

HP 9000 rp3410-2 and rp3440-4 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.

With the performance afforded by one, two, or four PA-8900 processors running at 800 MHz or 1 GHz; memory of up to 32 GB; and a maximum storage capacity of 900 GB, the HP 9000 rp3400 server series can take any business application and get the job done quickly. In addition, up to four 64-bit 133 MHz PCI-X I/O slots—plus support for the robust HP-UX 11i v1 or v2 operating systems—make the HP 9000 rp3400 server series ideal for workloads requiring high availability and superior bandwidth. The HP 9000 rp3410-2 and

rp3440-4 Servers are perfect for distributed sites and branch office locations, for the application and Web services tiers of enterprise data centers, and for small and medium-sized businesses. All this functionality comes in a sleek 2U chassis, delivering attractive performance density with substantial investment protection. For additional scalability and investment protection, an easy in-box upgrade is available from the HP 9000 rp3410-2 Server to the HP 9000 rp3440-4 Server.

Key features: HP 9000 rp3410-2 and rp3440-4 Servers

- Latest generation of PA-RISC PA-8900 processor
- HP Scalable Processor Chipset zx1
- Server chassis shared with HP Integrity rx2620-2 Server
- High-availability clustering integration with workload management
- HP-UX Virtual Server Environment with HP Workload Manager
- Optional Level 1 RAID

Key benefits: HP 9000 rp3410-2 and rp3440-4 Servers

- Strong performance boost for existing HP 9000 rp3400 server series customers
- Higher performance than competitive RISC platforms
- Easy in-chassis upgrade from PA-RISC to Intel® Itanium® 2 processors
- Increased system resource utilization while maintaining service levels
- Automatic resource allocation, simplified management, and improved system usage
- Mirror disks for additional fault tolerance and performance

Taking HP 9000 rp3410-2 and rp3440-4 Servers to the next level

HP has designed the HP 9000 rp3400 server series to get the most out of the powerful PA-8900 processor by integrating the processor with the HP Scalable Processor Chipset zx1. This chipset offers decreased memory latency and increased memory bandwidth, enabling the servers to achieve even greater performance. The HP 9000 rp3440-4 Server comes with two or four 800 MHz or 1.0 GHz PA-8900 processors, up to 32 GB of memory, and four PCI-X slots. The HP 9000 rp3410-2 Server is available with your choice of one or two PA-8900 800 MHz processors, up to 6 GB of memory, and two PCI-X slots—and it's an easy in-box upgrade to the HP 9000 rp3440-4 Server, providing outstanding investment protection. What's more, the same HP zx1 Chipset contained in the HP 9000 rp3400 server series 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 rp3400 server series to the HP Integrity rx2620-2 Server.

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 PA-8900-based HP 9000 rp3410-2 and rp3440-4 entry-class servers offer plenty of performance where you need it, in a compact, self-contained, affordable unit.

The HP 9000 rp3410-2 and rp3440-4 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. For instance, HP Systems Insight Manager (HP SIM) enables a single point of administration to increase your productivity, and HP Secure Web Console—for Web-based management—provides a wide range of single-system and multi-system management features. And, to help you achieve high uptime, the HP 9000 rp3410-2 and rp3440-4 Servers have high availability built in, including HP's Extended Fault Management System for the ultimate in error detection and avoidance.

Even with all their capability, these servers are remarkably cost-effective, boasting attractive price points that provide unprecedented value. They're economical to operate, too, thanks to a small 2U (3.4-inch) size that saves datacenter space and lets you pack up to 20 servers (and 80 processors) into a standard rack.

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. HP's commitment to standardized, simple, and modular technologies is embodied in our HP 9000 server series. The release of PA-8900-based systems underscores HP's commitment to delivering strong PA-RISC-based solutions as it expands the HP Integrity server solution ecosystem. You can choose PA-RISC-based systems today—realizing enhanced PA-8900 performance now—and through simple in-box upgrades assure yourself of a smooth transition to future technology later on. When the time is right, your HP 9000 servers will be an ideal stepping stone to Itanium-based HP Integrity servers, featuring the

industry's leading processor performance and the flexibility to choose among the market's leading operating systems.

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 same chassis and chipset that are the foundation of the HP 9000 server family can be fitted with Intel Itanium processors, taking you to the next level of computing performance. HP Integrity servers offer new degrees of flexibility in operating system choice, application support, and services. That means that as your business needs grow, you can continue to enjoy the world-class investment protection of your HP 9000 server as you move to the industry-leading performance of the HP Integrity server platform—at an affordable, incremental cost.

