

# 1U Rack-Mount Servers



*Compact and powerful*



Vendors manufacture 1U (1.75") rack-mount servers to satisfy the needs of organizations that have limited physical space. ISPs, application service providers (ASPs), and corporate data centers are likely to need the manageability and space conservation that ultra-thin servers provide. Smaller IT organizations can also start to incorporate 1U rack-mount servers into roles that larger pieces

of hardware currently occupy. For example, in most environments a properly equipped 1U rack-mount server can function as a domain controller (DC), DHCP server, DNS server, or gateway. The type of 1U rack-mount server you purchase for your organization will depend on how you plan to use it.

## Hardware Considerations

To analyze hardware requirements for a 1U rack-mount server, you need to use the same approach you use for a standard server. Consider your current and future expandability needs, and buy appropriately.

The new system should have adequate CPU, RAM, and storage capacity and include floppy and CD-ROM drives if you will need both. If you are concerned about disk performance, look for servers with an embedded Ultra 160 SCSI controller or, if your environment requires one, an embedded RAID controller. Many, but not all, 1U rack-mount servers come with dual embedded 10/100MB NICs. You should also verify that your organization's network boot and

Wake-on-LAN strategies support the NICs. Most 1U servers offer standard PS/2-style serial and USB ports and one or two PCI slots for expansion.

Different vendors offer different cooling fan implementations. If the server will be in a non-temperature-controlled environment, verify with the vendor that the unit's internal cooling is adequate.

## Manageability

Many vendors offer solutions to assist with installation, deployment, and manageability of 1U rack-mount servers. If you plan to implement a number of units, investigate different vendors' solutions.

Cable-management options can simplify installation and reduce the number of cables necessary to connect a rack of servers. Some servers come with sophisticated deployment tools to help you install the OS and your applications. If you plan to deploy many 1U servers, choose a vendor that offers such tools. Some units come with integrated Web-based management or with systems management tools

based on vendor-specific management frameworks. To determine what you'll need, consider the physical location of your servers and any management tools you already have.

## Upgradeability

At some point in a server's life cycle, you must choose whether to upgrade server components or replace the entire box. If you intend to upgrade components, plan accordingly. For example, if you plan to add a second processor to a dual-CPU system in the future, find

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out in advance whether you can use an off-the-shelf part or whether you must purchase a vendor-specific module. The same goes for disk drives and RAM.

## Serviceability

Choose a reliable vendor with service offerings that meet your organization's needs. Find out from the vendor how easily you can upgrade or replace individual components. Features such as removable drives, sliding rails, and hinged lids with thumbscrews can make maintenance much easier.

—Ed Roth

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**Editor's Note:** The Buyer's Guide summarizes vendor-submitted information. To find out about future Buyer's Guide topics or to learn how to include your product in an upcoming Buyer's Guide, go to <http://www.win2000mag.com/buyersguide>. To view previous Buyer's Guides on the Web, go to <http://www.win2000mag.net/channels/products>.

Compiled by Sue Cooper

Contact Information	Product Name	Price	Description
Compaq 281-370-0670 800-345-1518 <a href="http://www.compaq.com">http://www.compaq.com</a>	Compaq ProLiant DL360	\$4009 to \$5226	Features a 933MHz Pentium III processor and 128MB of 133MHz Error-Correcting Code (ECC) SDRAM expandable to 4GB; includes two Ultra Wide and Ultra 3 hot-plug drive bays, integrated Smart Array Controller module for RAID 0 functionality, a 9.1GB Universal Ultra 2 SCSI 7200rpm hard disk, 1.44MB floppy drive, and a high-speed IDE CD-ROM; supports SmartStart and Compaq Insight Manager management capabilities; has a 3-year limited warranty; doesn't include monitor
	ProLiant DL320	Starts at \$2160	Features an 800MHz Pentium III processor with standard 128MB of PC133MHz ECC SDRAM expandable to 2GB; features two Compaq NC3163 Fast Ethernet NICs with PCI 10/100 Wake-on-LAN capabilities; has one 64-bit PCI/33MHz expansion slot; includes a 1.44MB drive and a high-speed IDE CD-ROM drive; some models include a storage controller
Dell 512-728-3500 800-560-8324 <a href="http://www.dell.com">http://www.dell.com</a>	PowerEdge 1550	\$2599	Features single- or dual-Pentium III processors with a maximum of 1GHz scalability; includes as much as 108GB of internal storage capacity and as much as 2GB of 133MHz ECC SDRAM; supports two 64-bit 66MHz PCI slots on separate PCI buses; can support PDC and BDC gateways, DNS servers, and DHCP servers
Hewlett-Packard 408-343-5926 800-752-0900 <a href="http://www.hp.com">http://www.hp.com</a>	NetServer LP 1000r	Starts at \$4229	Allows as many as 84 CPUs per 2-meter rack; supports dual-Pentium III CPUs; features 4GB of SDRAM, three internal hard disks, and one 64-bit PCI slot; includes dual-embedded LAN adapters, two Channel Ultra 3 SCSI controllers, and CD-ROM and floppy drives
IBM 404-238-1234 888-746-7426 <a href="http://www.ibm.com">http://www.ibm.com</a>	IBM eServer xSeries 330	\$4426	Features a 1GHz Pentium III processor and 256MB of SDRAM; has 64KB of internal CPU cache and 256KB of Level 2 cache; includes an Ultra 160 SCSI drive bay
Polywell Computers 650-583-7222 800-999-1278 <a href="http://www.polywell.com">http://www.polywell.com</a>	PolyRaxx 1U2P-H	\$4750	Features 500MHz to 1GHz dual-Pentium III processors with 512MB of ECC RAM and two 36GB 10,000rpm hot-swap Ultra 160 RAID drives; has two 10/100Mbps Ethernet controllers; supports Windows 2000, Windows NT, Linux, FreeBSD, Sun Microsystems' Sun Solaris, and SCO systems
Supermicro 408-895-2000 <a href="http://www.supermicro.com">http://www.supermicro.com</a>	SuperServer 5010H	Call vendor for pricing	Features a 600MHz to 1GHz Pentium III processor or 300MHz to 700MHz Celeron processor with 133/100/66MHz front-side bus speed; supports as much as 512MB of PC133/100 SDRAM in three DIMM sockets; includes four 32-bit PCI slots, an Adaptec AIC-7899 dual-channel Ultra 160 SCSI controller, two Intel 82559 Ethernet controllers, AGP with optional AGP Inline Memory Module (AIMM) with 4MB of cache memory, and two Single Connector Attachment (SCA) Ultra 160 hot-swap drive bays
	SuperServer 6010H	Call vendor for pricing	Features 600MHz to 1GHz dual-Pentium III processors with 133/100MHz front-side bus speed; supports as much as 4GB of ECC PC133/100 SDRAM in four DIMM sockets; includes a 64/32-bit, 66/33MHz PCI slot, an Adaptec AIC-7899 dual-channel Ultra 160 SCSI controller, two Intel 82559 Ethernet controllers, an ATI Technologies' RAGE XL AGP VGA controller with 8MB of display memory, and two SCA Ultra 160 hot-swap drive bays