

Computer 's Persona AGANN

Image courtesy of SolidWorks

### Affordable innovation with the power to do more.

## HP xw4600 Workstation

Combining next-generation performance technologies into a powerful, flexible and reliable single processor socket workstation, the HP xw4600 Workstation is designed and engineered to give you and your business a professional edge.

#### Decidedly powerful

Gain a productivity advantage and accomplish more in less time. With outstanding price/performance, the HP xw4600 is an affordable workstation solution based on the new Intel® X38 Express performance chipset and the latest workstation-class Dual and Quad-Core Intel processors. With dual PCIe x16 Gen2 graphics interfaces, the HP xw4600 delivers up to twice the performance bandwidth of previous generation interfaces on your choice of professional 2D or 3D graphics cards while driving up to four 3D or six 2D displays without compromise. Realise savings in power consumption and energy costs with an 80 PLUS efficient power supply and Energy Star® compliant options without sacrificing performance.

#### Inherently flexible

Make a lasting impact with your financial investment with flexible, workstation-class options/expandability and support up to 8 GB of memory. The computing horsepower of the HP xw4600 allows you to meet the increasingly demanding requirements of graphics and other data-intensive professional applications such as mechanical design, digital content creation, or video editing and more. With more ports and expandability than before, it is easy to add memory, peripherals and HP recommends Windows Vista® Business.

storage as your future requirements change. Like all HP workstations, the HP xw4600 offers a tool-less chassis design for simple serviceability as well as free remote management software and optional Remote Graphics Software to assist in making your work life easier.

#### Exceedingly reliable

Focus on your priorities and work with true confidence with the comprehensive support of HP and its global partner network backing your system. HP engineers work onsite with ISVs to test and certify applications, OS and hardware configurations to help ensure that applications run better, faster and with greater reliability. Through innovative tools such as the HP Performance Tuning Framework (available free on Microsoft® Windows® – based systems), you can optimise and deliver the highest levels of system performance and application power throughout the life of your HP workstation.



