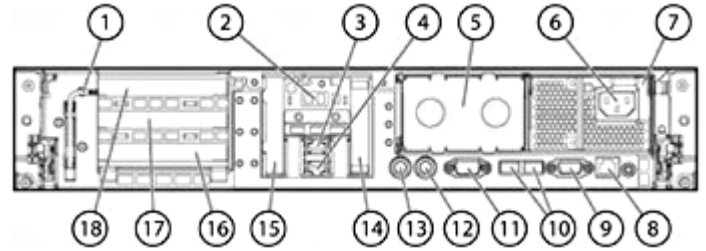
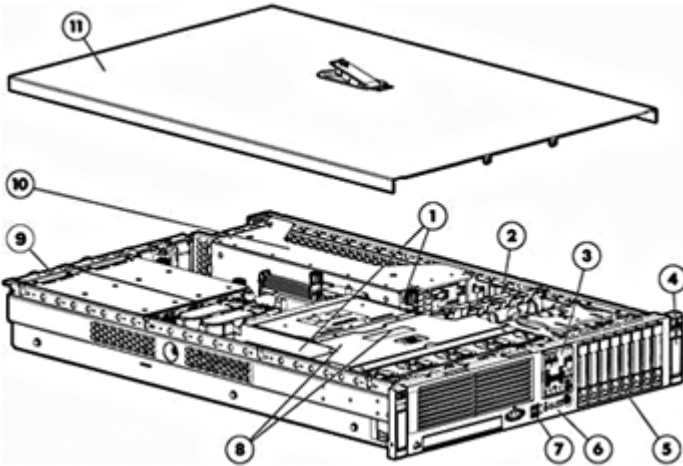


## Overview



### Front View:

1. Eight sockets for PC2-5300 DIMMs (DDR2-667) with Advanced ECC
2. Hot-plug fans, full redundancy
3. Systems Insight Display
4. Quick release lever for rapid server access
5. Support for eight Small Form Factor hot plug hard drives bays
6. Front LEDs (show server status) and Unit Identification button/LED (for easy in rack server identification)
7. Two front USB ports (+two rear, one internal USB port)
8. AMD Quad-Core Processor (Performance models include two processors)
9. Hot plug power supply, redundancy option (High performance models include redundant power supply)
10. Three PCI-E non-hot plug expansion slots (or optional mixed PCI-X/E expansion cage or optional x16 PCI-E 225W expansion cage). Two additional PCI-E slots embedded on system board. This provides Four available PCI-E non-hot plug expansion slots for use; one consumed by Smart Array Controller
11. Quick removal access panel

### Rear View:

1. T-10/T-15 Torx screwdriver
2. External option blank
3. NIC 2 connector
4. NIC 1 connector
5. Power supply bay 2
6. Power cord connector
7. Power supply bay 1 (populated)
8. Integrated Lights-Out 2 (iLO 2) connector
9. Video connector
10. USB connectors (2)
11. Serial connector
12. Mouse connector
13. Keyboard connector
14. Expansion slot 1
15. Expansion slot 2
16. Expansion slot 3
17. Expansion slot 4
18. Expansion slot 5

## What's New

- New AMD Opteron 2300 Series Low Voltage (HE) processor

## At A Glance



### Overview

The new HP ProLiant DL385 G5 delivers on the DL385 performance and the DL380's history of design excellence with enterprise-class uptime and manageability, and now with Quad-Core AMD Opteron™ performance, power, efficiency, and 2U density for a variety of rack deployments and applications.

- **Processors:**
  - AMD Quad-Core, 2300 series processors with 2MB (4 x 512KB) Level 2 cache and 2MB (1 x 2MB) Level 3 cache for blazing performance; systems support up to 2 processors (2 processors standard on all Performance models)
  - Preconfigured Performance models save valuable deployment time at a discounted bundle price
  - Serverworks HT-2100 Northbridge and HT-1000 Southbridge chipset
- **Memory:**
  - 8 DIMM slots supporting up to 64GB REG PC2-5300 DDR2-667 MHz memory with Advanced ECC
  - Select models support 2:1 Interleaving. Bank Interleaving (Data saved across 2 pairs of DIMMs) and Node interleaving support (data saved across 2 processors memory sets) also available
- **Storage Controller:**
  - Entry/High Efficiency Models: HP Smart Array E200/64MB Controller (RAID 0/1/5)
    - Upgrade to 128 MB cache, adds Raid 5 and BBWC
    - The Smart Array E200/64MB Controllers ships installed in slot 3 (slots 1,2,4,&5 available)
  - Base Models: HP Smart Array P400/256MB Controller (RAID 0/1/1+0/5)
    - Upgrade to 512 MB cache w/o Battery Backed Cache module, optional BBWC
    - The Smart Array P400/256MB Controller ships installed in slot 1 (slots 2-5 are available)
  - Performance Models: HP Smart Array P400/512MB BBCW Controller (RAID 0/1/5/6)
- **Internal Drive Support:**
  - (8) small form factor (SFF) hot-plug drive bays to support Serial-attached SCSI (SAS) and Serial ATA (SATA) drives
- **Network Controller:**
  - Two embedded NC373i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit
- **Expansion Slots:**
  - 4 Total PCI-Express slots: three x8 and one x4
  - Optional mixed 2 PCI-X / two x8 PCI-Express
  - Optional cage with PCI-Express with one x8; one x16 (225W) and one x4 configurations available
- **USB 2.0 Ports:**
  - 5 total ports: (2) ports up front; (2) ports in back; (1) port internal
- **Graphics Processing Unit (GPU):**
  - Support for Nvidia FX5600 1.5GB PCIe
- **Redundancy:**
  - Fully redundant hot plug fans
  - Hot plug power supply with optional redundancy (included in Performance models)
- **Management:**
  - HP Insight Control suite delivers essential management, including proactive health management, lights out remote control, optimization of power usage, rapid server deployment, performance analysis, vulnerability scanning and patch management and virtual machine management. For more information, go to: [www.hp.com/go/ice](http://www.hp.com/go/ice).
  - HP ProLiant Onboard Administrator (powered by the Integrated Light-Out 2 management processor) for simplified server setup, health monitoring and recovery, power and thermal control, and lights-out remote administration
    - Integrated Lights-Out 2 Advanced unlocks the full capabilities of the ProLiant Onboard Administrator with high performance Integrated Remote Console, multi-user console sharing, video record and replay, and virtual media, including virtual folders for rapid server updates.
    - System Insight Display on the front bezel for quick and easy server diagnostics
- **Form Factor:**
  - Rack (2U), (3.5-inch)
- **Operating Systems and Virtualization Software Support for ProLiant Server:**
  - Supports Windows, RHEL, SLES, OEL, Solaris, VMware, NetWare and HP Citrix Essentials for XenServer
- **Deployment/Serviceability:**

### Overview

- Quick Deploy Rail System includes sliding universal rails, an ambidextrous cable management arm and quick release levers for fast and easy serviceability
- Tool-less access to all system components for easy in rack serviceability
- Customer Self Repair (CSR): HP products are designed with many CSR parts to minimize repair time and allow for greater flexibility in performing defective parts replacement
- **Warranty:**
  - This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. SATA hard drives have a one-year warranty.

**NOTE:** Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have HP replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: <http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

### Standard Features

**NOTE:** For a brief, printer friendly data sheet that describes this product and informs you of the essential capabilities and specifications, please visit: <http://h71028.www7.hp.com/ERC/downloads/4AA1-7824ENW.pdf>.

**NOTE:** For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

**Processor**

AMD Opteron™ Processor 2356 (2.3 GHz, 75 Watts)

One of the following depending on Model

AMD Opteron™ Processor 2352 (2.1 GHz, 75 Watts)

AMD Opteron™ Processor 2347 HE (1.9 GHz, 55 Watts)

**NOTE:** Processor wattage references reflect Average CPU Power (ACP). For more information on ACP visit: <http://www.amd.com/powernow>.

**NOTE:** Up to 2 processors supported. High Performance Model configurations include two processors, Upgraded memory to 512, BBWC, DVD/CDRW and Redundant Power Supply.

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**Cache Memory**

2MB (4 x 512KB) Level 2 cache and 2MB (1 x 2MB) Level 3 cache

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**Chipset**

Serverworks HT-2100 Northbridge and HT-1000 Southbridge Chipset

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**Upgradeability**

Upgradeable to 2 processors

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**Memory Protection**

Advanced ECC

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**Memory**

Type

PC2-5300 DIMMs (DDR2-667)

Select models support 2:1 Interleaving, with Bank Interleaving (Data saved across 2 pairs of DIMMs) and Node interleaving support (data saved across 2 processors memory sets) available.

**NOTE:** DIMM banks are active only when the corresponding processor socket is populated.

Standard  
(Entry, Base Models)

2 GB (2 x 1 GB)

Standard  
(Performance Models)

4 GB (4 x 1 GB)

Maximum

64 GB (8 x 8 GB)

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**Network Controller**

Two embedded NC373i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit

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### Standard Features

#### Expansion Slots

With Standard PCIe Riser Installed

**NOTE:** For PCIe only situations.

Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
1	PCIe	x8	x8	70	Low profile slot	Reserved slot for Smart Array P400 Controller
2	PCIe	x8	x8	67	Low profile slot	
3	PCIe	x4	x8	11	Full length, full height slot	
4	PCIe	x8	x16	8	Full length, full height slot	
5	PCIe	x8	x16	5	Full length, full height slot	

\* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

\*\* Indicates the number of physical electrical lanes running to the connector.

With Optional PCIe x16 Riser 225W Installed

**NOTE:** For PCIe only situations.

Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
1	PCIe	x8	x8	70	Low profile slot	Reserved slot for Smart Array P400 Controller
2	PCIe	x8	x8	67	Low profile slot	
3	PCIe	x4	x8	8	Full length, full height slot	
4	PCIe	x16	x16	5	Full length, full height slot	Supports 225W card

\* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

\*\* Indicates the number of physical electrical lanes running to the connector.

### Standard Features

With Optional PCIe/PCI-X Riser Installed <i>NOTE: For PCI-X mixed situations.</i>	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Device Number***	Form Factor	Notes
	1	PCIe	x8	x8	70	0	Low profile slot	Reserved slot for Smart Array P400 Controller
	2	PCIe	X8	x8	67	0	Low profile slot	
	3	PCIe	x8	x16	10	0	Full length, full height slot	
	4	PCI-X (133MHz, 3.3 Volt)	64-bit	Not applicable	6	1	Full length, full height slot	
	5	PCI-X (133MHz, 3.3 Volt)	64-bit	Not applicable	6	2	Full length, full height slot	

\* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

\*\* Indicates the number of physical electrical lanes running to a PCI-e connector.

\*\*\* Slots are enumerated differently based on OS. MS OS's enumerate from lowest to highest Device ID by bus (starting with the lowest bus).

