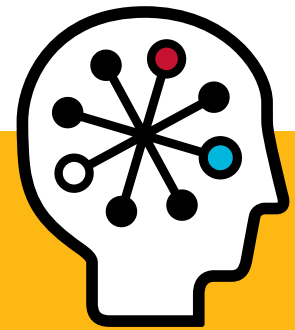




HP ProLiant WS460c G6 Workstation Blade

Data sheet



The HP ProLiant WS460c G6 Workstation Blade allows you to centralize your organization's workstations in the data center—revolutionizing workstation computing. Rather than placing the workstation's computing power at the user's desk, the computing power—in the form of a blade workstation—is moved to the data center, where workstations can be more easily, securely, and economically managed. The results are improved uptime and business continuity, enhanced data center security, and reduced IT costs.

This next-generation workstation infrastructure combines the centralized, mission-critical control and security of the data center with seamless, on-demand workstation performance, providing the flexibility to support professionals in multiple work locations. This innovative offering is more than five years in the making and testing. Our blade workstation is modeled on the HP ProLiant blade server, an infrastructure that has demonstrated trading-floor-proven reliability.

The WS460c provides for an improved user environment, better resource utilization, easy remote access, and real-time, remote collaboration between individuals and teams. It can transform your workstation environment to make your users more productive.

What's new?

Based on the Intel® Nehalem architecture and a broad range of graphic cards—such as the NVIDIA Quadro FX 770M (256MB), FX 770M (512MB), and FX 3600M mezzanine graphics cards—the HP ProLiant WS460c G6 Workstation Blade delivers high performance for demanding 2D and 3D applications. The WS460c's graphics capabilities, expanded memory support (up to 96GB per blade), and HP Remote Graphics Software (RGS) performance enable users to complete large model visualizations with uncompromised workstation-class performance.

Key features and benefits

The new WS460c supports the latest Intel Xeon® processors and NVIDIA graphics cards—providing outstanding enterprise-class performance while reducing risk, improving work efficiency, and eliminating distance barriers. With data center connectivity, the capability to make multiple blade connections, and high-performance compute density, the WS460c delivers compute power on demand.

Data center security and control

The WS460c lowers risks by managing technology exposure to your business operations with a centralized blade approach. Because only encrypted graphic data is sent to client devices, your workstation environment benefits from mission-critical security and low-latency data access. Encryption also reduces the risk of security exposure from local hard drives, removable media drives, and data interfaces such as USB, as well as from system theft or loss—helping you to effectively lock your sensitive data in the data center. Therefore, you can:

- Centralize your workstation computing power in the data center, with high-performance blade workstations driven graphically from client devices—keeping your workstation environment safer and more secure.
- Reduce or control the security exposure of your client devices' local drives and USB ports—and lower the risk associated with system theft or loss.

Business continuity

With multi-blade and multi-site capabilities, the WS460c can dramatically improve your business continuity. Now you can:

- Rely on the availability of your computing resources—knowing that your workstation computing infrastructure provides data center-class redundancy and fault tolerance to keep your computing resources up and running.

The HP ProLiant WS460c G6 Workstation Blade offers data center security, enhanced graphics capabilities, and remote access from multiple work locations. Based on a centralized blade workstation approach, it enables effective collaboration and cost reduction.

- Run multiple blade workstation sessions from a single client and connect to any data center to intelligently balance and shift compute resources in the event of problems.
- Be prepared for incidents such as power loss and catastrophic disasters—with data center computing environments that can be accessed more securely, from any location, with a solution designed in partnership with and extensively tested by financial industry leaders.

Reduced IT costs

The innovative WS460c reduces IT costs in a number of ways. It enables you to:

- Centralize your workstation resources and enable support personnel to easily manage and support your workstations.
- Equip support staff with excellent blade workstation management tools for faster problem detection, diagnosis, and resolution.
- Quickly provision another blade workstation to the user when one goes down—without physically visiting the user.

