



hp workstation zx6000



data sheet

stylish looks, ferocious performance

The HP Workstation zx6000 is the pinnacle of workstation 64-bit performance.

It has a sleek tower form factor, and it can be equipped with up to two 1GHz Intel® Itanium® 2 processors loaded with 3MB of on-chip L3 cache and as much as 12GB of RAM, increasing to 24GB when 2GB DIMMs become available.

The HP zx6000 is flexible. You can choose your 64-bit operating system from Windows®, Linux®, or HP-UX to suit your needs. You can deploy it as a single user system (as shown above) or in a rack. In either configuration, you will have a full range of 2D and 3D AGP graphics accelerators from which to choose.

The HP zx6000 is ideal for customers who need racked graphics workstations or who require cluster nodes that can later be redeployed desktide. The HP zx6000 has extraordinary compute density, fitting twenty to a 2m rack for an astounding 160 GFLOPS of potential power.

A combination of these factors with the storage and processing power makes the HP zx6000 the ultimate solution for Computer Aided Engineering, Scientific Research, Life Sciences, Digital Content Creation rendering, as well as a software development platform for Symmetric MultiProcessor capable code.

hp workstation zx6000

feature	benefit	advantage
1–2 Intel Itanium 2 processors at 900MHz with 1.5MB on-chip L3 cache or at 1GHz with 3MB on-chip L3 cache	latest 64-bit processor from Intel in two variants of clock speed and cache size allow you to select price/performance or raw performance while large on-chip caches ensure good throughput	flexibility to suit your requirements and budget while still ensuring excellent time-to-market
HP zx1 Chipset offers 8.5GB/sec of memory bandwidth; 78ns open page memory latency; and AGP graphics	high bandwidth, low-latency data transfer across a well-balanced performance chipset built specifically for the Intel Itanium 2 processor; offers professional, fast graphics	enables the performance benefits of the Intel Itanium 2 processor, ensuring more data gets processed in less time; offers industry-standard graphics functionality for visualization
able to address 12GB of DDR SDRAM today, 24GB when 2GB DIMMs become available	64-bit architecture allows full addressing of physical memory—much more than the 2GB maximum allowable on most 32-bit architectures; DDR SDRAM gives excellent price/performance	the largest sets can be run in memory and 2GB is no longer a barrier; excellent price/performance means better return on investment
supports 3 operating systems: <ul style="list-style-type: none">• HP-UX 11i v1.6• Microsoft® Windows 64-bit• 64-bit Linux	your choice of operating environment remains unconstrained so you can pick the OS that is right for you and, if necessary, repurpose it over time	you no longer have to change hardware if you want to change OS, you have a system that can migrate easily
high-performance storage expandability	3 bays of Ultra160 SCSI offers high-performance storage, and lots of it—up to 219GB maximum	lots of fast high-speed storage ensures that the storage and capacity need never become a bottleneck
compatible with 32-bit and 64-bit HP-UX 11 and 11i binaries, 32-bit and 64-bit Windows binaries; 64-bit Linux binaries; and all Intel Itanium architecture binaries	your legacy applications can still be run on this revolutionary new architecture without the need to recompile; Itanium-based applications run with high performance	no other workstation in the industry has this level of backwards compatibility with so many applications from so many different operating systems; you can define your own migration to a 64-bit environment
full range of AGP graphics from the entry-level to high-end 3D	market proven graphics cards from ATI and NVIDIA are supported bringing full 2D and 3D functionality	stable, performance graphics are available across all three operating systems
redundant hot-plug fans (tower only); also power supplies; hot-plug disks; remote management features; plus machine check architecture ensures excellent processor uptime	reliability, availability, serviceability are part of the processor and system architecture	minimizing downtime means you can get maximum return on investment from your racked workstations and more reliable time-to-market

hp workstation zx6000 technical specifications

central processor

type	Intel Itanium 2 processor
clock frequency	900MHz, 1GHz
number of processors	1-2
system bus bandwidth	6.4GB/sec

cache (on-chip)