#### Storage Controller *One of the following depending on Model*

Entry/High Efficiency Models:	HP Smart Array E200/64MB Controller (RAID 0/1/5) <b>Available upgrades:</b> 128 MB memory module for RAID 0/1/5, battery for battery-backed write cache (BBWC).
Base Models:	HP Smart Array P400/256 MB Controller (RAID 0/1/1+0/5) <b>Available upgrades:</b> 512 MB memory module for RAID 0/1/5/6, battery for battery-backed write cache (BBWC).
Performance Models:	HP Smart Array P400/512 MB BBWC Controller (RAID 0/1/5/6)

#### Storage

Diskette Drive	None Standard
Optical Drive <i>One of the following depending on Model</i>	None Standard IDE DVD-ROM/CDRW Combo included on Performance models
Hard Drives	None Standard

#### Maximum Internal Storage

Hot Plug SAS	2.4TB	8 x 300GB with standard internal hot plug SFF SAS drive cage
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### Standard Features

<b>Intelligent Manageability</b>	HP Systems Insight Manager SmartStart Management Agent Redundant ROM Remote Flash ROM ROM-Based Setup Utility (RBSU) Integrated Management Log Automatic Server Recovery (ASR) Dynamic Sector Repairing (with Smart Array controller) Drive Parameter Tracking (with Smart Array controller) Pre-Failure Warranty (covers processors, SAS hard drives and memory)
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<b>Interfaces</b>	Serial	1
	Pointing Device (Mouse)	1
	Graphics	1
	Keyboard	1
	VGA	2 (1 front, 1 back)
	Network RJ-45	2
	iLO 2 remote management port	1
	USB 2.0 Ports	5 (2 front, 2 back, 1 inside)

**NOTE:** Please see the following URL for additional information regarding USB support:  
<http://h18004.www1.hp.com/products/servers/platforms/usb-support.html>.

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<b>Graphics</b>	Integrated ATI ES1000, 32MB video standard
	<ul style="list-style-type: none"><li>• 16 bit color: maximum resolution of 1600 x 1200</li><li>• 32 bit color: maximum resolution of 1280 x 1024</li></ul>

**NOTE:** Maximum resolution available via iLO 2 remote console is 1280 x 1024.

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<b>Form Factor</b>	Rack (2U), (3.5-inch)
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### Standard Features

**HP Insight Control suite** HP Insight Control suite delivers essential infrastructure management, including remote monitoring, hardware resource deployment, health monitoring, software version control, performance monitoring, vulnerability scanning and patch management, and power management.

HP Insight Control suite installs and licenses the following components by default using a wizard-based integrated installer:

- HP Systems Insight Manager (SIM)
- HP iLO Advanced Pack
- HP Insight Rapid Deployment software (RDP)
- HP Insight Power Manager (IPM)
- HP Insight Performance Manager module (PMP)
- HP Insight Vulnerability and Patch Manager module (VPM)
- HP Insight Virtual Machine Manager software for ProLiant (VMM)

Additional Insight software and management tools included on the Insight Software media kit can be installed manually

- HP Insight Server Migration software for ProLiant (SMP)  
**NOTE:** HP Insight Server Migration software for ProLiant is licensed separately from Insight Control suite.
- HP Open Service Event Manager
- HP Insight Remote Support Standard
- HP Insight Remote Support Advanced (previously Service Essentials Remote Support Pack)

**NOTE:** Insight Server Migration software for ProLiant can be installed from the SMP CD included in the Insight Software media kit.

**NOTE:** For additional product and licensing information about HP Insight Control suite, visit: <http://www.hp.com/go/ice>.

**NOTE:** As of Feb. 1, 2009, HP iLO Power Management Pack is being discontinued. Customers can either purchase HP Insight Control suite which contains all the components of IPMP or the standalone components which include iLO Advanced, Insight Power Manager software and Systems Insight Manager.

HP Insight Control suite for Linux (ICE-Linux) provides comprehensive discovery, imaging & deployment, monitoring, and management for Linux-based ProLiant server platforms. Built on the industry-leading HP Systems Insight Manager framework, this solution integrates open source technology with experience leveraged from HP's Linux products in HP ICLE and HP XC Clusters, while providing paths to the future with developing management technologies.

HP Insight Control suite and most Insight software products include one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, please visit:

<http://www.hp.com/services/insight>.



### Standard Features

#### HP ProLiant Onboard Administrator

HP ProLiant Onboard Administrator (powered by the Integrated Lights-Out 2 management processor) simplifies server setup, health monitoring, power and thermal control, and lights-out remote administration of ProLiant ML, DL, and BL servers. HP ProLiant Onboard Administrator functions without additional software, and can be accessed from any location via a web browser. It works hand-in-hand with HP Systems Insight Manager, Insight Control, and Insight Dynamics - VSE suite helping customers unlock the value of the ProLiant platform and deliver the highest possible quality of IT service to the business.

Capabilities of the HP ProLiant Onboard Administrator embedded in ProLiant ML/DL servers include, but are not limited to the following:

- Rom-based Setup Utility (RBSU) and Option Rom Configuration for Arrays (ORCA)
- IML and iLO event logging
- Automatic Server Recovery (ASR)
- OS independent hardware health status
- Present server power consumption
- Virtual Unit ID control
- Remote serial console
- Virtual power button control
- Dynamic Sector Repairing (with Smart Array controller)
- Drive Parameter Tracking (with Smart Array controller)
- Hot Spare Boot

**NOTE:** Upon the event of a failed processor in a multi-processing environment, the system will automatically reboot and attempt to use the remaining good processor.

Unlock the full remote administration capabilities of HP ProLiant Onboard Administrator with Integrated Lights-Out 2 Advanced.

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#### Server Management Stand Alone Software Product - Insight software

HP Systems Insight Manager (SIM)

HP Systems Insight Manager (HP SIM) provides a unified, secure and extensible standards-based environment to centrally manage servers, storage and other infrastructure devices, (both HP and non-HP) across multiple operating system platforms.

For additional information, please see: [www.hp.com/go/insight](http://www.hp.com/go/insight)

HP Insight Rapid Deployment software (RDP)

Insight Rapid Deployment software (RDP) extends HP Systems Insight Manager with a complete deployment solution for HP ProLiant servers. RDP provides a central location to configure server hardware, deploy Windows, Linux and VMware ESX operating environments and install HP ProLiant Support Pack drivers using images and scripted profiles. For more information, visit: <http://www.hp.com/go/rdp>.

HP Insight Server Migration software for ProLiant (SMP)

Upgrading, replacing, or virtualizing your existing server? Effortlessly transition to new virtual or physical HP ProLiant servers or BladeSystem with automated, accurate and affordable migration of OS, application and data. Insight Server Migration software for ProLiant (SMP) automates the manual processes required for migrating servers between physical or virtual platforms, whether migrating to VMware or Microsoft virtual machines. SMP allows all of the following migrations:

- physical to ProLiant
- physical to virtual
- virtual to virtual

### Standard Features

- virtual to ProLiant

**NOTE:** For more information, visit: <http://www.hp.com/go/migrate>.

HP Insight Dynamics - VSE suite for ProLiant The HP Insight Dynamics - VSE suite for ProLiant is advanced infrastructure management software that allows you to analyze and optimize your adaptive infrastructure to manage physical and virtual resources in the same way. HP Insight Dynamics - VSE gives you a powerful toolkit to accelerate complex technology projects and simplify daily operations. It enables you to plan capacity and power continuously, balance across physical and virtual resources, ensure cost-effective high availability and provision infrastructure consistently.

**NOTE:** For more information, visit: <http://www.hp.com/go/insightdynamics>

HP Integrated Lights-Out (iLO) Advanced Pack Unlocks the full capabilities of the ProLiant Onboard Administrator with comprehensive remote control including Virtual KVM remote graphical console, power management capabilities such as power measurement, regulation, and capping, new iLO Text Console, automatic and on-demand video recording of server events, global team collaboration for up to four remote users, virtual media (floppy, CD/DVD, USB key), virtual folders, and enterprise security (directory services and two-factor authentication). For additional information, please see: [www.hp.com/go/iLO](http://www.hp.com/go/iLO)

HP Insight Virtual Machine Manager software for ProLiant Get the most out of server virtualization by unifying the management of physical and virtual servers in HP Systems Insight Manager. The Insight Virtual Machine Manager software for ProLiant (VMM) plug-in provides central management and control of VMware and Microsoft virtual machines and provides physical host to virtual machine association. For additional information, please see: <http://www.hp.com/go/vm-manage>

HP Insight Power Manager (IPM) Upgrades the single-server remote management capabilities of iLO Select/Advanced to include centralized reporting and policy-based management of power consumption and thermal output provided by the Insight Power Manager. IPM unifies all of this functionality within a single user interface - HP Systems Insight Manager.

**NOTE:** Flexible and volume quantity license kits are available for Insight software products. Refer to <http://www.hp.com/go/insightcontrol> or the various Insight software product QuickSpecs for more information.

### Standard Features

#### Core Infrastructure Management

#### HP Foundation Pack

Managing the growing number of servers can be complex and expensive for your organization. IT managers need to address changing business needs with tools that meet the challenges of managing today's complex Datacenters.

HP provides management solutions that are designed to simplify a server's installation, configuration and maintenance throughout the entire server lifecycle. This provides the customer with higher levels of operational efficiency and highly reliable systems: [www.hp.com/go/foundation](http://www.hp.com/go/foundation).

The foundation pack includes:

- HP SmartStart
- HP Management
- HP ProLiant Firmware Maintenance

SmartStart version supported (minimum): SmartStart 7.80.

<http://www.hp.com/servers/smartstart>

#### Insight Management Agents

The Insight Management Agents should be installed on all HP servers to present system instrumentation, health and configuration information into HP Systems Insight Manager and the HP System Management Homepage. The HP System Management Homepage aggregates systems data from Insight Management Agents and other HP management tools, providing a consolidated browser-based interface for managing individual servers.

Insight Management Agents and The HP System Management Homepage are included on ProLiant Support Packs, and can also be installed using the server profiles provided with the ProLiant Essentials Rapid Deployment Pack. For additional information about the Management Agents and the HP System Management Homepage please visit the management Web site at:

<http://www.hp.com/servers/manage>.

#### Subscriber's Choice

Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides software and driver change notifications for ProLiant products. Sign up at:

<http://www.hp.com/go/subscriberschoice> and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.

#### ProLiant Support Packs and ROMPaq, software

The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options, available through ProLiant Support Packs the ProLiant Essentials Rapid Deployment Pack, SmartStart or downloaded from software and drivers download pages website at:

<http://www.hp.com/go/support>.

### Standard Features

**HP Serviceguard for Linux (SGLX)** HP Serviceguard for Linux provides high availability clustering for Linux applications running on HP Integrity, HP ProLiant and other supported industry-standard servers. Serviceguard for Linux reduces planned and unplanned downtime and delivers efficient, continuous access to business-critical applications - with all of the enterprise features you expect from HP.

This high availability clustering solution is designed to protect applications and services from a wide variety of software and hardware failures, monitoring the health of each server (node) and quickly responding to failures such as those that affect system processes, system memory, LAN media and adapters, and application processes.