Workstation-class experience

The WS460c delivers an outstanding workstation experience transparent to the means of delivery and offers excellent graphic capabilities, all in a small device footprint. What's more, the WS460c includes HP RGS, an innovation from HP that delivers the full workstation-class experience over standard networks. You can:

- Use RGS to drive blade workstation graphics efficiently through a network connection.
- Remotely share and deliver advanced media-rich workstation graphics, with multi-display 2D/3D capabilities and full motion video.
- Dramatically reduce the heat, noise, and power consumption inherent in multi-workstation desktop configurations by moving compute power to a blade form factor in the data center, so your users can work productively without sacrificing computing power.

- Drive up to four displays per client device—and run multiple computing sessions from each—so professionals have access to the compute power they need on demand.
- Move, add, and change blade computing power in minutes, making it easy for your professionals to connect to compute resources and for IT to manage its hardware pool.

Multi-location flexibility

- The WS460c paves the way for new business work models by removing distance barriers with reliable network-enabled access that allows teams to collaborate remotely as virtual teams. RGS provides access from remote locations over long distances. It is possible to:
 - Easily access blade workstation resources from thin client devices and from Microsoft® Windows®-based workstations, PCs, and notebooks.¹
 - Decrease network impact and enable high levels of performance with a solution that intelligently compresses and reduces bandwidth usage, leverages your existing network infrastructure, and runs your existing applications unchanged.
 - Share a single system and session across multiple professionals in different locations, and work collaboratively on the same applications—allowing them to solve business, financial, and engineering problems in real time.

Easy management

The WS460c helps consolidate IT management in one location, heightening efficiency and reducing time needed to troubleshoot and perform maintenance tasks. Now you can:

- Put the power to manage entire systems in the hands of IT professionals—with the ability to navigate and manage systems through a single browser-based interface, and deploy software easily using the HP ProLiant Essentials Rapid Deployment Pack.
- Allow IT support staff to remotely control and troubleshoot your workstation blades—from a central location or anywhere on the network—through a single browser-based interface, using HP ProLiant Onboard Administrator (powered by the Integrated Lights-Out 2 management processor).

¹ The solution supports the following operating systems for ProLiant workstations:

- Genuine Microsoft Windows Vista® Business SP2 (32-bit and 64-bit)
- Genuine Microsoft Windows XP Professional SP3 (32-bit)
- Genuine Microsoft Windows XP Professional x64 edition with SP2
- Red Hat Enterprise Linux (RHEL) 4.8 and 5.3 (64-bit only)

HP ProLiant WS460c G6 Workstation Blade



Processor type	Intel Xeon 5500 series
Available processors	<p>Quad-core: Intel Xeon X5570 (2.93 GHz, 8MB L3, 95W, DDR3-1333, HT, Turbo 2/2/3/3) Intel Xeon X5560 (2.80 GHz, 8MB L3, 95W, DDR3-1333, HT, Turbo 2/2/3/3) Intel Xeon X5550 (2.66 GHz, 8MB L3, 95W, DDR3-1333, HT, Turbo 2/2/3/3) Intel Xeon E5540 (2.53 GHz, 8MB L3, 80W, DDR3-1066, HT, Turbo 1/1/2/2) Intel Xeon E5530 (2.40 GHz, 8MB L3, 80W, DDR3-1066, HT, Turbo 1/1/2/2) Intel Xeon E5520 (2.26 GHz, 8MB L3, 80W, DDR3-1066, HT, Turbo 1/1/2/2) Intel Xeon E5506 (2.13 GHz, 4MB L3, 80W, DDR3-800) Intel Xeon E5504 (2.00 GHz, 4MB L3, 80W, DDR3-800) Intel Xeon L5530 (2.40 GHz, 8MB L3, 60W, DDR3-1066, HT, Turbo 1/1/2/2) Intel Xeon L5520 (2.26 GHz, 8MB L3, 60W, DDR3-1066, HT, Turbo 1/1/2/2) Intel Xeon L5506 (2.13 GHz, 4MB L3, 60W, DDR3-800)</p> <p>Dual-core: Intel Xeon E5502 (1.86 GHz, 4MB L3, 80W, DDR3-800)</p>
Low-wattage processor offerings	Yes
Processor core	2- and 4-core
Cache memory	4MB or 8MB shared L3
Maximum processor speed	2.93 GHz
Multi-processor	2
Number of sockets	2
Processors per 42U enclosure	64
Servers supported (maximum)	16
Memory type	PC3-10600 (DDR-1333) DDR3 Registered and unbuffered DIMM
Standard memory	2GB or 4GB
Maximum memory	Up to 96GB
Memory slots	12 DIMM slots
Advanced memory protection	Advanced ECC Mirrored memory
Storage type	Hot plug SFF SAS
Number of hard drives	Up to 2 serial attached SFF hot plug SAS drives
Graphics card	NVIDIA Quadro FX 770M (256MB), up to four monitor support with dual-card configuration, FX770M (512MB) or FX 3600M (512MB), up to two monitor support
Expansion slot	Two (2) I/O expansion mezzanine slots (x8 PCI Express)
Deployment	
Form factor	Blade
Rack height	16 workstation blades in 10U; 8 workstation blades in 6U
Networking	Embedded NC532i Dual Port Flex-10 10GbE Multifunction Server Adapter
Remote management	ProLiant Onboard Administrator powered by iLO 2
Redundant power supply	Enclosure-based power
Warranty	3-year parts/3-year labor/3-year onsite
Remote Graphics Software	
Version	HP Remote Graphics Software Version 5.3
Performance	Interactive 2D, 3D, and streaming video performance
Multi-Display	Up to four displays per Client desktop session
Access Clients	
QuickSpecs URL	http://h18000.www1.hp.com/products/quickspecs/13429_div/13429_div.pdf
HP gt7725 Thin Client Quick Specs:	http://h18000.www1.hp.com/products/quickspecs/13165_div/13165_div.PDF