### HP xw4600 Workstation

#### HP recommends Windows Vista® Business.

Operating system   Genuine Windows Vista <sup>®</sup> Business (32-bit)     Genuine Windows Vista <sup>®</sup> Business (32-bit)   Genuine Windows Vista <sup>®</sup> Business (32-bit)     Genuine Windows Vista <sup>®</sup> Business (32-bit)   Genuine Windows <sup>®</sup> XP Professional (32-bit)     Genuine Windows Vista <sup>®</sup> Business (64-bit)   Genuine Windows <sup>®</sup> XP Professional x64     Red Hat Enterprise Linux 4   HP Installer Kit for Linux     Product note   Not all Windows Vista <sup>®</sup> such as innovations in organising and finding information, security, and reliability. Some features available in premium editions of Windows Vista – like the new Windows <sup>®</sup> Aero <sup>®</sup> user interface – require advanced or additional hardware. Check www.windowsvistac.om/getready for details     Processor   Intel <sup>®</sup> Pentium Dual Core <sup>®</sup> E2180 (2.00 GHz), Core <sup>®</sup> 2 Duo E4500 (2.20 GHz), Core <sup>®</sup> 2 Duo E6550 (2.33 GHz), Core <sup>®</sup> 2 Duo E6750 (2.66 GHz), Core <sup>®</sup> 2 Duo E6850 (3.00 GHz), Core <sup>®</sup> 2 Quad Q6600 (2.40 GHz), Core <sup>®</sup> 2 Duo E6850 (3.00 GHz), Core <sup>®</sup> 2 Quad Q6600 (2.40 GHz), Core <sup>®</sup> 2 Duo E6750 (2.66 GHz), Core <sup>®</sup> 2 Duo E6850 (3.00 GHz), Core <sup>®</sup> 2 Quad Q6600 (2.40 GHz), Core <sup>®</sup> 2 Duo E6850 (2.93 GHz)     Front Side Bus   Up to 1333 MHz Front Side Bus     Chipset   Intel <sup>®</sup> X8 Express     Memory   Up to 8 GB     Hard drive(s)   1.2 TB maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpm     Expansion Bays   3 external 5.25 <sup>®</sup> bays and 1 external 3.5 <sup>®</sup> bay for optional floppy drive, 2 internal 3.5 <sup>®</sup> bays     CD-ROM/DVD   SATA 16X		Convertible Minitower, rack-mountable	
Genuine Windows Viat <sup>10</sup> Business (44-bit) Genuine Windows Viat <sup>10</sup> Business (44-bit) Genuine Windows Viat <sup>10</sup> Business (44-bit) downgrade to Genuine Windows <sup>4</sup> XP Professional (32-bit) Genuine Windows Viat <sup>10</sup> Business (44-bit) downgrade to Genuine Windows <sup>4</sup> XP Professional s64 HP Installer Kit for Linux       Product note     Notal Windows Viatio <sup>4</sup> Business (44-bit) downgrade to Genuine Windows <sup>4</sup> XP Professional s64 HP Installer Kit for Linux       Product note     Rel and Windows Viatio <sup>4</sup> Business (44-bit) downgrade to Genuine Windows <sup>4</sup> XP Professional (32-bit) Genuine Windows Viatio <sup>4</sup> Business (44-bit)       Processor     Line HP menium Mindows <sup>4</sup> and Viatio <sup>4</sup> Sectore via timefrace - require advanced or additional hardware. Check www.windowsita.com/geneody for details       Processor     Line HP menium Mindows <sup>4</sup> Ard Viatio <sup>4</sup> Sectore via timefrace - require advanced or additional hardware. Check www.windowsita.com/geneody for details       Processor     Lipe HP minum Mindows <sup>4</sup> Core <sup>7</sup> 2 Duo E6550 (23 GHz). Core <sup>7</sup> 2 Duo E6750 (26 GHz). Core <sup>7</sup> 2 Duo E6550 (20 GHz). Core <sup>7</sup> 2 Duo E6700 (26 GHz). Core <sup>7</sup> 2 Duo E6700 (20 GHz). Core <sup>7</sup>		· · · ·	
Genuine Windows Vian <sup>10</sup> Business (24 bill downgrade to Genuine Windows <sup>4</sup> XP Prefessional (32 bil) Genuine Windows Vian <sup>10</sup> Business (24 bill downgrade to Genuine Windows <sup>4</sup> XP Prefessional x64 Red Hot Enterprise Linux 4       Product note     Not all Windows Viato <sup>4</sup> Enterprise Linux 4       Product note     Not all Windows Viato <sup>4</sup> Enterprise Linux 4       Product note     Not all Windows Viato <sup>4</sup> Enterprise Linux 4       Product note     Not all Windows Viato <sup>4</sup> Enterprise An anovations in organising and finding information, security, and reliability, come <sup>4</sup> 2 bace EdSt0 (22 03 CH2), Come <sup>4</sup> 2 bace EdSt0 (22 04 CH2	Operating system		
Genuine Windows Viai <sup>®</sup> Business (64-bit) downgrade to Genuine Windows <sup>4</sup> XP Professional x64       Product note     Windows Viai <sup>®</sup> Business (64-bit) downgrade to Genuine Windows <sup>4</sup> XP Professional x64       Product note     Windows Viai <sup>®</sup> Business (64-bit) downgrade to Genuine Windows <sup>4</sup> XP Professional x64       Product note     Windows Viai <sup>®</sup> Business (64-bit) downgrade to Genuine Windows <sup>4</sup> XP Professional x64       Product note     Professional XIII     Windows Viai <sup>®</sup> Business (64-bit)     Comparison of Windows Viai <sup>®</sup> Business (64-bit)       Product note     Professional XIIII     Comparison of Windows Viai <sup>®</sup> Business (64-bit)     Comparison of Windows Viai <sup>®</sup> Business (64-bit)       Product note     Professional XIIIII     Professional XIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			
Red Hot Enterprise Linux 4     Product note   Not all Windows Vistor features are available for use on all Windows Vistor Capable PCs. All Windows Vistor Capable PCs will run the core experiences of Windows Vistor. Link the new Windows? Area or uniferation. security, and reliability. Some features available in periman editions of Windows Vistor. Link the new Windows? Area or uniferation. security, and reliability. Some features available in periman editors of Windows? Area or uniferation. security, and reliability. Some features available for uses of Windows? Area or use interface - nequire advanced or additional hadvans. Check www.windowsista.com/geneody for details     Processor   InelP Pentium Dall Core "E 2100 (200 GHz), Core" 2 Duo E6550 (230 GHz), Core 2 Charlondows, Core			
