

HP 9000 rp4410-4 and rp4440-8 Servers

Data sheet



From entry-class 2-processor systems up to the high-end, 128-way HP 9000 Superdome, the HP 9000 server family delivers world-class, high-performance computing to the Adaptive Enterprise. Powered by the new PA-8900 processor with increased performance—and running the HP-UX 11i operating environment—HP 9000 servers add greater strength to HP's industry-leading server portfolio by integrating seamlessly into your existing IT infrastructure and providing the type of longevity that's crucial to protecting your investment.

HP introduces new 1-, 2-, and 4-way systems to its HP 9000 family with the HP 9000 rp4410-4 Server, while offering improved 8-way scalability in the HP 9000 rp4440-8 Server. Each server offers up to 128 GB of memory, runs the rock-solid HP-UX 11i operating system, and is powered by the new PA-8900 processor, which delivers improved performance and larger memory cache than before. The HP 9000 rp4400 server series has all of

the high-availability features you'd expect in an enterprise application server, and its elegant server design makes for easy installation, upgrading, and service. With excellent performance scalability and dense form factor, the HP 9000 rp4410-4 and rp4440-8 Servers deliver the performance required for critical business applications such as ERP, CRM, and e-commerce—while conserving IT funds and data-center space.

Key features:

HP 9000 rp4410-4 and rp4440-8 Servers

- Latest generation of PA-RISC PA-8900 processor
- Server chassis shared with HP Integrity rx4640-8 Server
- Four-processor option available with HP 9000 rp4410-4 Server
- Performance-clustering capabilities, plus manageability features

Key benefits:

HP 9000 rp4410-4 and rp4440-8 Servers

- Increased performance in the new HP 9000 rp4410-4 and rp4440-8 Servers
- Easy in-chassis upgrade from PA-RISC to Intel® Itanium® 2 processors
- Substantial cost savings by qualifying for Oracle® Standard Edition licensing
- Enables massively scalable systems, from entry-class to HP 9000 Superdome

Taking HP 9000 rp4410-4 and rp4440-8 Servers to the next level

The HP 9000 rp4410-4 and rp4440-8 Servers integrate the new, powerful PA-8900 processor with the innovative HP Scalable Processor Chipset zx1. This enables both systems to achieve even greater performance through decreased memory latency and increased memory bandwidth. This chipset is specifically designed for use with both the PA-8900 processor and the Intel® Itanium® 2 processor, making it both easy and effective to perform an in-box upgrade from the HP 9000 rp4440 server series to the HP Integrity rx4640-8 Server. Plus, the HP 9000 rp4410-4 Server can be easily upgraded to the HP 9000 rp4440-8 Server. This makes an already highly scalable server even more flexible and ready to meet new demands and business challenges as your organization continues to grow.

The HP 9000 rp4440-8 Server is a highly flexible platform, making affordable 8-way serving a reality for both new and existing customers. And because the HP 9000 rp4410-4 Server has a maximum of four processors, it qualifies for Oracle Database 10g Standard Edition licensing—offering substantial cost savings. The HP 9000 rp4410-4 Server and the HP 9000 rp4440-8 Server both offer six open PCI-X expansion I/O slots and up to 128 GB DDR memory.

HP-UX 11i, the industry's leading UNIX® operating environment

The capabilities of HP's PA-8900-based family of servers are further bolstered by HP-UX 11i, the secure, robust, and critically acclaimed enterprise UNIX operating environment. With the leadership workload management, high availability, and innovative server-virtualization capabilities—such as partitioning—that are part of the

HP Virtual Server Environment, HP-UX 11i makes the best use of system resources while it maintains service levels.

For HP 9000 systems, HP-UX 11i is a high-quality, proven, mission-critical operating environment that increases productivity, improves agility, and helps build a foundation for growth and lasting value.

Reduced complexity and lower operating costs = lower TCO

HP 9000 servers provide the key to getting you the best possible return on your IT investment. They can help you reduce your TCO through aggressive acquisition prices and low operating costs. The dual-core PA-8900 processor module makes it possible to pack more processing power into a smaller system chassis, which presents unique server consolidation and space conservation opportunities for your business.

The HP 9000 rp4410-4 and rp4440-8 Servers are easy to deploy, enabling faster time to revenue. And HP offers systems and network management tools for HP-UX 11i that can help you reduce operating costs as well. Two examples are HP Secure Web Console for Web-based management, which provides a wide range of single-system and multi-system management features, and HP Systems Insight Manager (HP SIM), which offers a single point of administration plus a variety of integrated tools for configuration and fault and workload management. The HP 9000 rp4410-4 and rp4440-8 Servers also have built-in high-availability features—such as automatic memory, processor de-configuration, and a service processor to monitor system status—to deliver reliable uptime.

You can trust your business and your budget to the PA-8900-based HP 9000 rp4410-4 and rp4440-8 Servers.