For the most recent list of Linux distributions & kernels, servers and storage supported with Serviceguard for Linux, please see:

[ftp://ftp.compaq.com/pub/products/servers/ha/linux/SGLX\\_Certification\\_Matrix.pdf](ftp://ftp.compaq.com/pub/products/servers/ha/linux/SGLX_Certification_Matrix.pdf)

The following is a quick summary of HP Serviceguard for Linux features and support:

- Supported Virtual Machines
  - SG/LX in HP Integrity Virtual Machines guests
  - SG/LX in VMware ESX guests
  - SG/LX in Red Hat and SUSE Xen hosts (DOM0)
- Application Integration Toolkits
  - HP Serviceguard for Linux Oracle Database Toolkit
  - HP Serviceguard Extension for SAP on Linux (SGeSAP/LX)
  - Free Application Integration Toolkits:
    - Apache
    - MySQL
    - NFS
    - PostgreSQL
    - Samba
    - Tomcat
    - Sendmail
- Disaster Tolerant Solutions
  - HP Serviceguard for Linux Extended Distance Cluster (XDC) extends cluster distances up to 100 km, utilizes software RAID mirroring for data replication and is storage array independent
  - HP StorageWorks XP/EVA Cluster Extension Software for Linux (CLX) works seamlessly with HP Serviceguard for Linux, HP StorageWorks Continuous Access, and HP Disk Arrays to automate failover and failback between sites
- Software updates are distributed by HP Services to customers with support contracts

**NOTE:** For additional information including software and server support on HP Serviceguard for Linux, visit: <http://www.hp.com/go/sglx> or see the HP Serviceguard for Linux QuickSpecs.

**NOTE:** HP Serviceguard for Linux products for HP ProLiant and select 3rd party x86 class servers include one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, please visit: <http://www.hp.com/services/swsupport>

### Standard Features

Industry Standard Compliance	ACPI 2.0 Compliant PCI 2.2 Compliant WOL Support Microsoft® Logo certifications USB 2.0 Support
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Security	Power-on password Keyboard password Diskette drive control Diskette boot control QuickLock, Network Server Mode Parallel and serial interface control Administrator's password
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Server Power Cords	High voltage power cord ships standard. <b>NOTE:</b> HP ProLiant DL servers no longer ship standard with NEMA power cords (163719-002) that allow connection to 110V US wall outlets in a home or office. ProLiant DL servers are primarily connected to PDU's in data center racks so they now ship standard with only a PDU power cord (416151-B21). If a user wishes to power a ProLiant DL server using a 110V receptacle (NEMA-15), the NEMA power cord (227099-001) must be ordered separately.
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UPS and PDU Power Cord Matrix	Please see the UPS and PDU cable matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units: <a href="ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf">ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf</a> .
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Power Supply	800 Watt, CE Mark Compliant Optional Hot Plug AC Redundant Power Supply
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System Fans	Hot plug fans ship standard, fully redundant Fully redundant hot plug fans ship standard (N+1)
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Operating Systems and Virtualization Software Support for ProLiant Server	<a href="#">Microsoft Windows Server</a> <a href="#">Microsoft Windows Server Hyper V</a> <a href="#">Red Hat Enterprise Linux (RHEL)</a> <a href="#">SUSE Linux Enterprise Server (SLES)</a> <a href="#">Oracle Enterprise Linux (OEL)</a> <a href="#">Solaris 10 for x86/x64 based Systems</a> <a href="#">NetWare</a> <a href="#">VMware</a> <a href="#">Citrix Essentials for XenServer</a> <b>NOTE:</b> For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: <a href="http://www.hp.com/go/ossupport">http://www.hp.com/go/ossupport</a> and our driver download page <a href="http://www.hp.com/support/DL385G5">www.hp.com/support/DL385G5</a> .
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### Standard Features

#### Rack Airflow Requirements

##### Rack 10000 series Cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors.

**CAUTION:** If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment:

- Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 830 square inches (5,350 sq cm) of holes evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation).
- Side: The clearance between the installed rack component and the side panels of the rack must be a minimum of 2.75 inches (7 cm).

**CAUTION:** Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage.

**NOTE:** For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL: [www.hp.com/servers/dl385](http://www.hp.com/servers/dl385).

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#### Rack Kit

The HP ProLiant DL385 quick deploy rail system provides tool-free support for racks with square or round mounting holes (including Compaq/HP 7000\*, 9000, 10000 and HP series), with an adjustment range of 24" - 36". The ambidextrous cable management arm can be mounted on either the left or right side for improved cable management.

**NOTE:** Cable management arm must be removed to access hot-plug power supplies when the cable management arm is mounted on the right.

**NOTE:** High Airflow Inserts (High Air Flow Rack Door Insert for the 7142 Rack (single) - PN: 327281-B21; or High Air Flow Rack Door Insert for the 7142 Rack (6-pack) - PN: 327281-B22) are required to support the HP ProLiant DL385 G5 in 7000 series racks. The DL385 Cable Management Arm is not supported on 7000 series racks.

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#### Telco Rack Support

DL385 Telco Rack Kit:

Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions (<http://www.racksolutions.com/hp/>)

### Standard Features

#### Factory Express Portfolio for Servers and Storage

HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSAxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to: <http://www.hp.com/go/factory-express>.

#### HP Enterprise Configurator

The HP eConfigure-Enterprise Configurator now provides factory default racking for our HP hardware portfolio. This approach is aligned with our strategic direction to meet the needs and expectations of our valued customers. If you require "custom" rack configuration, please contact HP's Customer Business Center or an Authorized Partner for assistance.

<http://www.hp.com/products/configurator>.

#### Service and Support

HP Care Pack services provide total care and support expertise with committed response designed to meet your IT and business needs.

HP Care Pack services include coverage for the HP branded hardware options qualified for the server and purchased at the same time or afterward that are internal to the enclosure. This also includes the 22" and smaller external monitors and tower UPS options up to 3kVA. These items will be covered at the same service level and for the same coverage period as the server. Coverage of UPS Battery is not included, and standard warranty terms & conditions apply. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

To fully capitalizing on your HP ProLiant servers' capabilities requires a service partner who thoroughly understands your server technology and systems environment. HP Services, an industry leader in provision of multi vender support solutions, provides a range of support services designed to meet the varying needs of your business. Whether an SMB, or large global corporation, HP has a ProLiant server support offer to help you speedily deploy and maximize system uptime.

**Recommended Service** - simplify ProLiant solution implementation, maintenance, and management.

- Support: 3-Year 4-Hour response 24x7 Same Business Day Coverage only
- Deployment Service: Installation and Start up only

**Enhanced Service** - optimize service level to increase IT performance and availability.

- Support: 3-Year Support Plus 24 only

Refer to the information on "Installation & Start-Up" for service on ProLiant server and Microsoft, or Linux O/S per the Customer Description and/or Data Sheet; to be delivered on a scheduled basis 8am-5pm, M-F, excluding HP holidays.

**NOTE:** For a complete listing of service offerings and information visit:

<http://www.hp.com/services/proliantservices>



## Standard Features

<http://www.hp.com/go/proliant/carepack>



## HPC Interconnects

**NOTE:** High Performance Computing (HPC) interconnect technologies are available for the DL385 under the Cluster Platform product portfolio. These high-speed interconnects are fully supported by HP when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPC Clusters with InfiniBand, Gigabit Ethernet or Myrinet Interconnects: <http://www.hp.com/techservers/clusters/ucp/index.html>.

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HPC Interconnect	InfiniBand	PCI-X and PCI-Express adapters
	Gigabit Ethernet	Use embedded ports
	Myrinet XP	PCI-X Rev D and Rev E adapters

### Models

**NOTE:** For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

HP DL385 G5 Performance Models HP DL385R05 2356 HPM 449764-001	<b>Processor(s)</b>	(2) Quad-Core AMD Opteron 2356 Processors (2.3 GHz, 75 Watts)
	<b>Cache Memory</b>	2MB (4 x 512KB) Level 2 cache and 2MB (1 x 2MB) Level 3 cache
	<b>Memory</b>	4 GB (4 x 1 GB) of 2:1 interleaved PC2-5300 DIMMs (DDR2-667) with Advanced ECC capabilities
	<b>Network Controller</b>	Two Embedded NC373i Multifunction Gigabit Server Adapters
	<b>Storage Controller</b>	HP Smart Array P400/512MB BBWC Controller (RAID 0/1/5/6)
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	2.4GB (8 x 300GB with standard internal hot plug SFF SAS drive cage and optional hard drives)
	<b>Optical Drive</b>	IDE DVD-ROM/CDRW combo
	<b>Form Factor</b>	Rack (2U), (3.5-inch)
	<b>Availability</b>	Hot Plug Fully Redundant Fans and Redundant Power Supplies

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HP DL385 G5 Base Models HP DL385R05 2352 449768-001 HP DL385R05 2356 449767-001	<b>Processor(s)</b>	(1) Quad-Core AMD Opteron 2356 Processor (2.3 GHz, 75 Watts) (1) Quad-Core AMD Opteron 2352 Processor (2.1 GHz, 75 Watts)
	<b>Cache Memory</b>	2MB (4 x 512KB) Level 2 cache and 2MB (1 x 2MB) Level 3 cache
	<b>Memory</b>	2 GB (2 x 1 GB) PC2-5300 DIMMs (DDR2-667) with Advanced ECC capabilities
	<b>Network Controller</b>	Two Embedded NC373i Multifunction Gigabit Server Adapters
	<b>Storage Controller</b>	HP Smart Array P400/256MB Controller (RAID 0/1/5)
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	2.4GB (8 x 300GB with standard internal hot plug SFF SAS drive cage and optional hard drives)
	<b>Optical Drive</b>	Optional DVD, DVD/CD-RW combo, DVD <sub>±</sub> R/RW
	<b>Form Factor</b>	Rack (2U), (3.5-inch)
	<b>Availability</b>	Hot Plug Fully Redundant Fans Standard

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### Models

HP DL385 G5 Entry/High Efficiency Model	Processor(s)	(1) Quad-Core AMD Opteron 2347 HE Processor (1.9 GHz, 55 Watts)
	Cache Memory	2MB (4 x 512KB) Level 2 cache and 2MB (1 x 2MB) Level 3 cache
HP DL385R05 2347 HE 459800-001	Memory	2 GB (2 x 1 GB) PC2-5300 Low Power DIMMs (DDR2-667) with Advanced ECC capabilities
	Network Controller	Two Embedded NC373i Multifunction Gigabit Server Adapters
	Storage Controller	HP Smart Array E200/64MB Controller (RAID 0/1/5)
	Hard Drive	None ship standard
	Internal Storage	2.4GB (8 x 300GB with standard internal hot plug SFF SAS drive cage and optional hard drives)
	Optical Drive	Optional DVD, DVD/CD-RW combo, DVD+R/RW
	Form Factor	Rack (2U), (3.5-inch)
	Availability	Hot Plug Fully Redundant Fans Standard

### Smart Buys

The ProLiant Smart Buy program offers a collection of promotional server and option products that are configured with SMB in mind, offered at discounted prices, and positioned for quick delivery. Smart Buy server offers are available for a limited time only.

<b>HP S-Buy DL385G5 2352 2P 464211-005</b>	<b>Processor(s)</b>	(2) AMD Opteron™ Processor 2352 (2.1 GHz, 75 Watts)
	<b>Cache Memory</b>	2 MB (1 x 2 MB) Level 3 cache
	<b>Memory</b>	4GB (4 x 1GB) PC2-5300 DIMMs (DDR2-667) with Advanced ECC capabilities
	<b>Network Controller</b>	Two Embedded NC373i Multifunction Gigabit Server Adapters
	<b>Storage Controller</b>	Smart Array P400 Controller with 256MB Cache (RAID 0/1/1+0/5)
	<b>Hard Drive</b>	None Ship Standard
	<b>Internal Storage</b>	1.168TB max - 8 x 146GB SAS drives (with optional hard drives)
	<b>Optical Drive</b>	Slimline DVD/CD-RW Drive (8X/24X)
	<b>Form Factor</b>	Rack (2U), (3.5-inch)
	<b>Availability</b>	Hot Plug Fully Redundant Fans and Redundant Power Supplies

### Configuration Information - Factory Integrated Models

**NOTE:** This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on CTO product offerings and requirements.

**NOTE:** HP does not allow factory integration of options into standard models listed above. Configure-to-order servers must start with a CTO Chassis.