HP Insteller Kin for Linux     reduct note   Not all Windows Vitati Capable PCs. All Windows Vitati Capable PCs. All Windows Vitati Capable PCs.     reduct note   experiences of Windows Vitatis – Like the new Windows' Aeo" user interface – require advanced or additional hardware. Check www.windowsvitat.com/gatready for details     recessor   Intel® Pentium Dual Core" 2 Die G4500 (2.20 GHz). Core" 2 Due G4500 (2.40 GHz). Core"Core" 2 Due G4500 (2.40 GHz). Core" 2 Due G4500			
experiences of Windows Viste, such as innovations in organising and finding information, security, and eliability. Some features available in promium aditions of Windows Viste I like hen ewe Windows? Area" user interface – require advanced or additional hardware. Check www.windowsviste.com/gaterady for delatis.       tracessor     Intel® Pentium Dual Core" 2 Duo E6500 (2.00 GHz), Core" 2 Duo E6500 (2.00 GHz), Core" 2 Oud AG6000 (2.40 GHz), Core" 2 Oud AG600 (2.40 GHz), Core" 2 Duo E6500 (2.93 GHz)       trant Side Bus     Up to 1333 MHz Front Side Bus       Lipiset     Intel® Sepress       Attamum Memory     Up to 8 GB       tard drive(s)     1,21 B maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpm) or 160 GB (10000 rpm) or up to 4 SAS drives, 12.1 B maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpm       tard drive(s)     SATA toX DVDOM, SATA CDRW//DV Combo, SATA 16X DVD+/-RW Supermulti with Lightscribe 16 in 1 Media Card Reader (Occupies lowest Optical Bay)       trice Cantrollers     Integrated 5 CAS' toX Querof's X30 (Up to two cards), NVDIA* Quedro* NYS 440; Entry 3D: NVDIA Quedro* TX 3500; NVDIA Quedro* TX 3500 (up to two cards); Midfand 3D: NVDIA* Quedro* TX 3500; INVDIA* Quedro* TX 3500 (up to two cards); Midfand 3D: NVDIA* Quedro* TX 3500; NVDIA* Quedro* TX 3500 (up to two cards); Midfand 3D: NVDIA* Quedro* TX 3500; NVDIA* Quedro* TX 3500 (up to two cards); MIDIA* Quedro* TX 5400; Pt tow cards); Midfand 4D: Channel SATA 3 full-length legacy RCI slat       tard drive(s)     Integrated Broadcom 5755 Nettherm Gigabit PCIe LAN, optional Broadco 5751 Nettherm Gigabit PCIe       Vorus			
Core***2 Due 65/50 (2.66 GHz); Core***2 Due 66/50 (3.00 GHz); Core***2 Guad O6/600 (2.40 GHz); Core***2 Quad O6/700 (2.66 GHz); Core**2 Extreme OX/6850 (2.93 GHz)Front Side BusUp to 1333 MHz Front Side BusChipsetIntel**X38 ExpressMemoryDDR2 667 or 800 MHz ECC unbufferedMaximum MemoryUp to 4 SAA drives, 4 TB maximum, 80, 160, 250, 500, 1000 GB (7200 rpm) or 160 GB (10000 rpm) or up to 4 SAS drives, 1.2 TB maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpmAtard drive(s)Up to 4 SATA drives, 4 TB maximum, 80, 160, 250, 500, 1000 GB (7200 rpm) or 160 GB (10000 rpm) or up to 4 SAS drives, 1.2 TB maximum, 73, 146, 300 GB (15000 rpm from 7200 to 15000 rpmExpansion Bays3 atternol 5.25* bays and 1 externol 3.5* bay for optional floppy drive, 2 Internol 3.5* baysDrACM/DVDSATA 16X DVDROM, SATA CD-RW/DV Combo, SATA 16X DVDH / RW Supermulti with Lightscribe 16 in 1 Media Card Reader (Occupies lowest Optical Bay)Drive ControllersIntegrated 6 channel SATA 3 Gb/s NCQ controller with RAID capability, optional 4 channel SAS controller with RAID capability Entry 3D: NVIDIA* Quadre** FX 370 (up to two cards); Midrange 3D: NVIDIA* Quadre** FX 370 (up to two cards); Midrange 3D: NVIDIA* Quadre** FX 370 (up to two cards); Midrange 3D: NVIDIA* Quadre** TX 4400 (768 MB). All cards are optional and are all PCI Express (x10 and 5 rus)Vetworking/communicationIntegrated Broadcom 3755 Netxtreme Gigability, optional PC Sound Blaster XFI Xtreme MusicVetworking/communicationIntegrated Broadcom 3755 Netxtreme Gigability, optional Broadco 3751 Netxtreme Gigabil PCIe V500 (up to two cards); Midrange 3D: NVIDIA* Quadre** TX 4400 (768 MB). All cards are optional Ant asrial port, 1 parallel port, 2 PS/2 Leyboard a	Product note	experiences of Windows Vista, such as innovations in organising and finding information, security, and reliability. Some features available in premium editions of Windows Vista – like the new Windows® Aero <sup>™</sup> user interface – require advanced or additional hardware. Check	
Front Side Bus     Up to 1333 MHz Front Side Bus       Ehipset     Intel® X38 Express       Aemory     DDR 2 667 or 800 MHz ECC unbuffered       Accimum Memory     Up to 8 GB       Identify     Up to 4 SATA drives, 4 TB maximum, 80, 160, 250, 500, 1000 GB (7200 rpm) or 160 GB (10000 rpm) or up to 4 SAS drives, 1.2 TB maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpm     of 60 GB (10000 rpm) or up to 4 SAS drives, 1.2 TB maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpm       SATA 16X DVDROM, SATA CDRW/DV Combo, SATA 16X DVD+/RW Supermulti with Lightscribe 16 in 1 Media Card Reader (Occupies Iowest Optical Bay)       Drive Controllers     Integrated 6 channel SATA 3 Gb/s NCQ controller with RAID capability, optional 4 channel SAS controller with RAID capability Professional 2D: NVIDIA® Quadro® FX 370 (up to two cards), NVIDIA® Quadro® NXS 440; Entry 3D: NVIDIA® Quadro® FX 370 (up to two cards), NVIDIA® Quadro® TX 5300; NVIDIA® Quadro® TX 4600 (768 MB), All cards are optional and are all PCI Express (xtpansion slots     7 slot: 2 PCI Express (x16) Graphics slot, 1 PCI Express (x16 mechanica x4 electrically), 1 PCI Express (x1) and 3 fullength legacy PCI slot tudio       Variation     Integrated Broadcour 575 Netzteme Gigabit PCIe LAN, optional PC Sound Blazer XFi Xteme Music       Vetworking/communication     Integrated Broadcour 575. Netzteme Gigabit PCIe LAN, aptional Broadco 575. Netzteme Gigabit PCIe       Op orts and connectors     Front: headphone, microphone, 2 USB 2.0 and 1 aptional Broadco 575. Netzteme Gigabit PCIe       Op or	Processor	Core™ 2 Duo E6750 (2.66 GHz), Core™ 2 Duo E6850 (3.00 GHz), Core™ 2 Quad Q6600 (2.40 GHz),	