Even with all their capabilities and features, these servers are remarkably cost-effective, boasting an attractive price point that provides unprecedented value. The HP 9000 rp4410-4 and rp4440-8 Servers are also economical to operate, thanks to a small 4U size (6.8-inch/173 mm) that saves datacenter space and lets you pack up to 10 servers (and 80 processors) into a standard 3-meter rack. Plus, with in-chassis processor upgrades, these servers offer unprecedented investment protection and are uniquely positioned to adapt quickly to your evolving needs.

Solutions running on HP 9000 servers enable you to further reduce complexity and increase efficiency through intelligent management capabilities across the multiple operating systems and server platforms of the broad HP server portfolio. And, by utilizing partitioning capabilities and HP Utility Pricing offerings, you can dynamically realign and virtualize your resource utilization with your business needs and budget.

HP 9000 servers offer flexible choices for the future.

The ability to scale to meet new challenges is key to enabling a more adaptive enterprise. That means having a clear roadmap for the future of your IT infrastructure. The HP 9000 rp4410-4 and rp4440-8 Servers underscore HP's commitment to delivering strong PA-RISC-based solutions as they expand the HP Integrity server solution ecosystem. You can choose from the PA-8900-based HP 9000 rp4400 server series today—and assure yourself of a smooth transition to future technologies later on.

The PA-8900 processor completes HP's long PA-RISC processor roadmap, reinforcing the company's strategy to protect and enhance your investments in HP solutions. When you're ready to move to Itanium-based computing, the HP 9000 rp4400 server series chassis and chipset can be fitted with Intel Itanium processors, taking you to the next level of computing performance. Itanium-based HP Integrity servers offer new degrees of flexibility in operating-system choice, application support, and services. That means as your business needs grow, you can continue to enjoy the world-class investment protection of your HP 9000 server.

Whether your future business needs demand HP 9000 or HP Integrity servers, you benefit from increased overall server performance at reduced costs.

Evolve your infrastructure confidently with a partner that stands accountable.

When you're ready to take advantage of the robust HP-UX 11i operating environment running on the HP 9000 rp4400 server series, HP has a full range of services to help make your deployment as seamless and painless as possible. We'll help you quickly and confidently introduce HP 9000 servers into your existing IT environment and make the most of their potential for your business. We offer assessment services to precisely define porting requirements and chart a course to deployment, implementation services to install and configure equipment rapidly, and education services to provide your staff with the expertise to achieve top system performance.

Throughout the deployment and transition process, HP accepts full accountability for delivering on the service commitments that we and our partners have made. And our commitment to your satisfaction doesn't stop with the transition process itself. Our support offerings—from simple reactive support to comprehensive mission-critical support—help you reduce the risks associated with downtime once your HP 9000 systems are installed. We are looking ahead to further your long-term success by working with leading independent software vendors (ISVs) in both the technical and commercial markets to tailor their applications to the PA-8900 RISC architecture, enabling you to exploit the full potential of your HP 9000 systems. For more information on these services, please contact your HP sales representative or visit:

www.hp.com/hps/support

Technical specifications

	HP 9000 rp4440-8 PA-8900	HP 9000 rp4410-4 PA-8900
Processor		
Processors per system	2, 4, 6, 8	1, 2, 4
Module type	Dual-Processor	Dual-Processor
Clock speed	800 MHz and 1.0 GHz	800 MHz and 1.0 GHz
Front-side bus	200 MHz	200 MHz
L1 cache	1.5 MB per CPU	1.5 MB per CPU
L2 cache	64 MB	64 MB
RAM minimum/maximum	1 GB/128 GB	
RAM type	PC2100 ECC registered DDR266A/B	
Memory protection	Error checking and correcting (ECC) on memory and caches; memory chip spare	
Hard drive capacity	36 GB, 73 GB, 146 GB, and 300 GB drives available	
Internal hard drive bays	2 hot-plug Ultra320 SCSI	
Maximum internal storage	600 GB	
Removable media	1 open bay for DVD-ROM or DVD+RW drive	
Expansion slots	6 PCI-X slots available (2 x 133 MHz, 4 x 66 MHz); 4.2 GB/s total I/O bandwidth	
Network adapter	Dual-port 10/100/1000Base-T Ethernet	
Storage adapter	Dual-channel Ultra320 SCSI, configured as 2 internal or 1 internal/1 external; Smart Array 6402 RAID adapter can be substituted for standard SCSI adapter	
Interfaces	VGA and 2 USB ports for local human interface; 1 RS-232 serial port for general use; 2 RS-232 serial ports and 10/100Base-T LAN for Integrated Lights Out (iLO) management	
Form factor	Rack-optimized with 4U height; standalone (rack-less) form factor kit available	
Hot-plug fans	6, configured in 3 redundant pairs	
Operating systems supported	<ul style="list-style-type: none"> • HP-UX 11i v1 • HP-UX 11i v2 	
High availability		
Standard server features	<ul style="list-style-type: none"> • N+1 fans • Error checking and correcting (ECC) on memory and caches • Memory chip spare • Automatic deconfiguration of memory and processors • Service processor to monitor system status 	
High-availability and business-continuity solutions (optional)	<ul style="list-style-type: none"> • N+1 redundant power supplies (N=1) • HP Serviceguard for HP-UX 11i • HP Serviceguard Extension for RAC • HP Serviceguard Extension for SAP • HP Serviceguard Manager for clusters • HP Event Monitoring Service • HA Monitors • High Availability Toolkits • HP Mirrordisk/UX • HP Extended Campus Cluster (including RAC) • HP Metrocluster with Continuous Access XP • HP Metrocluster with EMC SRDF • HP Continentalclusters (including RAC) 	