**NOTE:** FIO indicates that this option only available as a Factory Installable Option.

### Step 1: Base Configuration (choose one of the following configurable models)

Models	HP ProLiant DL385G5 Rack CTO Chassis	453060-B21
	<b>Factory Integrated Model ships with:</b>	
	(8) SFF Serial Attached SCSI (SAS) Drive Bays	
	Two Embedded NC373i Multifunction Gigabit Server Adapters	
	PCI-Express Riser Cage	
	800 Watt hot plug power supply, CE Mark Compliant	
	One IEC Power cord	
	Hot plug fans (fully redundant)	
	Rack (2U), (3.5-inch)	

### Step 1A: Choose Storage Controller (must choose only one of the following)

Storage Controllers	HP Smart Array P400/256 DL38x LP FIO Ctr <b>NOTE:</b> PCI Express.	405160-B21
	HP Smart Array P400/512 DL38x LP FIO Ctr <b>NOTE:</b> PCI Express.	405162-B21
	HP Smart Array E200/128 BBWC Controller <b>NOTE:</b> PCI Express.	411508-B21
	HP Smart Array P600/256 BBWC Controller <b>NOTE:</b> PCI-X. SA-P600 Controller supports both internal and external drives.	337972-B21
	HP Smart Array P600 w/512 FIO Ctrlr	432103-B21
	HP Smart Array P800/512 BBWC Controller <b>NOTE:</b> PCI Express.	381513-B21
	HP Smart Array E200/64 FIO Controller	405528-B21

### Configuration Information - Factory Integrated Models

#### Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

Processors	AMD Opteron™ Processor 2356 (2.3 GHz, 75 Watts) Kit	449774-L21
	AMD Opteron™ Processor 2352 (2.1 GHz, 75 Watts) Kit	449776-L21
	AMD Opteron™ Processor 2347 HE (1.9 GHz, 55 Watts) Kit	457557-L21
Base Memory	<b>NOTE:</b> DIMM banks are active only when the corresponding processor socket is populated.	
	1 GB REG PC2-5300 2 x 512 MB Single Rank Kit	408850-B21
	2 GB REG PC2-5300 2 x 1 GB Single Rank Kit	408851-B21
	2 GB REG PC2-5300 2 x 1 GB Low Power Single Rank Kit	483399-B21
	4 GB REG PC2-5300 2 x 2 GB Dual Rank Kit	408853-B21
	4 GB REG PC2-5300 2 x 2 GB Low Power Single Rank Kit	483401-B21
	8 GB REG PC2-5300 2 x 4 GB Dual Rank Kit	408854-B21
	8 GB REG PC2-5300 2 x 4 GB Low Power Dual Rank Kit	483403-B21
	16 GB REG PC2-5300 2 x 8 GB Dual Rank Kit	408855-B21
	64 GB REG PC2-5300 8 x 8 GB Dual Rank Kit	495605-B21

#### Step 3: Choose Additional Factory Integratable Options

Performance Packs	The HP ProLiant DL385 G5 performance packs are necessary to configure a HP ProLiant DL385 G5 Performance Model. HP ProLiant DL385 G5 Performance model includes the latest performance technologies and enterprise class availability features pre-installed for convenience and value. The performance pack includes a 2nd processor and a redundant power supply. To complete the configuration of a Performance model, select the Slimline CD-RW/DVD-ROM Combo Option Kit (331903-B21).	
	HP DL385G5 2356 HPM FIO PERF PACK	454024-B21

#### Step 4: Choose Additional Options for Factory Integration

**NOTE:** For additional options, please refer to the "Core Options" and "Additional Options" section below.

### Core Options

**NOTE:** Some options may not be factory integratable. Contact your local sales representative for additional information.

<b>HP ProLiant DL385 G5 Unique Options</b>	HP DL385G5 Nvidia FX5600 1.5GB PCIe	464272-B21
	<b>NOTE:</b> Requires the 2 Slot x16/x4 DL385G5 225W Riser (PN 464271-B21). Only compatible with HP ProLiant DL385 G5 server.	
	HP 2 Slot x16/x4 DL385G5 225W Riser	464271-B21
	<b>NOTE:</b> This riser is only supported on the DL385G5. The G5 does not support the x16 riser from the DL385G2 system.	

<b>Processors</b>	AMD Opteron™ Processor 2356 (2.3 GHz, 75 Watts) Kit	449774-B21
	AMD Opteron™ Processor 2352 (2.1 GHz, 75 Watts) Kit	449776-B21
	AMD Opteron™ Processor 2347 HE (1.9 GHz, 55 Watts) Kit	457557-B21

<b>Memory</b>	1 GB REG PC2-5300 2 x 512 MB Single Rank Kit	408850-B21
	2 GB REG PC2-5300 2 x 1 GB Single Rank Kit	408851-B21
	2 GB REG PC2-5300 2 x 1 GB Low Power Single Rank Kit	483399-B21
	4 GB REG PC2-5300 2 x 2 GB Dual Rank Kit	408853-B21
	4 GB REG PC2-5300 2 x 2 GB Low Power Single Rank Kit	483401-B21
	8 GB REG PC2-5300 2 x 4 GB Dual Rank Kit	408854-B21
	8 GB REG PC2-5300 2 x 4 GB Low Power Dual Rank Kit	483403-B21
	16 GB REG PC2-5300 2 x 8 GB Dual Rank Kit	408855-B21
	64 GB REG PC2-5300 8 x 8 GB Dual Rank Kit	495605-B21

<b>Optical Drives</b>	Slimline CD-RW/DVD-ROM Combo Option Kit	331903-B21
	<b>NOTE:</b> Included in performance models.	
	Slimline DVD-ROM Drive (8x/24x) Option Kit	264007-B21
	HP DVD±R/RW 8X Slim	383975-B21
	Slimline CD-ROM Drive 24X	356963-B21

### Core Options

#### Hard Drives

**NOTE:** The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

#### SAS Hot Plug SFF Enterprise (ENT) Drives

HP 300GB 6G SAS 10K SFF DP ENT HDD	507127-B21
HP 300GB 3G SAS 10K SFF DP ENT HDD	492620-B21
HP 146GB 6G SAS 15K SFF DP ENT HDD	512547-B21
HP 146GB 6G SAS 10K SFF DP ENT HDD	507125-B21
HP 146GB 3G SAS 15K SFF DP ENT HDD	504062-B21
HP 146GB 3G SAS 10K SFF DP ENT HDD	418367-B21
HP 146GB 3G SAS 10K SFF SP HDD	431958-B21
HP 72GB 6G SAS 15K SFF DP ENT HDD	512545-B21
HP 72GB 3G SAS 15K SFF DP ENT HDD	418371-B21
HP 72GB 3G SAS 15K SFF SP HDD	431935-B21
HP 72GB 3G SAS 10K SFF DP ENT HDD	384842-B21
HP 72GB 3G SAS 10K SFF SP HDD	375861-B21
HP 36GB 3G SAS 15K SFF DP ENT HDD	418369-B21
HP 36GB 3G SAS 15K SFF SP HDD	431933-B21

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:

[http://h18000.www1.hp.com/products/quickspecs/12244\\_na/12244\\_na.html](http://h18000.www1.hp.com/products/quickspecs/12244_na/12244_na.html)

#### SATA Hot Plug SFF Entry (ETY) Drives

HP 250GB 3G SATA 5.4K SFF ETY HDD	460355-B21
HP 120GB 1.5G SATA 5.4K SFF ETY HDD	458924-B21

**NOTE:** SATA drives have a 1 year warranty. Please see the QuickSpecs for Technical Specifications and additional information:

[http://h18000.www1.hp.com/products/quickspecs/13021\\_na/13021\\_na.html](http://h18000.www1.hp.com/products/quickspecs/13021_na/13021_na.html)

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#### Communications

HP NC110T PCI Express Gigabit Server Adapter	434905-B21
HP NC360T PCI Express Dual Port Gigabit Server Adapter	412648-B21
HP NC364T PCI Express Quad Port Gigabit Server Adapter	435508-B21
HP NC373F PCI Express Multifunction Gigabit Server Adapter	394793-B21
HP NC373T PCI Express Multifunction Gigabit Server Adapter	394791-B21
HP NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter	458492-B21
HP NC510F PCIe 10 Gigabit Server Adapter	414126-B21
<b>NOTE:</b> A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510F adapter.	
HP NC510C PCIe 10 Gigabit Server Adapter	414129-B21
<b>NOTE:</b> A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510C adapter.	

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### Core Options

Riser Cage Options	HP DL385G5 Nvidia FX5600 1.5 GB PCIe	464272-B21
	<b>NOTE:</b> Requires the 2 Slot x16/x4 DL385G5 225W Riser (PN 464271-B21). Only compatible with HP ProLiant DL385 G5 server.	
	HP 2 Slot x16/x4 DL385G5 225W Riser	464271-B21
	Mixed Riser Cage Option Kit (PCI-E/PCI-X)	410570-B21

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Redundant Options	Redundant Power Supply 350/370/380 G5 Kit (IEC cord)	399771-B21
	Redundant Power Supply 350/370/380 G5 Kit (NEMA cord)	399771-001
	Redundant Power Supply 380 G5 - 48Volt DC	433634-B21

### Additional Options

HP Insight Control suite	<p><b>NOTE:</b> Electronic licensing options are available for Insight Control suites software products. Please see the appropriate Insight Control QuickSpecs for additional information.</p> <p><b>HP Insight Control Environment (ICE)</b></p> <p>HP Insight Control Environment, No Media 1-Server License including 1 year of 24x7 Technical Support and Updates <span style="float: right;">452148-B22</span></p> <p><b>NOTE:</b> This part number can be purchased as a single license or as multiple licenses with a single activation key. Customer will receive a license entitlement certificate via e-mail. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service. Only available directly from HP and select resellers in the Americas region.</p> <p>HP Insight Software Media Kit <span style="float: right;">436222-B21</span></p> <p><b>NOTE:</b> Insight Software DVD media without licenses. Contains Systems Insight Manager and Insight software products and components licensed by Insight Control suite. Uses an integrated installer to perform quick and accurate software installation and updates.</p> <p><b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/12631_na/12631_na.html">http://h18000.www1.hp.com/products/quickspecs/12631_na/12631_na.html</a></p> <p><b>HP Insight Control suite for Linux (ICE-LX)</b></p> <p>HP Insight Control suite for Linux, Media pack (DVD) - No licenses included <span style="float: right;">464422-B22</span></p> <p><b>NOTE:</b> This optional Media pack DVD contains the ISO image for HP Insight Control suite for Linux, HP Systems Insight Manager, HP Insight Power Manager, HP Insight Virtual Machine Manager software for ProLiant, and an integrated installer. Servers must be acquired separately.</p> <p><b>NOTE:</b> This Media pack is optional because the latest ISO image and latest updates may be downloaded at no cost from: <a href="http://www.hp.com/go/ice-linux">http://www.hp.com/go/ice-linux</a> (click on Download button).</p> <p>HP Insight Control suite for Linux, No Media, 1-Server license, including one year of 24x7 Technical Support and Updates <span style="float: right;">464423-B22</span></p> <p><b>NOTE:</b> This part number can be used to purchase one (1) license with a single activation key. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.</p> <p><b>NOTE:</b> One certificate is shipped for each license.</p> <p><b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/13019_na/13019_na.html">http://h18000.www1.hp.com/products/quickspecs/13019_na/13019_na.html</a></p>
Server Management Stand Alone Software Product - Insight software	<p><b>NOTE:</b> Electronic licensing options are available for select Insight software products. Please see the appropriate Insight software product QuickSpecs for additional information.</p> <p><b>Deploy</b></p> <p><b>HP Insight Rapid Deployment software</b></p> <p>HP Insight Rapid Deployment software No Media 1-Server License including 1 year of 24x7 Technical Support and Updates <span style="float: right;">452151-B21</span></p> <p><b>NOTE:</b> This license allows 1 server to be deployed and managed via RDP. Customer</p>