Memory     DDR2 667 or 800 MHz ECC unbuffered       Meximum Memory     Up to 8 GB       fard drive(s)     Up to 4 SATA drives, 4 TB maximum, 80, 160, 250, 500, 1000 GB (7200 rpm) or 160 GB (10000 rpm) or up to 4 SAS drives, 1.2 TB maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpm       Expansion Bays     3 external 5.25° bays and 1 external 3.5° bay for optional flopp vine, 2 internal 3.5° bays       CD-ROM/DVD     SATA 16X DVD-ROM, SATA CD-RW/DV Combo, SATA 16X DVD+/-RW Supermulti with lightscribe 16 in 1 Media Card Reader (Occupies lowest Optical Bay)       Orderstonel     Professional 2D: NVIDIA® Cuadro® NVS 240 (up to two cards), VIDIA® Cuadro® NVS 440; Entry 3D: NVIDIA® Cuadro® FX 370 (up to two cards), NVIDIA® Cuadro® TX 540 (rps to two cards); Midrange 3D: NVIDIA® Cuadro® FX 370 (up to two cards), NVIDIA® Cuadro® TX 540 (rps to wa cards); Midrange 3D: NVIDIA® Cuadro® FX 370 (up to two cards), NVIDIA® Cuadro® TX 550 (up to two cards); Midrange 3D: NVIDIA® Cuadro® FX 3700; NVIDIA® Cuadro® TX 550 (rps to tards); Midrange 3D: NVIDIA® Cuadro® TX 3500; NVIDIA® Cuadro® TX 5500 (rps to two cards); Midrange 3D: NVIDIA® Cuadro® TX 3500; NVIDIA® Cuadro® TX 400 (788 MB), All cards are optional and are all PCI Express (ratio mechanics at electrically), 1 PCI Express (x16) Graphics slots, 1 PCI Express (x16) mechanics at electrically, 1 PCI Express (x10 and 3 full-length legacy PCI slot Audio       Networking/communication     Integrated Broadcom 5755 Netxtreme Gigabit PCIe LAN, optional Broadco 5751 Netxtreme Gigabit PCIe       //O ports and connectors     Front: headphone, microphone, 2 USB 2.0 and 1 optional IEEE 1394A Rea USB 2.0, 1 externe Gigabit PCIe  <	Front Side Bus		
Ackinum Memory     Up to 8 GB       Iard drive(s)     Up to 4 SATA drives, 4 TB maximum, 80, 160, 250, 500, 1000 GB (7200 rpm) or 160 GB (10000 rpm) or up to 4 SAS drives, 1.2 TB maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpm       Expansion Bays     3 external 5.25" bays and 1 external 3.5" bay for optional floppy drive, 2 internal 3.5" bays       D-ROM/DVD     SATA 16X DVDROM, SATA CDRW/DV Combo, SATA 16X DVD+/-RW Supermulti with Lightscribe 16 in 1 Media Card Reader (Occupies lowest Optical Bay)       Drive Controllers     Integrated 6 channel SATA 3 Gb/s NCQ controller with RAID capability, optional 4 channel SAS controller with RAID capability       Graphics     Professional 2D: NVIDIA* Quadre* NVS 290 (up to two cards), NVIDIA* Quadre* NVS 440; Entry 3D: NVIDIA Quadre* FX 370 (up to two cards), NVIDIA* Quadre* NVS 440; Entry 3D: NVIDIA* Quadre* FX 300 (up to two cards), NVIDIA* Quadre* NVS 440; Entry 3D: NVIDIA* Quadre* FX 4000 (768 MB). All cards are optional and are all PCI Express argansion slots     7 slots: 2 PCI Express (x16) Graphics slots, 1 PCI Express (x16 mechanica x4 electrically), 1 PCI Express (x1) and 3 full-length legacy PCI slot Audio       Networking/communication     Integrated Broadcom 5755 Netxtreme Gigabil PCIe LAN, optional Broadco 5751 Netxtreme Gigabil PCIe 10 ports and connectors     Front: headphone, microphone, 2 USB 20 and 1 optional Broadco 5751 Netxtreme Gigabil PCIe 10 port 2 r5/2 keyboard and mouse, 1 RI-45 to integrated Gigabil LAN, audio In, audio O microphone 2 USB 2.0 (internal)       ower     475 watts wide-ranging, active Power Factor Correction, 80 Plus Efficient iscurity     P Soleno	Chipset	Intel® X38 Express	
Idead drive(s)   Up to 4 SATA drives, 4 TB maximum, 80, 160, 250, 500, 1000 GB (7200 rpm) or 160 GB (10000 rpm) or up to 4 SAS drives, 1.2 TB maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpm     ixpansion Bays   3 external 5.25" bays and 1 external 3.5" bay for optional floppy drive, 2 internal 3.5" bays     DD-ROM/DVD   SATA 16X DVD-ROM, SATA CD-RW/DV Combo, SATA 16X DVD+/-RW Supermulti with Lightscribe 16 in 1 Media Card Reader (Occupies lowest Optical Bay)     Drive Controllers   Integrated 6 channel SATA 3 Gb/s NCQ controller with RAID capability, optional 4 channel SAS controller with RAID capability     Group Line group and 2D: NVIDLA* Quadro* TX 370 (up to two cards), NVIDLA* Quadro* NVS 440; Entry 30: NVIDLA* Quadro* FX 370 (up to two cards), NVIDLA* Quadro* TX 500 (up to two cards); Midrange 3D: NVIDLA* Quadro* FX 1700 (up to two cards), NVIDLA* Quadro* TX 4600 (768 MB). All cards are optional and are all PCI Express     Expansion slots   7 slots: 2 PCI Express (x16) Graphics slots, 1 PCI Express (x16 mechanica x4 electrically), 1 PCI Express (x1) and 3 full-length legacy PCI slot Audio     Integrated High Definition audio with Jack Retasking capability, optional PC Sound Blaster XFi Xtreme Music     Vower   475 watts wide-ranging, active Power Facto Carrection, 80 Plus Efficient     vower   475 watts wide-ranging, active Power Facto Carrection, 80 Plus Efficient     vower   HP Stondord Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)     vower   475 watts wide-ranging, active Power Factor Carrection, 8	Memory	DDR-2 667 or 800 MHz ECC unbuffered	
