IBM @server p5 520 servers

@server p5 520 rack system with I/O drawer

Highlights

- ***Innovative, powerful, affordable, open and adaptable UNIX and Linux POWER5 system design***
- ***Dynamic partitioning capabilities facilitate efficient resource utilization***
- ***Mainframe-inspired reliability, availability and serviceability (RAS) capabilities***

The IBM @server® p5 520 system is a new breed of entry server for small and medium-sized businesses and distributed systems for large enterprises. Fast and affordable, it is packed with features and functions that can be found in the most sophisticated systems from IBM. The p5-520 is designed to run the AIX 5L™, IBM's industrial-strength UNIX®, and Linux® operating systems.

The @server p5 520 is well-suited to serve as a low cost development and deployment platform for new applications. Its versatility, leading-edge performance and manageability position the p5-520 as a branch server, small database server or e-business platform for enterprises of all sizes. The p5-520 can handle mission-critical e-business applications, secure Web transactions and small datamarts for business intelligence. It can also be clustered into powerful high performance computing (HPC) clusters.

Mainframe-inspired RAS helps keep on demand systems available

The @server p5 520 system features many of the same mainframe-inspired reliability, availability and serviceability features as larger @server p5 models, helping keep the system up and running around the clock. The p5-520 extends the pSeries heritage of world-class RAS to an entry system by introducing concurrent firmware updates, in which applications remain operational while IBM system firmware is updated for most operations; and finer-grained L2 cache deallocation, improved L3 cache line deletes and ECC cache for better self-healing capabilities.

Flexibility to grow and adapt to changing needs

The @server p5 520 server is available as a 2-way symmetric multiprocessing (SMP) system with 1.65 GHz POWER5™ processors. Clients have extensive growth potential in a choice of 19" rack-mount or deskside packages with up to 32GB of memory, up to four optional I/O drawers resulting in 8.2TB of disk storage and up to 34 hot-plug PCI-X slots. In addition, as many as 64 p5-520 systems may be included in a single HPC cluster. For the ultimate in IBM server availability, the p5-520 can be clustered with HACMP™ software designed to provide near continuous availability.

IBM Virtualization Engine drives utilization and improves productivity

The @server p5 520 server features breakthrough technologies for a UNIX or Linux entry system. IBM Virtualization Engine™ systems technology options for p5-520 systems provide innovations like Micro-Partitioning™ which allows businesses to increase system utilization while helping to ensure applications continue to get the resources they need. Micro-Partitioning technology helps lower costs by allowing the system to be finely tuned to consolidate multiple independent AIX 5L and Linux workloads. Virtual servers can be defined as small as 1/10th of a processor in increments as small as 1/100th of a processor. Dynamic logical partitioning helps assign system resources (processors, memory and I/O) for faster non-disruptive response to changing workload requirements.

Innovations like optional virtual I/O allow the sharing of expensive disk drives, communications adapters and Fibre Channel-attached disks and help drive down complexity and systems/administrative expenses. The shared processor pool allows for automatic non-disruptive balancing of processing power between partitions assigned to the shared pool—resulting in increased throughput and utilization.

IBM @server p5 520: the new standard in entry UNIX and Linux servers

The p5-520 system offers a specially priced Value Pak that is designed to meet the needs of many mission-critical applications and deliver outstanding business value to small and medium-sized business and departments of large enterprises. The Value Pak offers popular, easy to order configurations with significant financial incentives. Additional memory, disk drives or adapters can be easily added to the p5-520 Value Pak without impacting the savings.

The combination of flexible expansion and reliability features and exceptional price/performance make the p5-520 system an outstanding choice for retail,

@server p5 520 deskside system

wholesale distribution, financial services, insurance and healthcare environments that support remote stores, branches, regional offices or kiosks. With a choice of deskside or rack-mount form-factors, this server is designed to be easy to install, integrate and manage. Based on these qualities, the p5-520 can help give small to medium-sized businesses enterprise-class on demand computing without compromising availability, performance or security—at the value price of an entry-level server.

The IBM @server p5 520 system sets a new standard for entry UNIX and Linux servers.

p5-520 at a glance

Available configurations	
Microprocessors	2-way 64-bit 1.65 GHz POWER5 processors
Level 2 (L2) cache	1.9MB
Level 3 (L3) cache	36MB
RAM (memory)	1GB – 32GB ECC DDR1 SDRAM
Internal storage	8.2TB (with optional I/O drawers)
Processor-to-memory bandwidth	10.3GB/second
L2 to L3 cache bandwidth	26.4GB/second
RIO-2 I/O subsystem bandwidth	4.4GB/second
Internal disk bays	Four standard plus four optional (36.4/73.4/146.8GB 10K rpm or 36.4GB/73.4GB 15K rpm disks)
Media bays	Two slimline and one standard
Adapter slots	Six hot-plug 3.3v PCI-X (2 – 32-bit/66 MHz; 4 - 64-bit/133 MHz)
Standard features	
I/O adapters	Dual ported integrated internal Ultra320 SCSI controller (RAID optional); two Ethernet 10/100/1000 controllers
Ports	Two serial, two USB, two HMC ports, keyboard and mouse
I/O expansion	Up to four optional 7311-D20 I/O drawers, each providing seven 3.3v 64-bit PCI-X slots and up to 12 disk bays (36.4/73.4/146.8GB 10K rpm or 36.4/73.4GB 15K rpm disks)
Connectivity support	2 Gigabit Fibre Channel; 10 Gigabit Ethernet
Logical partitioning support	Dynamic LPAR*
IBM Virtualization Engine systems technologies (optional)	Micro-Partitioning Shared processor pool Virtual I/O Virtual LAN
RAS features	Copper and silicon-on-insulator (SOI) microprocessors Concurrent firmware updates (planned for 4Q 2004) IBM Chipkill™ ECC, bit-steering memory ECC L2 cache, L3 cache Service processor Hot-swappable disk bays Hot-plug PCI-X slots (on base system and I/O drawers) Blind-swap PCI-X slots on I/O drawers Hot-plug power supplies and cooling fans Dynamic Processor Deallocation Dynamic deallocation of logical partitions and PCI bus slots Redundant cooling fans Redundant power supply (optional)
Operating systems	AIX 5L Versions 5.2/5.3 SUSE LINUX Enterprise Server 9 for POWER™ (SLES 9) Red Hat Enterprise Linux AS 3 for POWER (RHEL 3)
Power requirements	100v to 127v or 200v to 240v AC
System dimensions	Deskside: 21.0"H x 7.9"W x 23.0"D (533mm x 201mm x 584mm); weight 35.5 kg (78 lb)** Rack drawer: 7.0"H x 17.2"W x 20.0"D (178mm x 437mm x 508mm); weight 35.5 kg (78 lb)** 7311-D20 I/O drawer: 7.0"H x 17.5" W x 24.0"D (178mm x 445mm x 610mm); weight 45.9 kg (101 lb)**

* Available with AIX 5L and SLES 9 operating systems

** Weight will vary when disks, adapters and peripherals are installed.

For more information

To learn more about the IBM @server p5 520 system, please contact your IBM marketing representative or IBM Business Partner, or visit the following Web sites:

ibm.com/eserver/pseries

ibm.com/servers/aix

ibm.com/linux/power

ibm.com/common/ssi

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This equipment is subject to FCC rules. It will comply with the appropriate FCC rules before final delivery to the buyer.

Information concerning non-IBM products was obtained from the suppliers of these products. Questions on the capabilities of the non-IBM products should be addressed with the suppliers.

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