

IBM System p5 Express Family – Highlights IBM Virtualization Engine™

The Advanced POWER™ Virtualization feature optionally available on selected IBM System p5™ Express servers is designed to allow smaller and mid-sized companies to increase system utilization while helping to ensure that applications get required resources in a non-disruptive fashion. As a by-product, multiple independent AIX 5L™ and Linux® operating environments may be run simultaneously on the same system. Consolidating applications can help reduce complexity and lower operational costs. The easy-to-use, Web-based Integrated Virtualization Manager (IVM) allows the cost-effective consolidation of multiple partitions on a single server by helping reduce the time and effort required to manage virtual devices and partitions. The need to purchase a Hardware Management Console (HMC) is eliminated when IVM is used.

Express Editions

Specially priced Express Editions (AIX 5L Edition and OpenPower™ Edition) are available for System p5 Express servers. These easy to order, pre-configured packages provide financial incentives on the hardware as well as the ability to order a discounted AIX 5L or Linux OS license. Additional memory, disk drives, adapters, displays and external storage can be easily added without impacting the original savings. Express Editions deliver outstanding business value and help companies customize systems quickly.

POWER5 and POWER5+ Processors

Innovative technology such as simultaneous multithreading, virtualization and the cache memory subsystem have helped propel IBM POWER5™ and POWER5+™ processor-based systems to achieve performance leadership in a broad spectrum of industry and application benchmarks. See ibm.com/systems/p/benchmarks.

AIX 5L OS

The AIX 5L OS, an industrial-strength UNIX® environment, is tuned for application performance and delivers exceptional reliability, availability and serviceability (RAS) features, enhancements to Java™ technology, Web performance and Linux compatibility. Over 6200 AIX 5L applications are supported on the System p5 family.

Linux OS

By supporting the open source Linux OS, the System p5 Express family offers cost-saving opportunities. The Linux OS provides the freedom to use the right applications for organizations' needs. Over 1800 Linux applications are supported on the System p5 Express family. IBM is firmly committed to superior Linux service and support.

RAS

The System p5 Express family of servers (POWER5 and POWER5+ models) features world-class, mainframe-inspired reliability, availability and serviceability capabilities including a sophisticated service processor; hot-plug, hot-swappable and redundant components; Chipkill™ ECC and bit-steering memory; and dynamic deallocation of system components. As a result, these servers are among the most resilient UNIX and Linux systems IBM offers.



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rPerf (Relative Performance) is an estimate of commercial processing performance relative to other IBM UNIX systems. It is derived from an IBM analytical model which uses characteristics from IBM internal workloads, TPC and SPEC benchmarks. The rPerf model is not intended to represent any specific public benchmark results and should not be reasonably used in that way. The model simulates some of the system operations such as CPU, cache and memory. However, the model does not simulate disk or network I/O operations.

rPerf estimates are calculated based on systems with the latest levels of AIX 5L and other pertinent software at the time of system announcement. Actual performance will vary based on application and configuration specifics. The IBM @server® pSeries 640 is the baseline reference system and has a value of 1.0. Although rPerf may be used to approximate relative IBM UNIX commercial processing performance, actual system performance may vary and is dependent upon many factors including system hardware configuration and software design and configuration.

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.

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

Many of the features described are operating system dependent and may not be available on Linux. For more information, please check: ibm.com/systems/p/software/whitepapers/linux_overview.html.

The IBM home page on the Internet can be found at: ibm.com.

The System p5 home page on the Internet can be found at: ibm.com/systems/p/.

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System images are not to scale.



	System p5 185 Express	System p5 505 Express	System p5 510 and 510Q Express	System p5 520 and 520Q Express	System p5 550 and 550Q Express	System p5 560Q Express
System package	5U, 19" rack / desktide	1U, 19" rack	2U, 19" rack	4U, 19" rack / desktide	4U, 19" rack / desktide	4U, 19" rack
Microprocessors	IBM PowerPC®	POWER5	POWER5+	POWER5+	POWER5+	POWER5+
# of processors (GHz)	1, 2 (2.5)	1 (1.65), 2 (1.5, 1.65)	1, 2 (1.9), 4 (1.5)	1 (1.65), 2 (1.65, 1.9), 4 (1.5)	2, 4 (1.65, 1.9), 4, 8 (1.5)	4, 8 (1.5)
Minimum - maximum memory (GB)	0.5 - 8	1 - 32	1 - 32	1 - 32	1 - 64	2 - 64
Maximum internal disk bays/storage (TB)	4 / 1.2	2 / 0.6	4 / 1.2	8 / 2.4	8 / 2.4	6 / 1.8
Maximum internal PCI-X slots (MHz)	4 (100, 133)	2 (266)	3 (133, 266)	6 (66, 133, 266)	5 (133, 266)	6 (133)
Maximum optional I/O drawers	-	-	-	4	8	-
Maximum disk bays/storage with I/O drawers (TB)	-	-	-	56 / 16.8	104 / 31.2	-
Maximum PCI-X slots with I/O drawers	-	-	-	34	59	-
Advanced POWER Virtualization (optional)	-	<ul style="list-style-type: none"> • Micro-Partitioning, Shared processor pool, Virtual I/O Server with Integrated Virtualization Manager, Virtual LAN • Partition Load Manager for AIX 5L V5.2 and V5.3 				
Micro-Partitioning	-	Up to 10 micro-partitions per processor except 550Q which has 40 maximum (optional)				
RAS capabilities	<ul style="list-style-type: none"> • Dynamic firmware updates • Service processor with fault monitoring 					
Additional RAS capabilities	<ul style="list-style-type: none"> • Processor and ambient temperature monitor • PCI bus parity and ECC memory • System management alerts 	<ul style="list-style-type: none"> • First Failure Data Capture • Chipkill ECC bit-steering memory • ECC L2 and L3 cache • Dynamic deallocation of processors (2-core and above) • Dynamic deallocation of PCI-X slots with extended error handling 	<ul style="list-style-type: none"> • Blind-swap PCI-X slots (560Q) • Blind-swap PCI-X slots – I/O drawers • Hot-add I/O drawers (requires HMC) • Hot plug PCI-X slots – servers and I/O drawers (except 505, 510) • Hot-swappable disk bays (servers and I/O drawers) • Redundant hot-plug cooling 			
Redundant hot-plug power	Auto reboot on power loss	Optional				Standard
OS support	AIX 5L V5.2 and V5.3, SUSE Linux Enterprise Server 9 for POWER (SLES 9) and above, Red Hat Enterprise Linux AS 4 for POWER (RHEL AS 4) and above					
Warranty	3-year					
AIX 5L V5.3 rPerf	2.48 - 4.34	3.51 - 9.86	6.11 - 18.75	3.62 - 18.75	10.15 - 34.46	18.75 - 35.50

IBM System p5 Express: Solutions that are easy to buy, install and manage. At a price that might surprise you.