1.2 TB maximum, 73, 146, 300 GB (15000 rpm) from 7200 to 15000 rpm     Expansion Bays   3 external 5.25" bays and 1 external 3.5" bay for optional floppy drive, 2 internal 3.5" bays     CD-ROM/DVD   SATA 16X DVD-ROM, SATA CD-RW/DV Combo, SATA 16X DVD+/-RW Supermulti with lightscribe 16 in 1 Media Card Reader (Occupies lowest Optical Bay)     Drive Controllers   Integrated 6 channel SATA 3 Gb/s NCQ controller with RAID capability, optional 4 channel SAS controller with RAID capability     Graphics   Entry 3D: NVIDIA* Quadre* NVS 290 (up to two cards), NVIDIA* Quadre* NVS 440; Entry 3D: NVIDIA* Quadre* FX 370 (up to two cards), NVIDIA* Quadre* X 570 (up to two cards); Mid-range 3D: NVIDIA* Quadre* FX 1700 (up to two cards), ATI FireGL* V5600 (up to two cards); Mid-range 3D: NVIDIA* Quadre FX 1700 (up to two cards), ATI FireGL* V5600 (up to two cards); High-end 3D: NVIDIA* Quadre FX 1700 (up to two cards), ATI FireGL* V5600 (up to two cards); High-end 3D: NVIDIA* Quadre FX 1700 (up to two cards), ATI FireGL* V5600 (up to two cards); High-end 3D: NVIDIA* Quadre FX 1700 (up to two cards), ATI FireGL* V5600 (up to two cards); High-end 3D: NVIDIA* Quadre FX 1700 (up to two cards), ATI FireGL* V5600 (up to two cards); High-end 3D: NVIDIA* Quadre FX 1700 (up to two cards), ATI FireGL* V5600 (up to two cards); Mid-range 3D: NVIDIA* Quadre FX 1700 (up to two cards), ATI FireGL* V5600 (up to two cards); Mid-range 3D: NVIDIA* Quadre FX 1700 (up to two cards), ATI FireGL* V5600 (up to two cards); Mid-range 3D: NVIDIA* Quadre FX 1700 (up to two cards); Mid-range 3D: NVIDIA* Quadre FX 1700 (up to two cards); Mid-range 3D: NVIDIA* Quadre FX 1700 (up to two cards); Mid-range 3D: NVIDIA* Quadre FX 1700 (up to two cards); Security     Poter cart cart cart cart cart cart cart car	Naximum Memory	Up to 8 GB	
DP-ROM/DVD   SATA 16X DVD-ROM, SATA CD-RW/DV Combo, SATA 16X DVD+/-RW Supermulti with Lightscribe 16 in 1 Media Card Reader (Occupies lowest Optical Bay)     Drive Controllers   Integrated 6 channel SATA 3 Gb/s NCQ controller with RAID capability, optional 4 channel SAS controller with RAID capability     Graphics   Professional 2D: NVIDIA® Quadro® NVS 290 (up to two cards), NVIDIA® Quadro® NVS 440; Entry 3D: NVIDIA Quadro® FX 370 (up to two cards), NVIDIA® Quadro® TX 500 (up to two cards); Midrange 3D: NVIDIA® Quadro® FX 3700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V500 (up to two cards); Audio     Integrated Broadcom 5755 Nextreme Gigabit PCle LAN, optional Broadco 5751 Nextreme Music     Vetworking/communication   Integrated Broadcom 5755 Nextreme Gigabit PCle LAN, oudio In, audio O microphone 2 USB 2.0 (internal) </td <td>Hard drive(s)</td> <td colspan="2"></td>	Hard drive(s)		
(Occupies lowest Optical Bay)     Drive Controllers     Integrated 6 channel SATA 3 Gb/s NCQ controller with RAID capability, optional 4 channel SAS controller with RAID capability     Graphics   Professional 2D: NVIDIA® Quadro® NVS 290 (up to two cards), NVIDIA® Quadro® NVS 440; Entry 3D: NVIDIA Quadro® FX 370 (up to two cards), NVIDIA® Quadro FX 570 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 370 (up to two cards), ATI FrieGE'V 5560 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 3500; NVIDIA® Quadro® FX 4600 (768 MB). All cards are optional and are all PCI Express     Audio   Integrated High Definition audio with Jack Retasking capability, optional PC Sound Blaster XFi Xtreme Music     Networking/communication   Integrated Broadcom 5755 Netxtreme Gigabil PCIe LAN, optional Broadco 5751 Netxtreme Gigabil PCIe     /O ports and connectors   Front: headphone, microphone, 2 USB 2.0 and 1 optional IEEE 1394A Rea USB 2.0, 1 external SATA, 1 standard serial port, 1 parallel port, 2 PS/2 keyboard and mouse, 1 RI-45 to integrated Gigabil LAN, audio In, audio O microphone 2 USB 2.0 (internal)     Power   475 watts wide-ranging, active Power Factor Correction, 80 Plus Efficient     security   HP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and Lock     nput devices   HP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)     Dimensions (W x D x H)   16.8 x 45.6 x 45.0 cm     Weight   Minimum configuration: 15 kg, Maximum configuration: 19 kg <td< td=""><td>xpansion Bays</td><td>3 external 5.25" bays and 1 external 3.5" bay for optional floppy drive, 2 internal 3.5" bays</td></td<>	xpansion Bays	3 external 5.25" bays and 1 external 3.5" bay for optional floppy drive, 2 internal 3.5" bays	
Fordessional 2D: NVIDIA® Quadro® NVS 290 (up to two cards), NVIDIA® Quadro® NVS 440;     Entry 3D: NVIDIA@ Quadro® FX 370 (up to two cards), NVIDIA@ Quadro® NVS 440;     Entry 3D: NVIDIA@ Quadro® FX 1700 (up to two cards), NVIDIA@ Quadro® NVS 440;     Kidrange 3D: NVIDIA® Quadro® FX 1700 (up to two cards), NVIDIA@ Quadro® NVS 640;     Kity 3D: NVIDIA@ Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards);     High-end 3D: NVIDIA® Quadro® FX 1700 (up to two cards);     Networking/communication   Integrated Bioadcom 5755 Netxtreme Gigabit PCle     /O ports and connectors   Front: headphone, microphone, 2 USB 2.0 a	CD-ROM/DVD		
