

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



IBM Power 550 Express server



Power 550 Express desk-side and rack-mount servers

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 virtualisation technologies designed to aggregate and manage resources while helping to simplify and optimise your IT infrastructure and reduce server sprawl.

Highlights

- **For UNIX®, IBM i (formerly known as i5/OS) and Linux Enterprise Resource Planning (ERP)/Customer Relationship Management (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 performance and virtualisation 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 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 two-, four-, six- or eight-core entry server utilising 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 deskside 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

virtualisation 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.

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

Leadership POWER6 performance

The leadership performance of the POWER6 processor 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. 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 optimise 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. Reliability, Availability and Serviceability (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 (PIR) 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 utilisation and energy efficiency

As the price of energy increases and resources are limited, energy efficiency through better utilisation 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 virtualise your infrastructure and improve server utilisation 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 virtualised resources. Micro-partitions enable the Power 550 Express to be split into a flexible and highly utilised system. IBM Systems Director Active Energy Manager exploits POWER6 processor-based EnergyScale technology which monitors power/thermal utilisation and conserves power by enabling power management features for improved system utilisation 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.

Power 550 Express at a glance

Configuration options

Processor cores	Two, four, six or eight 64-bit 3.5 GHz, 4.2 GHz or 5.0 GHz POWER6 with AltiVec Single Instruction Multiple Data (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
Random Access Memory (RAM)	3.5 GHz: 4 GB to 128 GB of Double Data Rate (DDR)2 Synchronous Dynamic Random Access Memory (SDRAM) 4.2/5.0 GHz: 4 GB to 256 GB of DDR2 SDRAM
Internal drive options	Six 3.5" Serial Attached SCSI (SAS) (146.8 GB, 300 GB, 450 GB 15K revolutions per minute (rpm)) or Eight 2.5" SAS (73.4 GB 15K rpm; 146.8 GB 10k rpm) or Eight Solid State Drives (SSD) (69 GB)
Internal disk storage	Up to 2.7 TeraByte (TB)
Media bays	One slimline and one half-high
Adapter slots	Two PCI-X (266 MHz DDR); Three PCI Express 8x

Standard input/output (I/O) adapters

Integrated Virtual Ethernet	<ul style="list-style-type: none">• Two Ethernet 10/100/1000 Megabits per second (Mbps) ports, or• Four Ethernet 10/100/1000 Mbps ports, (option) or• Two 10 Gigabit Ethernet (GbE) ports (option)
Integrated disk	3G SAS controller (internal; Redundant Array of Independent Disk (RAID) optional)
Other Ports	Three Universal Serial Bus (USB), two Hardware Management Console (HMC), two system ports, two SPCN

Expansion features (optional)

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

Power 550 Express at a glance

PowerVM technologies

POWER Hypervisor	Logical Partition (LPAR), Dynamic LPAR, Virtual Local Area Network (VLAN) (Memory to memory inter-partition communication)
PowerVM Express Edition (optional)	Up to three partitions on the server; PowerVM Lx86; virtualised disk and optical devices (VIOS); Shared Processor Pool; and Integrated Virtualisation 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 ² (optional)	PowerVM Standard Edition plus Live Partition Mobility (LPM) and Active Memory Sharing (AMS)

RAS features

IBM Chipkill Error Checking and Correction (ECC), bit-steering memory and cache PIR
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 (SLES) 10 SP1 for POWER or later; Red Hat Enterprise Linux (RHEL) 4.5 for POWER 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)³
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)³

Warranty (limited)

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



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/
- ibm.com/systems/i/os/i5os/
- ibm.com/aix
- ibm.com/linux/power
- ibm.com/systems/p/solutions
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¹ 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.

² Not supported on IBM i 5.4.

³ Weight will vary when disks, adapters and peripherals are added.



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