### Additional Options

will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service

**NOTE:** For additional License Kits, please see the QuickSpecs at:

[http://h18000.www1.hp.com/products/quickspecs/11053\\_na/11053\\_na.html](http://h18000.www1.hp.com/products/quickspecs/11053_na/11053_na.html)

#### HP Insight Server Migration software for ProLiant (SMP)

HP Insight Server Migration software for ProLiant, No Media, Physical / Virtual to ProLiant Single Migration License, including 1 year of 24x7 Technical Support and Updates 460750-B21

**NOTE:** This license allows 1 physical to ProLiant or virtual to ProLiant migration. Customer will receive a printed license entitlement certificate and documentation via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.

HP Insight Server Migration software for ProLiant, No Media, Physical / Virtual to Virtual Single Migration License, including 1 year of 24x7 Technical Support and Updates 460753-B21

**NOTE:** This license allows 1 physical to virtual or virtual to virtual migration. Customer will receive a printed license entitlement certificate and documentation via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.

HP Insight Server Migration software for ProLiant, No Media, 1-Year Unlimited Migration License, including 1 year of 24x7 Technical Support 460756-B21

**NOTE:** This license allows unlimited migrations (physical to ProLiant, physical to virtual, virtual to virtual, and virtual to ProLiant) for one year. Customer will receive a printed license entitlement certificate and documentation via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service.

**NOTE:** For additional License Kits, please see the QuickSpecs at:

[http://h18000.www1.hp.com/products/quickspecs/12855\\_na/12855\\_na.html](http://h18000.www1.hp.com/products/quickspecs/12855_na/12855_na.html)

#### Monitor

##### HP Insight Dynamics-VSE suite for ProLiant

HP Insight Dynamics-VSE with Insight Control Environment, 1-server license including 1 year of 24x7 Technical Support and Updates 483527-B21

**NOTE:** This license supports HP ProLiant ML/DL and c-Class Blade servers. Customer will receive a printed license entitlement certificate via physical shipment.

HP Insight Dynamics-VSE without Insight Control Environment, 1-server license including 1 year of 24x7 Technical Support and Updates 483531-B21

**NOTE:** This license supports HP ProLiant ML/DL and c-Class Blade servers. Customer will receive via email a receipt and link to a license entitlement certificate.

**NOTE:** For additional License Kits, please see the QuickSpecs at:

[http://h18000.www1.hp.com/products/quickspecs/13050\\_na/13050\\_na.html](http://h18000.www1.hp.com/products/quickspecs/13050_na/13050_na.html)

#### Control

HP Integrated Lights-Out Advanced Pack

### Additional Options

HP ProLiant Essentials Integrated Lights-Out Advanced Pack, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates <b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/12362_na/12362_na.html">http://h18000.www1.hp.com/products/quickspecs/12362_na/12362_na.html</a>	512485-B21
<b>Optimize</b> <b>HP Insight Power Manager (IPM)</b> HP Insight Power Manager, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates <b>NOTE:</b> Customers purchasing this upgrade must already have an iLO Advanced or Select license on each managed server. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service. <b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/12623_na/12623_na.html">http://h18000.www1.hp.com/products/quickspecs/12623_na/12623_na.html</a>	452677-B21
<b>HP Insight Virtual Machine Manager software for ProLiant (VMM)</b> HP Insight Virtual Machine Manager software for ProLiant, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates <b>NOTE:</b> Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service. <b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/12328_na/12328_na.html">http://h18000.www1.hp.com/products/quickspecs/12328_na/12328_na.html</a> <b>NOTE:</b> Flexible and volume quantity license kits are available for Insight software products. Refer to: <a href="http://www.hp.com/go/insightcontrol">http://www.hp.com/go/insightcontrol</a> or the various Insight software product QuickSpecs for more information.	452153-B21

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### Storage Controllers

#### SAS Controllers

##### Smart Array E200 Controller

HP Smart Array E200/128 BBWC Controller 411508-B21

128 MB BBWC (Battery-Backed Write Cache) Enabler 351580-B21

**NOTE:** Supports the Smart Array E200 Controller, Smart Array 641 Controller, and Smart Array 642 Controller.

##### Smart Array P400 Controller

HP Smart Array P400/256 MB Controller 405132-B21

**NOTE:** The HP Smart Array P400/256 MB Controller (PN 405132-B21) may only be installed in slots 3, 4, and 5.

HP Smart Array P400/512 MB BBWC Controller 411064-B21

**NOTE:** The HP Smart Array P400/512 MB BBWC Controller (PN 411064-B21) may only be installed in slots 3, 4, and 5.

512 MB Battery-backed cache upgrade 405148-B21

**NOTE:** For Smart Array P400 Controller.

Battery-backed write cache upgrade 383280-B21

**NOTE:** For Smart Array P400 Controller.

### Additional Options

HP SA-P400 and SA-E500 24 In Battery Cable Kit <b>NOTE:</b> This option kit contains a 24" battery cable and adhesive material for installing a batter into the server if a Smart Array P400 is integrated outside of the factory. For all solutions, please refer to the server QuickSpecs and User's Manual for detailed installation instructions.	417836-B21
<b>Smart Array P600 Controller</b> HP Smart Array P600/256 BBWC Controller <b>NOTE:</b> Requires Mixed PCI-E/X riser cage.	337972-B21
512 MB Battery-Backed Cache Upgrade <b>NOTE:</b> This 512 MB Battery-Backed Cache Module upgrade kit supports the Smart Array P600 Controller and the Smart Array 6400 series Controller.	372538-B21
<b>Smart Array P800 Controller</b> HP Smart Array P800/512 BBWC Controller <b>NOTE:</b> Please see the following QuickSpecs for additional information: <a href="http://h18000.www1.hp.com/products/quickspecs/12460_na/12460_na.html">http://h18000.www1.hp.com/products/quickspecs/12460_na/12460_na.html</a> (Smart Array E200 Controller) <a href="http://h18000.www1.hp.com/products/quickspecs/12400_na/12400_na.html">http://h18000.www1.hp.com/products/quickspecs/12400_na/12400_na.html</a> (Smart Array P400 Controller) <a href="http://h18000.www1.hp.com/products/quickspecs/12247_na/12247_na.html">http://h18000.www1.hp.com/products/quickspecs/12247_na/12247_na.html</a> (Smart Array P600 Controller) <a href="http://h18000.www1.hp.com/products/quickspecs/12616_na/12616_na.html">http://h18000.www1.hp.com/products/quickspecs/12616_na/12616_na.html</a> (Smart Array P800 Controller)	381513-B21
<b>SAS HBA</b> HP SC08Ge Host Bus Adapter	488765-B21
HP SC44Ge Host Bus Adapter <b>NOTE:</b> When using the SC44Ge with SATA Hard Drives, 1.5G SATA Hard Drives are required. Transfer rate: 1.5 Gb/s SATA, 3 Gb/s SAS. <b>NOTE:</b> Please see the following QuickSpecs for additional information: <a href="http://h18004.www1.hp.com/products/quickspecs/13082_na/13082_na.html">http://h18004.www1.hp.com/products/quickspecs/13082_na/13082_na.html</a> (SC08Ge HBA) <a href="http://h18004.www1.hp.com/products/quickspecs/12617_na/12617_na.html">http://h18004.www1.hp.com/products/quickspecs/12617_na/12617_na.html</a> (SC44Ge HBA)	416096-B21
<b>SCSI Controllers for External Drive/Storage Support</b> <b>NOTE:</b> All Ultra 320 controllers are PCI-X and require the Mixed Riser Cage Option Kit (PCI-E/PCI-X).	
Smart Array 6402/128 Controller <b>NOTE:</b> Ultra320 SCSI.	273915-B21
Smart Array 6404/256 Controller <b>NOTE:</b> Ultra320 SCSI.	273914-B21
Smart Array 642 Controller <b>NOTE:</b> Ultra320 SCSI.	291967-B21
128-MB Battery-Backed Write Cache (BBWC) <b>NOTE:</b> Supports the Smart Array E200 Controller, Smart Array 641 Controller, and Smart Array 642 Controller.	351580-B21
Ultra320 Expansion Module for SA-6402	273911-B21
<b>SCSI HBA</b>	

### Additional Options

HP SC11Xe Host Bus Adapter	412911-B21
<b>NOTE:</b> Recommended HBA for SCSI tape drive connect.	
<b>NOTE:</b> Please see the following QuickSpecs for Technical Specifications and additional information:	
<a href="http://h18000.www1.hp.com/products/quickspecs/11943_na/11943_na.html">http://h18000.www1.hp.com/products/quickspecs/11943_na/11943_na.html</a> (Single Channel Ultra320 SCSI HBA)	
<a href="http://h18000.www1.hp.com/products/quickspecs/11587_na/11587_na.html">http://h18000.www1.hp.com/products/quickspecs/11587_na/11587_na.html</a> (Smart Array 6400 Series)	
<a href="http://h18000.www1.hp.com/products/quickspecs/12069_na/12069_na.html">http://h18000.www1.hp.com/products/quickspecs/12069_na/12069_na.html</a> (Smart Array 642)	
<a href="http://h18000.www1.hp.com/products/quickspecs/12566_na/12566_na.html">http://h18000.www1.hp.com/products/quickspecs/12566_na/12566_na.html</a> (SC11Xe HBA)	

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HPC Specific Options	HP IB 4X DDR PCI-e DUAL PORT 0 mem HCA	483513-B21
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### Tape Drives

<b>NOTE:</b> For the complete listing of Tape Drive offerings, please see: <a href="http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html">http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html</a>	
<b>USB Rack-Mount Tape Solutions</b>	
HP StorageWorks 1U USB Rack-Mount Kit with one DAT 160 USB Tape Drive	AG703A
<b>NOTE:</b> Pre-configured with one DAT 160 USB tape drive.	
<b>SAS Rack-Mount Tape Solutions</b>	
<b>NOTE:</b> HP recommends purchasing the HP SC44Ge HBA (416096-B21) for a dedicated SAS HBA for tape.	
HP StorageWorks 1U SAS Rack-Mount Kit with one LTO-4 Ultrium 1760	EH946A
<b>NOTE:</b> Pre-configured with one LTO-4 Ultrium 1760 SAS tape drive.	
HP StorageWorks 1U SAS Rack-Mount Kit	AE459A
<b>NOTE:</b> Supports up to (2) half-height SAS tape drives.	
HP StorageWorks LTO-2 Ultrium 448 SAS Internal Tape Drive	DW085A
<b>NOTE:</b> Mounts inside the 1U SAS Rack-Mount Kit (AE459A)	
HP StorageWorks LTO-3 Ultrium 920 SAS Internal Tape Drive	EH847A
<b>NOTE:</b> Mounts inside the 1U SAS Rack-Mount Kit (AE459A)	
For an up-to-date listing of the latest O/S and software support details for HP Ultrium tape drives, please visit: <a href="http://www.hp.com/go/connect">http://www.hp.com/go/connect</a> .	