Entry 3D: NVIDIA Quadros FX 370 (up to two cards), NVIDIA Quadro FX 570 (up to two cards); Mid-range 3D: NVIDIA® Quadros FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards); High-end 3D: NVIDIA® Quadros FX 1700 (up to two cards), ATI FireGL® V5600 (up to two cards); High-end 3D: NVIDIA® Quadros FX 3500; NVIDIA® Quadros FX 4600 (768 MB). All cards are optional and are all PCI ExpressExpansion slots7 slots: 2 PCI Express (x16) Graphics slots, 1 PCI Express (x16 mechanica x4 electrically), 1 PCI Express (x1) and 3 full-length legacy PCI slotAudioIntegrated High Definition audio with Jack Retasking capability, optional PC Sound Blaster X-Fi Xtreme MusicNetworking/communicationIntegrated Broadcom 5755 Netxtreme Gigabit PCle LAN, optional PC Sound Blaster X-Fi Xtreme Music/O ports and connectorsFront: headphone, microphone, 2 USB 2.0 and 1 optional IEEE 1394A Rea USB 2.0, 1 external SATA, 1 standard serial port, 2 PS/2 keyboard and mouse, 1 RI-45 to integrated Gigabit LAN, audio In, audio O microphone 2 USB 2.0 (internal)Power475 watts wide-ranging, active Power Factor Correction, 80 Plus EfficientMput devicesHP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)Dimensions (W x D x H)16.8 x 45.6 x 45.0 cmWeightMinimum configuration: 15 kg, Maximum configuration: 19 kgMonitorsHP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19 in Flat Panel Monitor (all sold separately)	Drive Controllers	Integrated 6 channel SATA 3 Gb/s NCQ controller with RAID capability, optional 4 channel SAS controller with RAID capability	
Mid-range 3D: NVIDIA® Quadro® FX 1700 (up to two cards), ATI FireGL" V5600 (up to two cards); High-end 3D: NVIDIA® Quadro® FX 1500; NVIDIA® Quadro® FX 4600 (768 MB). All cards are optional and are all PCI ExpressExpansion slots7 slots: 2 PCI Express (x16) Graphics slots, 1 PCI Express (x16 mechanica x4 electrically), 1 PCI Express (x1) and 3 full-length legacy PCI slot AudioIntegrated High Definition audio with Jack Retasking capability, optional PC Sound Blaster X-Fi Xtreme MusicNetworking/communicationIntegrated Broadcom 5755 Netxtreme Gigabit PCIe LAN, optional Broadco 5751 Netxtreme Gigabit PCIe/O ports and connectorsFront: headphone, microphone, 2 USB 2.0 and 1 optional IEEE 1394A Rea USB 2.0, 1 external SATA, 1 standard serial port, 1 parallel port, 2 PS/2 keyboard and mouse, 1 RJ-45 to integrated Gigabit LAN, audio In, audio O microphone 2 USB 2.0 (internal)Power475 watts wide-ranging, active Power Factor Correction, 80 Plus EfficientiecurityHP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and Locknput devicesHP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)Dimensions (W x D x H)16.8 x 45.6 x 45.0 cmWeightMinimum configuration: 15 kg, Maximum configuration: 19 kgMonitorsHP LP3065 30in Flat Panel Monitor, HP LP2465 24:n Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19:n Flat Panel Monitor (all sold separately)	Graphics		
High-end 3D: NVIDIA® Quadro FX 3500; NVIDIA® Quadro® FX 4600 (768 MB). All cards are optional and are all PCI Expressixpansion slots7 slots: 2 PCI Express (x 16) Graphics slots, 1 PCI Express (x 16 mechanica x4 electrically), 1 PCI Express (x 1) and 3 full-length legacy PCI slotAudioIntegrated High Definition audio with Jack Retasking capability, optional PC Sound Blaster X-Fi Xtreme MusicNetworking/communicationIntegrated Broadcom 5755 Netxtreme Gigabit PCIe LAN, optional Broadco 5751 Netxtreme Gigabit PCIe/O ports and connectorsFront: headphone, microphone, 2 USB 2.0 and 1 optional IEEE 1394A Rea USB 2.0, 1 external SATA, 1 standard serial port, 1 parallel port, 2 PS/2 keyboard and mouse, 1 RJ-45 to integrated Gigabit LAN, audio In, audio O microphone 2 USB 2.0 (internal)Power475 watts wide-ranging, active Power Factor Correction, 80 Plus EfficientiecurityHP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and Locknput devicesHP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)Dimensions (W x D x H)16.8 x 45.6 x 45.0 cmWeightMinimum configuration: 15 kg, Maximum configuration: 19 kgMonitorsHP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19in Flat Panel Monitor (all sold separately)			
To slots: 2 PCI Express (x16) Graphics slots, 1 PCI Express (x16 mechanica x4 electrically), 1 PCI Express (x1) and 3 full-length legacy PCI slotAudioIntegrated High Definition audio with Jack Retasking capability, optional PC Sound Blaster X-Fi Xfreme MusicNetworking/communicationIntegrated Broadcom 5755 Netxtreme Gigabit PCIe LAN, optional Broadco 5751 Netxtreme Gigabit PCIe/O ports and connectorsFront: headphone, microphone, 2 USB 2.0 and 1 optional IEEE 1394A Rea USB 2.0, 1 external SATA, 1 standard serial port, 1 parallel port, 2 PS/2 keyboard and mouse, 1 RI-45 to integrated Gigabit LAN, audio In, audio O microphone 2 USB 2.0 (internal)Power475 watts wide-ranging, active Power Factor Correction, 80 Plus EfficientNetworkingHP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and LockImput devicesHP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)Dimensions (W x D x H)16.8 x 45.6 x 45.0 cmWeightMinimum configuration: 15 kg, Maximum configuration: 19 kgMonitorsHP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19in Flat Panel Monitor (all sold separately)			
