact your IBM marketing representative or IBM Business Partner, or visit the following Web sites:

- [ibm.com/systems/power/](http://ibm.com/systems/power/)
- [ibm.com/systems/i/os/i5os/](http://ibm.com/systems/i/os/i5os/)
- [ibm.com/aix](http://ibm.com/aix)
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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 1000; accessible capacity may be less.

<sup>1</sup> Available configuration options are dependent on the number of processor cores and other factors. Contact IBM or your IBM Business Partner for specific configuration restrictions.

<sup>2</sup> Not supported on IBM i 5.4, 6.1.

<sup>3</sup> Weight will vary when disks, adapters and peripherals are added.

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Integrated Marketing Communications  
Systems and Technology Group  
Route 100  
Somers, NY 10589

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