Technical specifications (continued)

Management	<p>HP Systems Insight Manager provides a single point of administration across all operating systems supported on HP Integrity and HP 9000 servers. In addition, the following tools are available to manage the servers under HP-UX 11i:</p> <p>Software deployment</p> <ul style="list-style-type: none">• HP Ignite-UX for installation and deployment of the HP-UX 11i Operating System• HP Software Distributor-UX for software and patch management• Update-UX automates updates to HP-UX 11i Operating Environments• Software Package Builder packages software into SD-UX packages <p>Configuration management</p> <ul style="list-style-type: none">• HP System Administration Manager for HP-UX 11i system administration• HP-UX 11i webmin-based Admin allows easy plug-in of open source management tools• HP-UX 11i Bastille provides security hardening and lockdown• Security Patch Check efficiently improves system security• Serviceguard Manager monitors and manages Serviceguard clusters• Integrated Lights Out enables comprehensive remote server management• WBEM for consistent management <p>Workload management</p> <ul style="list-style-type: none">• HP Process Resource Manager manages allocation of resources (optional)• Secure Resource Partitions for secure application stacking• HP-UX 11i Workload Manager automatically manages resources based upon SLOs (optional)• Global Workload Manager to manage large environments
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Environmental specifications

Altitude	Operating: 10,000 ft. (3000 m) maximum Non-operating: 15,000 ft. (4500 m) maximum
Temperature	Operating: 41 to 95°F (5 to 35°C) Non-operating: -40 to +158°F (-40 to +70°C) Maximum rate of temperature change: 36°F (20°C) per hour
Humidity	Operating: 15% to 80% relative non-condensing Non-operating: 8% to 85% non-condensing
Dimensions	
Rack form factor	Height: 6.8 in. (173 mm)/4U EIA Width: 19.0 in. (482 mm) Depth: 27.2 in. (690 mm)
Standalone frame	Height: 20.9 in. (530 mm) Width: 10.2 in. (260 mm) Depth: 27.4 in. (695 mm)
Weight	Maximum configuration: 100 lb. (45 kg)
Power requirements	Maximum input current: 8 A @ 240 VAC Line frequency: 50–60 Hz Maximum AC power input: 1368 W (conservative), 1065 W (typical) <i>Note: Power figures are per system, not per input line (power supply), and include losses in the power supplies.</i>
Power supply	Maximum output: 1200 W per supply Number of supplies: 1 or 2 (1+1 configuration: one required, one optional) Power inlet type: IEC320-C14
BTU rating	Typical: 3,600 BTU/hour Maximum: 5,500 BTU/hour
Voltage tolerance range	180 to 264 VAC (operating range of 200–240 VAC +/- 10%)
Frequency tolerance range	48.5 to 61.8 Hz (operating range of 50–60 Hz +/- 3%)
Regulatory	Regulatory model number: RSVLA-0201

HP 9000 rp4410-4 and rp4440-8 Servers

HP StorageWorks solutions: putting information to work

HP StorageWorks helps businesses put information to work. Our industry-leading portfolio of network storage solutions makes it easier for you to keep the right information at your fingertips, quickly adapt to change and exploit new opportunities, and increase information availability while radically cutting costs. For more information on StorageWorks, please contact your HP sales representative or visit:

www.hp.com/storage

Flexible financing options

Take advantage of our special financing offers to further enhance your return on IT. Leasing your HP 9000 server is cost-effective and offers you an easy transition path to new PA-RISC processors or to an Itanium-based solution with HP Integrity servers, making it the smartest way to invest in IT.

HP Financial Services offers a full range of IT transition, acquisition, management, and disposition services—helping you to remove existing equipment and paying you for technology that has remaining market value. For more information on these services, please contact your HP sales representative or visit:

www.hp.com/go/hpfinancialservices

To learn more

For more information about the HP 9000 rp4410-4 or rp4440-8 Servers, please contact any of our worldwide sales offices or visit:

www.hp.com/go/rp4410

www.hp.com/go/rp4440

www.hp.com/go/hp9000

For more information

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, contact your HP sales representative or find us on the Web at:

www.hp.com/go/hpfinancialservices

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