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### Additional Options

#### Disk-Based Backup

##### RDX Removable Disk Backup

HP StorageWorks RDX500 External Removable Disk Backup System

AJ935A

**NOTE:** 500GB of Disk Storage.

**NOTE:** Please see the HP RDX Removable Disk Backup System QuickSpecs for additional information:

[http://h18000.www1.hp.com/products/quickspecs/13036\\_na/13036\\_na.html](http://h18000.www1.hp.com/products/quickspecs/13036_na/13036_na.html)

##### D2D Backup

HP StorageWorks D2D2502i Backup System

EJ001A

**NOTE:** 2 TB raw capacity/1.5 TB useable capacity.

HP StorageWorks D2D2504i Backup System

EJ002A

**NOTE:** 4 TB raw capacity/3 TB useable capacity.

**NOTE:** Please see the HP D2D Backup Systems QuickSpecs for additional information: <http://www.hp.com/go/d2d>

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#### Tape Autoloaders

##### HP StorageWorks 1/8 G2 Tape Autoloader

HP StorageWorks 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader

AK377A

HP StorageWorks 1/8 G2 LTO-3 Ultrium 920 SAS Autoloader

AH558A

HP StorageWorks 1/8 G2 Tape Autoloader Rack Kit

AH166A

**NOTE:** Required to install the 1/8 G2 Autoloaders in a standard 19-inch rack; includes rails and rackmount instructions.

**NOTE:** Please reference the Tape Autoloader QuickSpecs at:

<http://www.hp.com/go/automation> for additional information needed to create a complete solution.

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#### Tape Libraries

##### HP StorageWorks MSL2024 Tape Library

HP StorageWorks MSL2024 1 LTO-4 Ultrium 1760 SAS Drive Library

AK378A

HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SAS Drive Library

AH559A

##### HP StorageWorks MSL4048 Tape Library

HP StorageWorks MSL4048 2 LTO-4 Ultrium 1760 SAS Drive Library

AK380A

HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SAS Drive Library

AH560A

**NOTE:** Please reference the MSL Tape Library QuickSpecs at:

<http://www.hp.com/go/automation> for additional information needed to create a complete solution.

### Additional Options

High Availability Cluster Options	<b>HP Serviceguard for Linux</b>	
	HP Serviceguard for Linux on HP ProLiant and other third-party x86 Servers - Physical Media Kit	519353-B21
	<b>NOTE:</b> This kit contains media only.	
	HP Serviceguard for Linux on HP ProLiant and other third-party x86 Servers Single-Server License	519354-B21
	Licensed per Server	
	<b>NOTE:</b> This license allows Serviceguard for Linux to be installed on 1 server. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.	
	HP Serviceguard for Linux - Flexible-Quantity License (for HP ProLiant and other third-party x86 servers)	519355-B21
Licensed per Server		
<b>NOTE:</b> This part number can be used to purchase multiple licenses with a single activation key. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service		
HP Serviceguard Linux Oracle Database Toolkit for HP ProLiant/x86 Servers	463833-B21	
Licensed per cluster		
Includes media and One Year 24x7 Software Support & Updates		
HP Serviceguard Extension for SAP on Linux for HP ProLiant/x86 Servers	463834-B21	
Licensed per physical server		
Includes media and One Year 24x7 Software Support & Updates		
HP Serviceguard Linux Extended Distance Cluster (XDC) for HP ProLiant/x86 Servers	463835-B21	
Licensed per physical server		
Includes media and One Year 24x7 Software Support & Updates		
<b>NOTE:</b> The above is not a complete list of all HP Serviceguard for Linux product numbers For a detailed list of supported configuration/certification options for HP Serviceguard for Linux please refer to the HP Serviceguard for Linux Configuration & Ordering Guide available at: <a href="http://www.hp.com/go/sglx/info">http://www.hp.com/go/sglx/info</a> .		
<b>NOTE:</b> HP Serviceguard for Linux products running on x86 platforms now include one year of 24 x 7 Software Technical Support and Updates. Please see the Support Information section of the HP Serviceguard for Linux QuickSpecs for details.		
<b>NOTE:</b> For additional information including a complete list of Product Numbers for HP Serviceguard for Linux, please see the following QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/11518_na/11518_na.html">http://h18000.www1.hp.com/products/quickspecs/11518_na/11518_na.html</a>		



### Additional Options

#### StorageWorks Options

#### StorageWorks Fibre Channel HBA

**NOTE:** For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 and Linux, please see:

<http://h18006.www1.hp.com/storage/saninfrastructure/hba.html>

HP StorageWorks FC2142SR 4 Gb PCI-e HBA	A8002A
HP StorageWorks FC2242SR Dual Channel 4 Gb PCI-e HBA	A8003A
HP StorageWorks FC1142SR 4 Gb PCI-e HBA	AE311A
HP StorageWorks FC1242SR Dual Channel 4 Gb PCI-e HBA	AE312A
HP StorageWorks FC2143 4 Gb PCI-X 2.0 -to-Fibre Channel HBA	AD167A
HP StorageWorks FC2243 Dual Channel 4 Gb PCI-X 2.0 HBA	AD168A
HP StorageWorks FC1143 4 Gb PCI-X 2.0 HBA	AB429A
HP StorageWorks FC1243 Dual Channel 4 Gb PCI-X 2.0 HBA	AE369A
HP StorageWorks 81Q PCI-e FC HBA	AK344A
HP StorageWorks 81E 8Gb SP PCI-e FC HBA	AJ762A
HP 82E 8Gb Dual-port PCI-e FC HBA	AJ763A
HP 82Q 8Gb Dual Port PCI-e FC HBA	AJ764A

#### StorageWorks SCSI HBA

HP U320e SCSI Host Bus Adapter	AH627A
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**NOTE:** Recommended HBA for MSL SCSI Tape Library connect.

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#### HP StorageWorks 20 Modular Smart Array

HP StorageWorks 20 Modular Smart Array

335921-B21

**NOTE:** Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.

**NOTE:** Please see the Modular Smart Array 20 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: [http://h18000.www1.hp.com/products/quickspecs/11942\\_na/11942\\_na.html](http://h18000.www1.hp.com/products/quickspecs/11942_na/11942_na.html)

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#### HP StorageWorks 50 Modular Smart Array

HP StorageWorks 50 Modular Smart Array

364430-B21

**NOTE:** Please see the Modular Smart Array 50 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: [http://h18000.www1.hp.com/products/quickspecs/12245\\_na/12245\\_na.html](http://h18000.www1.hp.com/products/quickspecs/12245_na/12245_na.html)

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#### HP StorageWorks 60 Modular Smart Array

HP StorageWorks 60 Modular Smart Array

418408-B21

**NOTE:** Please see the Modular Smart Array 60 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: [http://h18000.www1.hp.com/products/quickspecs/12627\\_na/12627\\_na.html](http://h18000.www1.hp.com/products/quickspecs/12627_na/12627_na.html)

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#### HP StorageWorks 70 Modular Smart Array

HP StorageWorks 70 Modular Smart Array

418800-B21

**NOTE:** Please see the Modular Smart Array 70 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: [http://h18000.www1.hp.com/products/quickspecs/12652\\_na/12652\\_na.html](http://h18000.www1.hp.com/products/quickspecs/12652_na/12652_na.html)

### Additional Options

HP StorageWorks 2000sa Modular Smart Array	HP 2012sa Single Controller Modular Smart Array	AJ752A
	HP 2012sa Dual Controller Modular Smart Array	AJ753A

**NOTE:** Please see the Modular Smart Array 2000sa QuickSpecs for additional options and configuration information at:  
[http://h18000.www1.hp.com/products/quickspecs/13045\\_na/13045\\_na.html](http://h18000.www1.hp.com/products/quickspecs/13045_na/13045_na.html)

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Uninterruptible Power Systems - Rack	<b>HP R1500 G2 UPS</b>	
	HP, R1.5kVA UPS, 1U	AF419A

**NOTE:** Please see UPS QuickSpecs for additional information:  
[http://h18000.www1.hp.com/products/quickspecs/12507\\_na/12507\\_na.html](http://h18000.www1.hp.com/products/quickspecs/12507_na/12507_na.html)

	<b>HP Rack-Mountable R5500 UPS</b>	
	HP R5500 VA UPS	AF426A

**NOTE:** Please see UPS QuickSpecs for additional information:  
[http://h18000.www1.hp.com/products/quickspecs/11871\\_na/11871\\_na.html](http://h18000.www1.hp.com/products/quickspecs/11871_na/11871_na.html)

**NOTE:** For additional information on HP Uninterruptible Power Systems please go to:  
[www.hp.com/servers/rackups](http://www.hp.com/servers/rackups).

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USB Options	HP USB 04 Standard Keyboard	DT528A#ABA
	HP 1 GB USB 2.0 Floppy Drive Key	442085-B21

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Third Party Rack Adapter Kit (for wide racks)	Rack Adapter Kit	332815-B21
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**NOTE:** Not required for most racks. This kit allows HP rack servers to fit in racks that are 24" wide.

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HP Rack 5000 Series (Graphite Metallic)	HP 5642 Rack-Unassembled	358254-B21
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**NOTE:** Please see the HP Rack 5642 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color:  
[http://h18000.www1.hp.com/products/quickspecs/12074\\_na/12074\\_na.html](http://h18000.www1.hp.com/products/quickspecs/12074_na/12074_na.html)

**NOTE:** For additional information regarding Rack Cabinets, please see the following URL: <http://www.hp.com/go/rackandpower>.