Ideal environment

The WS460c is ideal for computing environments that require the use of high-performance graphical applications in remote locations. It is well suited for organizations in the financial trading, mechanical computer-aided design (MCAD), public sector, and oil and gas markets.

Financial (securities trading): Stream video, market data, and financial trading applications from multiple workstations to a multi-display trading desk, remote office, or disaster recovery site.

MCAD: Rely on more secure, real-time, interactive access to 3D CAD applications from multiple locations, faster loads and stores of data, and the ability to remotely collaborate within your design teams.

Command and control centers: Consolidate your data centers and share access to your mission-critical data out to your user community in remote locations, without that data ever leaving your secure data center.

Scientific research and defense: Provide more secure, high-performance access to sensitive data and applications. Users no longer have direct access to disks or USB ports to potentially remove data.

Oil and gas exploration: Depend on enhanced graphics capabilities to visualize and collaborate on large datasets from remote access points.

HP Financial Services

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 local HP representative, or visit: www.hp.com/go/hpfinancialservices

For more information

For more information about the HP ProLiant WS460c G6 Workstation Blade, contact your local HP representative, or visit: www.hp.com/go/WS460c

To connect with other blade customers, partners and experts, visit the HP Blade Connect online community: www.hp.com/go/bladeconnect

HP Services

When Technology Works, Business Works

The challenge of virtually every IT organization is similar: to develop and maintain an agile, efficient server infrastructure that delivers the service levels your business needs.

HP Technology Services offer a comprehensive portfolio of HP Care Pack Services to help design, deploy, manage, and support your HP ProLiant Workstation Blades environment with easy-to-buy, easy-to-use support packages.

Minimum recommended HP Care Pack offerings:

- Three-year, four-hour response onsite 24-hour x seven-day hardware support
- Blades Infrastructure plus Enhanced Network installation and Start Up services
- Enhanced service level Care Pack offerings
- Three-year Support Plus 24: Integrated 24x7 hardware and software support
- Proactive Select: Access to HP best-in-class technical consultants. Purchase service credits and obtain expertise when needed

Benefit from HP Care Pack Services helping you:

- Reduce deployment time and manage HP ProLiant Workstation solutions smoothly and efficiently
- Increase uptime and performance of server availability for your business
- Detect, diagnose, and repair problems to quickly save time, money, and resources

For more information, visit:

www.hp.com/services/bladesteam or

www.hp.com/go/proliant/carepack

Technology for better business outcomes

To learn more, visit www.hp.com/go/WS460c

© Copyright 2009 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.

4AA2-8077ENW, August 2009



Get connected

www.hp.com/go/getconnected

Current HP drivers, support & security alerts delivered directly to your desktop