Audio   Integrated High Definition audio with Jack Retasking capability, optional PC Sound Blaster X-Fi Xtreme Music     Networking/communication   Integrated Broadcom 5755 Netxtreme Gigabit PCIe LAN, optional Broadco 5751 Netxtreme Gigabit PCIe     /O ports and connectors   Front: headphone, microphone, 2 USB 2.0 and 1 optional IEEE 1394A Rea USB 2.0, 1 external SATA, 1 standard serial port, 1 parallel port, 2 PS/2 keyboard and mouse, 1 RJ-45 to integrated Gigabit LAN, audio In, audio O microphone 2 USB 2.0 (internal)     Power   475 watts wide-ranging, active Power Factor Correction, 80 Plus Efficient     Power   475 watts wide-ranging, active Power Factor Correction, 80 Plus Efficient     Power   HP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and Lock     Integration   HP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)     Dimensions (W x D x H)   16.8 x 45.6 x 45.0 cm     Weight   Minimum configuration: 15 kg, Maximum configuration: 19 kg     Monitors   HP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19in Flat Panel Monitor (all sold separately)		High-end 3D: NVIDIA® Quadro FX 3500; NVIDIA® Quadro® FX 4600 (768 MB). All cards are optional and are all PCI Express	
Notes and connectors   Integrated Broadcom 5755 Netxtreme Gigabit PCle LAN, optional Broadco 5751 Netxtreme Gigabit PCle     /O ports and connectors   Front: headphone, microphone, 2 USB 2.0 and 1 optional IEEE 1394A Rea USB 2.0, 1 external SATA, 1 standard serial port, 1 parallel port, 2 PS/2 keyboard and mouse, 1 RI-45 to integrated Gigabit LAN, audio In, audio O microphone 2 USB 2.0 (internal)     ower   475 watts wide-ranging, active Power Factor Correction, 80 Plus Efficient     recurity   HP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and Lock     nput devices   HP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)     timensions (W x D x H)   16.8 x 45.6 x 45.0 cm     Veight   Minimum configuration: 15 kg, Maximum configuration: 19 kg     Nonitors   HP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19in Flat Panel Monitor (all sold separately)	xpansion slots	7 slots: 2 PCI Express (x16) Graphics slots, 1 PCI Express (x16 mechanica x4 electrically), 1 PCI Express (x1) and 3 full-length legacy PCI slot	
/O ports and connectors   Front: headphone, microphone, 2 USB 2.0 and 1 optional IEEE 1394A Rea USB 2.0, 1 external SATA, 1 standard serial port, 2 PS/2 keyboard and mouse, 1 RI-45 to integrated Gigabit LAN, audio In, audio O microphone 2 USB 2.0 (internal)     /rower   475 watts wide-ranging, active Power Factor Correction, 80 Plus Efficient     /recurity   HP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and Lock     /nput devices   HP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)     Dimensions (W x D x H)   16.8 x 45.6 x 45.0 cm     Weight   Minimum configuration: 15 kg, Maximum configuration: 19 kg     HP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19 in Flat Panel Monitor (all sold separately)	Audio	Integrated High Definition audio with Jack Retasking capability, optional PC Sound Blaster X-Fi Xtreme Music	
2 PS/2 keyboard and mouse, 1 RJ-45 to integrated Gigabit LAN, audio In, audio O microphone 2 USB 2.0 (internal)     ower   475 watts wide-ranging, active Power Factor Correction, 80 Plus Efficient     recurity   HP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and Lock     nput devices   HP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)     timensions (W x D x H)   16.8 x 45.6 x 45.0 cm     Veight   Minimum configuration: 15 kg, Maximum configuration: 19 kg     Nonitors   HP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19 in Flat Panel Monitor (all sold separately)	letworking/communication		
Security   HP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and Lock     Input devices   HP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)     Dimensions (W x D x H)   16.8 x 45.6 x 45.0 cm     Neight   Minimum configuration: 15 kg, Maximum configuration: 19 kg     Monitors   HP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19 in Flat Panel Monitor (all sold separately)	/O ports and connectors		
Input devices   HP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)     Dimensions (W x D x H)   16.8 x 45.6 x 45.0 cm     Weight   Minimum configuration: 15 kg, Maximum configuration: 19 kg     Aonitors   HP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19in Flat Panel Monitor (all sold separately)	ower	475 watts wide-ranging, active Power Factor Correction, 80 Plus Efficient	
Dimensions (W x D x H)   16.8 x 45.6 x 45.0 cm     Veight   Minimum configuration: 15 kg, Maximum configuration: 19 kg     Monitors   HP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19in Flat Panel Monitor (all sold separately)	ecurity	HP Solenoid Hood Lock/Sensor Kit, Kensington Security Cable and Lock	
Veight   Minimum configuration: 15 kg, Maximum configuration: 19 kg     Aonitors   HP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19in Flat Panel Monitor (all sold separately)	nput devices	HP Standard Keyboard (USB or PS/2) 2-button scroll mouse (USB optical or PS/2) or 3-button mouse (USB optical)	
Monitors HP LP3065 30in Flat Panel Monitor, HP LP2465 24in Flat Panel Monitor, HP LP2065 20.1 in Flat Panel Monitor, HP LP1965 19in Flat Panel Monitor (all sold separately)	Dimensions (W x D x H)	16.8 x 45.6 x 45.0 cm	
HP LP1965 19in Flat Panel Monitor (all sold separately)	Veight	Minimum configuration: 15 kg, Maximum configuration: 19 kg	
Narranty 3-year worldwide parts, labour and next business day onsite service Terms and conditions may vary, restrictions apply	Monitors		
	Varranty	3-year worldwide parts, labour and next business day onsite service Terms and conditions may vary, restrictions apply	