### Additional Options

HP Rack 10000 G2 Series (Carbon/Graphite Metallic)	10642 G2 (42U) Rack Cabinet - Pallet	AF001A
	10642 G2 (42U) Rack Cabinet - Shock Pallet	AF002A
	10642 G2 (42U) Rack Cabinet - Crated	AF003A
	10642 G2 (42U) Rack Cabinet, with Extension - Shock Pallet	AF004A
	10636 G2 (36U) Rack Cabinet - Pallet	AF011A
	10636 G2 (36U) Rack Cabinet - Shock Pallet	AF012A
	10636 G2 (36U) Rack Cabinet - Crated	AF013A
	10636 G2 (36U) Rack Cabinet, with Extension - Shock Pallet	AF014A
	10622 G2 (22U) Rack Cabinet - Pallet	AF021A
	10622 G2 (22U) Rack Cabinet - Shock Pallet	AF022A
	10642 G2 (42U) Rack Cabinet 1200mm Deep - Shock Pallet	AF034A
	10642 G2 (42U) Rack Cabinet 1200mm Deep - Pallet	AF038A
	10842 G2 (42U) 800mm Wide Rack Cabinet - Pallet	AF041A
	10842 G2 (42U) 800mm Wide Rack Cabinet - Shock Pallet	AF042A
	10647 G2 (47U) Rack Cabinet - Pallet	AF031A
	HP S10614 (14U) Rack Cabinet - Shock Pallet	292302-B22
	10647 G2 (47U) Rack Cabinet 1200mm Deep - Shock Pallet	AF044A
	<b>NOTE:</b> Due to handling and shipping requirements, AF044A is only orderable through HP Factory Express. It is not for direct sales. Customer site surveys are required before an order is approved. CTO orders may require additional lead time.	
	10647 G2 (47U) Rack Cabinet 1200mm Deep - Pallet	AF045A

**NOTE:** It is mandatory to use a shock pallet when shipping racks with equipment installed.

**NOTE:** xxxxx-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels).

**NOTE:** Please see the Rack 10000 G2 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color:  
[http://h18000.www1.hp.com/products/quickspecs/12402\\_na/12402\\_na.html](http://h18000.www1.hp.com/products/quickspecs/12402_na/12402_na.html)

**NOTE:** For additional information regarding Rack Cabinets, please see the following URL: <http://www.hp.com/go/rackandpower>.

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Keyboards and Monitors	TFT7600 Rackmount Keyboard Monitor	AG052A
	1U Rackmount Keyboard with USB	AG072A

**NOTE:** For additional information regarding Rack Options, please see the following URL: <http://www.hp.com/go/rackandpower>.

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### Additional Options

HP KVM Switch Options	2 x 1 x 16 IP Console Switch with Virtual Media	AF601A
	4 x 1 x 16 IP Console Switch with Virtual Media	AF602A
	2 x 16 Server Console Switch with Virtual Media	AF600A
	PS/2 Virtual Media Interface Adapter, 1 pack	AF604A
	<b>NOTE:</b> Requires PS/2 and one USB port on server.	
	Server console switch 0x2x8	AF616A
	Server console switch 0x2x16	AF617A
	PS/2 Interface Adapter, 1 pack	262588-B21
	PS/2 Interface Adapter, 8 pack	262587-B21
	<b>NOTE:</b> Cat5e cables are required to connect Interface Adapters to Console Switches. Cat5e cables can be found at the following URL: <a href="http://www.hp.com/go/kvm">http://www.hp.com/go/kvm</a> .	
	HP 1 x 4 Console Switch (ALL)	AF611A
	PS2 Server Console Cable, 6 ft, 2 pack	AF612A
	USB Server Console Cable, 6 ft, 2 pack	AF613A
	<b>NOTE:</b> Required for supporting USB peripherals.	
<b>NOTE:</b> For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: <a href="http://www.hp.com/go/kvm">http://www.hp.com/go/kvm</a> .		

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HP Serial Console Server Options	HP 16 Port Serial Console Server	AF101A
	HP 48 Port Serial Console Server	AF102A
	Serial Adapter, RJ45-DB9 DCE Female, 1 Pack	AF103A
	Serial Adapter, RJ45-DB9 DCE Female, 8 Pack	AF110A
	<b>NOTE:</b> Cat5e cables are required to connect Serial Adapters to Serial Console Servers. Additional Serial Adapters and Cat5e cables can be found at the following URL: <a href="http://www.hp.com/go/kvm">http://www.hp.com/go/kvm</a> .	
<b>NOTE:</b> For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: <a href="http://www.hp.com/go/kvm">http://www.hp.com/go/kvm</a> .		

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### Additional Options

#### Service and Support Offerings

(HP Care Pack Services)

#### Hardware Services On-site Service

**NOTE:** To attach 3 year, 4-Hour On-site Service to Smart Buy servers, Smart Buy Care Packs must be used. For other service levels, order standard Care Pack part numbers.

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic U4544E

4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic U4545E

**NOTE:** Use one of the following Smart Buy Care Packs to attach 3 year, 4-Hour On-site Service to Smart Buy servers. For other service levels, order standard Care Pack part numbers.

DL38x Smart Buy 4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic UE893E

DL38x Smart Buy 4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic UE894E

#### Hardware Services 6-Hour Call to Repair On-site Service

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic U4546E

#### Installation & Start-up Services

Hardware Installation, Electronic U4554E

Installation & Start-Up of a ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays, Electronic U4555E

Installation and Startup for Essentials Rapid Deployment Pack, Electronic U5683E

#### Support Plus

Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic U4556E

#### Support Plus 24

Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic U4557E

Onsite HW support 24x7, 4hr response and SuSE Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic U6312E

Onsite HW support 24x7, 4hr response and Red Hat ES Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic U8334E

**NOTE:** For more information, customer/resellers can contact:

<http://www.hp.com/services/carepack>.

### Memory

**NOTE:** Memory configurations listed do not apply to "Factory Integrated Models".

#### HP ProLiant DL385 G5 Base Models

##### Standard Memory

2 GB REG PC2-5300 2 x 1 GB installed

##### Upgrading Memory and Memory Interleaving

DIMMs must be installed in identical pairs. Bank interleaving is automatically enabled on a processor node under the following conditions:

1. Four single ranked DIMMs populated per node (4 x 512 MB or 4 x 1 GB for example) yields 2-way bank interleaving.
  2. Two dual ranked DIMMs populated per node (2 x 2 GB or 2 x 4 GB for example) yields 2-way bank interleaving.
  3. Four dual ranked DIMMs populated per node (4 x 2 GB or 4 x 4 GB for example) yields 4-way bank interleaving.
- If single and dual ranked DIMMs are mixed on the same node, bank interleaving will not be enabled.

Node interleaving can be configured via RBSU if both processors have the same memory footprint and it is independent of bank interleaving.

DIMMs must be installed in decreasing capacity with the largest DIMMs installed in the banks furthest away from each processor.

##### Standard Memory Plus Optional Memory

Up to 18 GB memory is available with the standard memory and the optional installation of 2 x 8GB REG PC2-5300 DIMMs.

##### Standard Memory Replaced with Optional Memory

Up to 32 GB of memory is available with the removal of the standard memory and the optional installation 4 x 8GB of REG PC2-5300 DIMMs.

**NOTE:** Chart does not represent all possible configurations.

**NOTE:** DIMM banks are active only when the corresponding processor socket is populated.

Memory		Slot							
		1	2	3	4	5	6	7	8
Standard	2 GB	1 GB	1 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	18 GB	8 GB	8 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Maximum	32 GB	8 GB	8 GB	8 GB	8 GB	Empty	Empty	Empty	Empty

## Memory

### HP ProLiant DL385 G5 Performance Models

#### Standard Memory

4 GB REG PC2-5300 4 x 1 GB installed

#### Upgrading Memory and Memory Interleaving

DIMMs must be installed in identical pairs. Bank interleaving is automatically enabled on a processor node under the following conditions:

1. Four single ranked DIMMs populated per node (4 x 512 MB or 4 x 1 GB for example) yields 2-way bank interleaving.
  2. Two dual ranked DIMMs populated per node (2 x 2 GB or 2 x 4 GB for example) yields 2-way bank interleaving.
  3. Four dual ranked DIMMs populated per node (4 x 2 GB or 4 x 4 GB for example) yields 4-way bank interleaving.
- If single and dual ranked DIMMs are mixed on the same node, bank interleaving will not be enabled.

Node interleaving can be configured via RBSU if both processors have the same memory footprint and it is independent of bank interleaving.

DIMMs must be installed in decreasing capacity with the largest DIMMs installed in the banks furthest away from each processor.

#### Standard Memory Plus Optional Memory

Up to 36 GB memory is available with the standard memory and the optional installation of 4 x 8GB REG PC2-5300 DIMMs

#### Standard Memory Replaced with Optional Memory

Up to 64 GB of memory is available with the removal of the standard memory and the optional installation of 8 x 8GB REG PC2-5300 DIMMs.

**NOTE:** Chart does not represent all possible configurations.

Memory		Slot							
		1	2	3	4	5	6	7	8
Standard	4 GB	1 GB	1 GB	Empty	Empty	1 GB	1 GB	Empty	Empty
Optional	36 GB	8 GB	8 GB	1 GB	1 GB	8 GB	8 GB	1 GB	1 GB
Maximum	64 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB

Following are memory options available from HP:

1 GB REG PC2-5300 2 x 512 MB Single Rank Kit	408850-B21
2 GB REG PC2-5300 2 x 1 GB Single Rank Kit	408851-B21
2 GB REG PC2-5300 2 x 1 GB Low Power Single Rank Kit	483399-B21
4 GB REG PC2-5300 2 x 2 GB Dual Rank Kit	408853-B21
4 GB REG PC2-5300 2 x 2 GB Low Power Single Rank Kit	483401-B21
8 GB REG PC2-5300 2 x 4 GB Dual Rank Kit	408854-B21
8 GB REG PC2-5300 2 x 4 GB Low Power Dual Rank Kit	483403-B21
16 GB REG PC2-5300 2 x 8 GB Dual Rank Kit	408855-B21
64 GB REG PC2-5300 8 x 8 GB Dual Rank Kit	495605-B21

## Storage



1-8 Eight SFF SAS hot plug hard drive bays

## Drive Support

	Quantity Supported	Position Supported	Controller
<b>Removable Media</b>			
Slimline CD-RW/DVD-ROM Combo Option Kit <b>NOTE:</b> Included in performance models.	Only 1 available removable media bay	Slimline bay	Integrated IDE <b>NOTE:</b> Optional.
Slimline DVD-ROM Drive (8x/24x) Option Kit	Only 1 available removable media bay	Slimline bay	Integrated IDE <b>NOTE:</b> Optional.
HP DVD+R/RW 8X Slim	Only 1 available removable media bay	Slimline bay	Integrated IDE <b>NOTE:</b> Optional.