L1: 16KB instruction 16KB data
L2: 256KB
L3: 1.5MB (900MHz)
L3: 3MB (1GHz)

performance

hp workstation performance results can be found at:

www.hp.com/go/itaniumperformance

main memory & chipset

memory bandwidth	up to 8.5GB/sec
RAM type	PC2100 ECC DDR CL2
capacity	expandable to 12GB*
memory slots	12 DIMMs
open page memory system latency	78ns
aggregate I/O bandwidth	3.3GB/sec
graphics bandwidth	1.06GB/sec

* 24GB when 2GB DIMMs become available

operating system

HP-UX 11i v1.6
Microsoft Windows 64-bit
64-bit Linux

internal storage devices (3 bays for 1" high 3.5" hot-plug disks)

LSI 1030 dual-channel Ultra160 SCSI controller	
Ultra160 SCSI hard drives	36GB (10k rpm)
up to 3 devices, 219GB maximum	73GB (10k rpm)

expansion slots*

AGP 4X Pro 50 (1 slot)	32-bit 66MHz 1.5V 1.06GB/sec
PCI-X (full length, 3 slots)	64-bit 133MHz 532MB/sec

* each slot is an independent bus, bandwidth is not shared

removable media (1 slimline bay available)

IDE optical drives	
slimline DVD-ROM	
slimline CD-RW/DVD-ROM Combo Drive	

networking (integrated & supported on all O/S)

Intel 82550C Wake-on-LAN	
LAN data rate	10/100Mbps
Broadcom 5701	
LAN data rate	10/100/1000Mbps

built-in I/O

serial interface, DB9P	2 ports
USB 2.0, style A (USB 1.1 compatible)	4 ports

IEEE-1394 (Optional)

IEEE-1394A, OHCI	3 ports (2 rear, 1 internal)
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remote management features

baseboard management controller (integrated):

power and reset management, health management, event logging and reporting, hardware & data protection, always available management console

management processor card (optional):

manages system resources, diagnostics, facilitates system repair, includes management processor, a 2D graphics console (only supported if no AGP graphics card is installed), and a 10/100BT LAN for out-of-band management, alert-on-LAN

power supply

primary	hot-swap power supply with failover support
secondary (optional)	redundant hot-swap power supply with failover support
power supply output	650W

audio (optional, requires PCI slot)

type	16-bit stereo full-duplex
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monitors

18" flat panel LCD
19" flat screen CRT
21" flat screen CRT
24" flat screen CRT

environmental specifications

altitude	
operating	3000 m (10000 ft) max
storage	4600 m (15000 ft) max
temperature	
operating	+5°C to +35°C (+41°F to +95°F)
non-operating	-40°C to +70°C (-40°F to +158°F)
humidity	
operating	15% to 80% (relative)

physical dimensions, tower configuration

height	49.5 cm (19.5 in)
width	29.7 cm (11.7 in)
depth	67.3 cm (26.5 in)

physical dimensions, rack configuration (2U)

height	8.6 cm (3.4 in)
width	48.3 cm (19.0 in)
depth	68.1 cm (26.8 in)

net weight

minimum tower configuration	22.4 kg (49.4 lb)
maximum tower configuration	25.5 kg (56.3 lb)
minimum rack configuration	17.5 kg (38.6 lb)
maximum rack configuration	22.2 kg (49.0 lb)

power requirements

input current	100-127V~ 8.0A/200-240V~ 3.9A (autoranging)
line frequency	50Hz to 60Hz
maximum power input	714W

professional 3D graphics (AGP)

extreme 3D

ATI Fire GL4™	hp-ux only IBM® raster and geometry engines 128MB unified graphics memory Windows, Linux NV25GL graphics processing unit 128MB unified graphics memory
NVIDIA Quadro™4 900 XGL*	

mid-range 3D

ATI Fire GL™ 8800*	Windows, Linux ATI R200 graphics controller 128MB unified graphics memory
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entry3D

NVIDIA Quadro2 EX*	Windows, Linux Single, integrated geometry engine 32MB unified graphics memory
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professional 2D graphics (AGP)

ATI RADEON™ 7000**	hp-ux, Windows, Linux RADEON 7000 graphics controller 32MB DDR SDRAM memory
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www.hp.com/workstations/programs/leadership_graphics/index.html

*64-bit Windows and Linux availability set by OS release schedule

**currently available on HP-UX; 64-bit Windows and Linux availability set by OS release schedule

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