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 high-density, high-performing HP 9000 rp3400 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 our partners and we 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 rp3440-4 PA-8900	HP 9000 rp3410-2 PA-8900
Processor		
Processors per system	1, 2, 4	1–2
Module type	Dual-core processor	Dual-core processor
Clock speed	800 MHz and 1.0 GHz	800 MHz
L1 cache	1.5 MB per CPU	1.5 MB per CPU
L2 cache	64 MB	64 MB
RAM minimum/maximum	1 GB/32 GB	
RAM type	PC2100 ECC registered DDR266A	
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	3 hot-plug Ultra320 SCSI	
Maximum internal storage	900 GB	
Removable media	1 open bay for DVD-ROM or DVD+RW drive	
Expansion slots	<ul style="list-style-type: none"> rp3440-4: 4 full-length, 64-bit/133 MHz PCI-X slots available; 4.0 GB/s total I/O bandwidth; rp3410-2: 2 full-length, 64-bit/133 MHz PCI-X slots available; 2.0 GB/s total I/O bandwidth 	
Network adapter	10/100/1000Base-T Ethernet	
Storage controller	Dual-channel Ultra160 SCSI, configured as 2 internal/1 external	
Interfaces	VGA and 4 USB ports for local human interface; 2 RS-232 serial ports for general use; 2 RS-232 serial ports and 10/100Base-T LAN for Integrated Lights Out (iLO) management; optional management processor card	
Form factor	Rack-optimized with 2U height; standalone (rack-less) form factor kit available	
Hot-plug fans	4, configured in 2 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 for HP-UX 11i HP Serviceguard Extension for SAP for HP-UX 11i HP Serviceguard Manager for HP-UX 11i HP Event Monitoring Service HA Monitors for HP-UX 11i High Availability Toolkits for HP-UX 11i HP Mirrordisk/UX for HP-UX 11i HP Extended Campus Cluster (including RAC) for HP-UX 11i HP Metrocluster with EMC SRDF for HP-UX 11i HP Continentalclusters (including RAC) for HP-UX 11i 	

Technical specifications (continued)

Management	<p>HP Systems Insight Manager provides a single point of administration across all operating systems supported on HP Integrity 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 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
-------------------	--

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: 3.4 in. (86 mm)/2U EIA Width: 19.0 in. (483 mm) Depth: 26.8 in. (680 mm)
Pedestal form factor	Height: 19.5 in. (495 mm) Width: 11.6 in. (295 mm) Depth: 26.6 in. (675 mm)
Weight	Maximum configuration: 56 lb. (25 kg)
Power requirements	Maximum input current: 8 A @ 100–127 VAC; 4 A @ 200–240 VAC (autoranging) Line frequency: 50–60 Hz <i>Note: Power figures are per system, not per input line (power supply), and include losses in the power supplies.</i>
Power supply	Power consumption, typical system: 600 W
BTU rating	Typical: 1,945 BTU/hour
Voltage tolerance range	90 to 132 VAC (operating range of 100–120 VAC +/-10%) 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	<p>Electromagnetic Interference</p> <p>Complies with FCC Rules and Regulations, Part 15 as a Class A digital device. Manufacturer's Declaration to EN55022 Level A, VCCI Registered, Class A, Korea RLL</p> <p>Safety</p> <p>UL Listed, CSA Certified, UL GS Mark compliant with EN 60950 and EN 41003</p>

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 rp3410-2 or rp3440-4 Servers, please contact any of our worldwide sales offices or visit:

www.hp.com/go/rp3410

www.hp.com/go/rp3440

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

HP Customer Support provides a broad spectrum of services to commercial and enterprise customers, including performance and availability services such as proactive mission-critical services and support management services for deployment of the entire IT infrastructure, including HP and multivendor environments. For more information on these services, contact your HP sales representative or visit:

www.hp.com/hps/support

© 2004, 2005 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Intel and Itanium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. UNIX is a registered trademark of The Open Group.

Financing available through Hewlett-Packard Financial Services Company or one of its affiliates is subject to credit approval and execution of standard HP Financial Services documentation. Other restrictions may apply. HP Financial Services reserves the right to change or cancel this program at any time without notice.

To learn more, visit www.hp.com

5982-3523EN Rev. 3, 05/25/2005