## Hard Drives

**NOTE:** The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

### SAS Hot Plug SFF Enterprise (ENT) Drives

	Quantity Supported	Position Supported	Controller
300GB 6G SAS 10K DP	Up to 8	1-8	HP Smart Array E200/64 MB Controller
300GB 3G SAS 10K DP			HP Smart Array E200/128 BBWC Controller
146GB 6G SAS 10K DP			HP Smart Array P400/256 MB Controller
146GB 6G SAS 15K DP			HP Smart Array P400/512 MB BBWC Controller
146GB 3G SAS 15K DP			HP Smart Array P600/256 BBWC Controller
146GB 3G SAS 10K SP			<b>NOTE:</b> Optional mixed PCI-X/E required for SA-P600.
146GB 3G SAS 10K DP			
72GB 6G SAS 15K DP			
72GB 3G SAS 10K SP			
72GB 3G SAS 10K DP			
72GB 3G SAS 15K SP			
72GB 3G SAS 15K DP			
36GB 3G SAS 15K SP			
36GB 3G SAS 15K DP			

### SATA Hot Plug SFF Entry (ETY) Drives

	Quantity Supported	Position Supported	Controller
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### Storage

250GB 3G SATA 5.4K 120GB 1.5G SATA 5.4K	Up to 8	1-8	HP 8 Internal Port SAS HBA with RAID <b>NOTE:</b> When using the 8 Internal Port SAS HBA with SATA Hard Drives, 1.5G SATA Hard Drives are required. Transfer rate: 1.5 Gb/s SATA, 3 Gb/s SAS. <b>NOTE:</b> Transfer Rate: 1.5 Gb/s SATA, 3 Gb/s SAS. HP Smart Array E200/64 MB Controller HP Smart Array E200/128 BBWC Controller HP Smart Array E500/256 MB Controller HP Smart Array P400/256 MB Controller HP Smart Array P400/512 MB BBWC Controller HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller
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### External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
20 Modular Smart Array	1 per external VHDCI SCSI connector	External	Smart Array 6402/128 Controller Smart Array 6404/256 Controller
50 Modular Smart Array	Up to 4 Up to 2 Up to 4	External	HP Smart Array E500/256MB Controller HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller
60 Modular Smart Array	Up to 8 Up to 4 Up to 8	External	HP Smart Array E500/256MB Controller HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller
70 Modular Smart Array	Up to 4 Up to 2 Up to 4	External	HP Smart Array E500/256MB Controller HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller
HP 2000sa Modular Smart Array Controller	Up to 4	External	HP SC08Ge Host Bus Adapter

### Maximum Storage Capacity - (with MSA50)

Internal	2.4TB (8 x 300GB SAS SFF)
External	6.0TB (20 x 300GB SAS SFF)
Total	8.4TB

### Tape and Disk-Based Backup

**NOTE:** For a complete listing of compatible tape and disk-based backup offerings, please visit: [www.hp.com/go/connect](http://www.hp.com/go/connect)

	Position Supported	Controller	Controller Part Number
HP StorageWorks SCSI Tape Drives, External LTO-1 Ultrium 232 LTO-2 Ultrium 448 LTO-3 Ultrium 960	External	HP SC11Xe Host Bus Adapter	412911-B21



### Storage

LTO-3 Ultrium 920  
LTO-4 Ultrium 1760  
LTO-4 Ultrium 1840  
DAT 40  
DAT 72  
DAT 160  
1U Rack-Mount Kit  
3U Rack-Mount Kit

<b>HP StorageWorks USB Tape Drives, External</b> DAT 40 USB DAT 72 USB DAT 160 USB 1U Rack-Mount Kit	External	USB 2.0 Port	N/A
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<b>HP StorageWorks SAS Tape Drives, External</b> DAT 160 SAS LTO-2 Ultrium 448 SAS LTO-3 Ultrium 920 SAS LTO-4 Ultrium 1760 SAS LTO-4 Ultrium 1840 SAS 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP SC44Ge Host Bus Adapter	416096-B21
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<b>HP StorageWorks SCSI Tape Automation, External</b> DAT 72x10 Autoloader 1/8 Tape Autoloader MSL2024 MSL4048 MSL8096 MSL6000	External	HP SC11Xe Host Bus Adapter  HP U320e SCSI Host Bus Adapter <b>NOTE:</b> Recommended for MSL tape libraries.	412911-B21  AH627A
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<b>HP StorageWorks SAS Tape Automation, External</b> 1/8 G2 Autoloader MSL2024 MSL4048	External	HP SC44Ge Host Bus Adapter	416096-B21
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<b>HP StorageWorks Fibre Tape Automation, External</b> MSL2024 MSL4048 MSL8096	External	Please consult the EBS connectivity matrix at: <a href="http://www.hp.com/go/ebs">http://www.hp.com/go/ebs</a> for detailed connectivity information.	N/A
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## Storage

MSL6000

HP StorageWorks RDX Removable Disk Backup System, External RDX160 RDX320 RDX500	External	USB 2.0 Port	N/A
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HP StorageWorks D2D Backup Systems D2D120 D2D130 D2D2500i D2D4000i	External	Embedded Network Controller	N/A
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## Power Specifications

<b>Power Supply Specification - AC</b>	<b>Part number</b> 380622-001					
	<b>Spare Kit</b> 403781-001					
Operational Input Voltage Range (Vrms)	90 to 264					
Frequency Range (Nominal) (Hz)	47 to 63 (50/60)					
Nominal Input Voltage (Vrms)	100	120	208	220	230	240
Max Rated Output Wattage Rating	800	850	1000	1000	1000	1000
Nominal Input Current (A rms)	10.0	8.8	5.85	5.5	5.2	4.97
Max Rated Input Wattage Rating (Watts)	980	1035	1193	1186	1172	1169
Max. Rated VA (Volt-Amp)	1000	1056	1217	1210	1196	1193
Efficiency (%)	81.5	82	84	84	85	85.5
Power Factor	0.98	0.98	0.98	0.98	0.98	0.98
Leakage Current (mA)	0.44	0.52	0.91	0.96	1.00	1.04
Max. Inrush Current (A peak)	30	30	30	30	30	30
Max. Inrush Current duration (mS)	3	3	3	3	3	3

<b>Power Supply Specification - DC</b>	<b>Part number</b> 412837-001					
	<b>Spare Kit</b> 419613-001					
Operational Input Voltage Range (Vrms)	-36.0 to -72.0V DC					
Frequency Range (Nominal) (Hz)	DC					
Nominal Input Voltage (Vrms)	-36	-48	-72			
Max Rated Output Wattage Rating	1200	1200	1200			
Nominal Input Current (A rms)	38	29	20			
Max Rated Input Wattage Rating (Watts)	1368	1392	1440			
Efficiency (%)	87.6	87.6	86			
Max. Inrush Current (A peak)	60	60	60			
Max. Inrush Current duration (mS)	100	100	100			

## Power Specifications

To review typical system power ratings use the Active Answers HP Power Advisor which is available via the online tool located at URL: [www.hp.com/go/proliant-energy-efficiency](http://www.hp.com/go/proliant-energy-efficiency)

- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: DL385 G5
- Click on: "Power Calculator" link. (You may need to scroll down to see it)

### Technical Specifications

<b>System Unit</b>	<b>Dimensions</b> (H x W x D) (with bezel)	3.38 x 17.54 x 26.01 in (8.59 x 44.54 x 66.07 cm)	
	<b>Weight</b> (approximate)	Maximum (all hard drives, power supply, and processor installed)	60 lb (27.22 kg)
		Minimum (one hard drive, power supply, and processor installed)	47.18 lb (20.41 kg)
<b>Input Requirements</b> (per power supply)	<b>Rated Line Voltage</b>	100 VAC, 120VAC, 200-240 VAC	
	<b>Rated Input Current</b>	10 A (at 100 VAC), 9 A (at 120 VAC), 6.1 A (at 200 VAC)	
	<b>Rated Input Frequency</b>	50 to 60 Hz	
	<b>Rated Input Power</b>	980 W (at 100 VAC), 1035 W (at 120 VAC), 1170 W (at 240 VAC)	
<b>BTU Rating</b>	Maximum	3350 BTU/hr (at 100 VAC), 3530 BTU/hr (at 120 VAC), 3990 BTU/hr (at 240 VAC)	
<b>Power Specifications</b>	To review typical system power ratings use the Active Answers HP Power Advisor which is available via the online tool located at URL: <a href="http://www.hp.com/go/proliant-energy-efficient">www.hp.com/go/proliant-energy-efficient</a> - Click on the system of interest. Example: DL385 G5 - Follow the instructions of the next screens.		
<b>Power Supply Output Power</b> (per power supply)	<b>Rated Steady-State Power</b>	800 W (at 100 VAC), 850 W (at 120 VAC), 1000 W (at 200-240 VAC)	
	<b>Maximum Peak Power</b>	800 W (at 100 VAC), 850 W (at 120 VAC), 1000 W (at 200-240 VAC)	
<b>System Inlet Temperature</b>	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).	
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).	
<b>Relative Humidity</b>	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F)	

### Technical Specifications

(non-condensing)		maximum wet bulb temperature, non-condensing.
Altitude	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic Noise		Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).
	Idle	
	LWAd	6.3 B
	LpAm	47 dBA
	Operating	
	LWAd	6.3 B
	LpAm	47 dBA
Emissions Classification (EMC)	FCC Rating	Class A
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

### Technical Specifications

<b>Smart Array P400 Controller</b>	<b>Disk Drive and Enclosure Interface</b>	3 G SAS (Serial Attached SCSI) 1.5 G SATA (Serial Advanced Technology Attachment)
	<b>SAS Connectors</b>	2 internal (SFF8484) x4 wide port connectors
	<b>Cache Memory Speed</b>	DDR2-533MHz with 40 or 72-bit wide bus provides up to 4.2 GB/s maximum bandwidth.
	<b>Server Interface</b>	x8 2.5 G PCIe provides 2GB/s maximum bandwidth.
	<b>SAS Speed</b>	x8 3 G SAS provides 2.4GB/s maximum bandwidth.
	<b>Cache Memory</b>	40-bit 256 MB cache (72-bit 512MB module upgrades available); ECC protection, battery-backed, and transportable
	<b>Logical Drives Supported</b>	Up to 32 logical drives
	<b>Maximum Logical Drive Capacity</b>	3TB (6 x 500 GB)
	<b>Host Memory Addressing</b>	64-bit, supporting greater than 4GB server memory space
	<b>RAID Support</b>	RAID 6 with ADG (Advanced Data Guarding) requires Battery Backed Write Cache Upgrade RAID 5 (Distributed Data Guarding) RAID 1+0 (Striping & Mirroring) RAID 0 (Striping)

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<b>Smart Array E200 Controller</b>	<b>Disk Drive and Enclosure Interface</b>	3 G SAS (Serial Attached SCSI) 1.5 G SATA (Serial Advanced Technology Attachment)
	<b>SAS Connectors</b>	2 internal (SFF8484) x4 wide port connectors
	<b>Cache Memory Speed</b>	DDR1-266 MHz provides up to 4.2 GB/s maximum bandwidth.
	<b>Server Interface</b>	x8 2.5 G PCIe provides 2 GB/s maximum bandwidth.
	<b>SAS Speed</b>	x8 3 G SAS provides 2.4 GB/s maximum bandwidth.
	<b>Cache Memory</b>	40-bit 64MB cache or a 128 MB battery backed cache: ECC protection, battery-backed, and transportable
	<b>Logical Volumes Supported</b>	Up to 32 logical volumes
	<b>Maximum Volume Capacity</b>	3 TB (6 x 500 GB)
	<b>Host Memory Addressing</b>	64-bit, supporting greater than 4GB server memory space
	<b>RAID Support</b>	RAID 5 (Distributed Data Guarding) RAID 1+0 (Striping & Mirroring) RAID 0 (Striping)

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### Technical Specifications

Two Embedded NC373i Multifunction Gigabit Server Adapters	Network Interface	10Base-T/100Base-TX/1000Base-TX	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
	Data Transfer Method	PCI Express, four lanes (x4)	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-TX (Half and Full-Duplex)	2000Mb/s
Connector	Two RJ-45		
Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)	
	100Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)	
	1000BaseTX	Category 5 or higher UTP; up to 328 ft (100 m)	

Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> . To recycle your product, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> . These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.
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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.