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# HP xw4600 Workstation

### HP recommends Windows Vista® Business.

SpaceExplorer USB 3D Input Device	The intelligent 3D motion controller, deliver all the functions you need, the second you need them. HP is the only vendor also offering a Performance Tuning Framework for simplified installation and uninterrupted productivity.
	Product number: RY429AA
ATI FireGL V5600 512 MB PCIe Graphics	Mid-range professional graphics board for CAD, DCC, and visualisation applications. If you're looking for the ultimate price/performance solution, you've just found it.
	Product number: GT346AA
HP 1 GB (1×1 GB) DDR2-667 ECC unb RAM	A high-quality memory add-on for users who require increased performance and improved efficiency. Easily run daily applications and tackle increasingly complex design or data simulation.
	Product number: PV941A
HP 512 MB (1x512) DDR2-667 ECC unb RAM	A high-quality memory add-on for users who require increased performance and improved efficiency. Easily run daily applications and tackle increasingly complex design or data simulation.
	Product number: PV940A
HP 250 GB SATA 3 Gb/s NCQ 7200 rpm HDD	Serial ATA Hard Drives maximise the performance of HP workstations by providing the technologies to meet your increasing storage demands. These 250 GB drives offer all the capacity, reliability and performance you need.
	Product number: EA788AA



