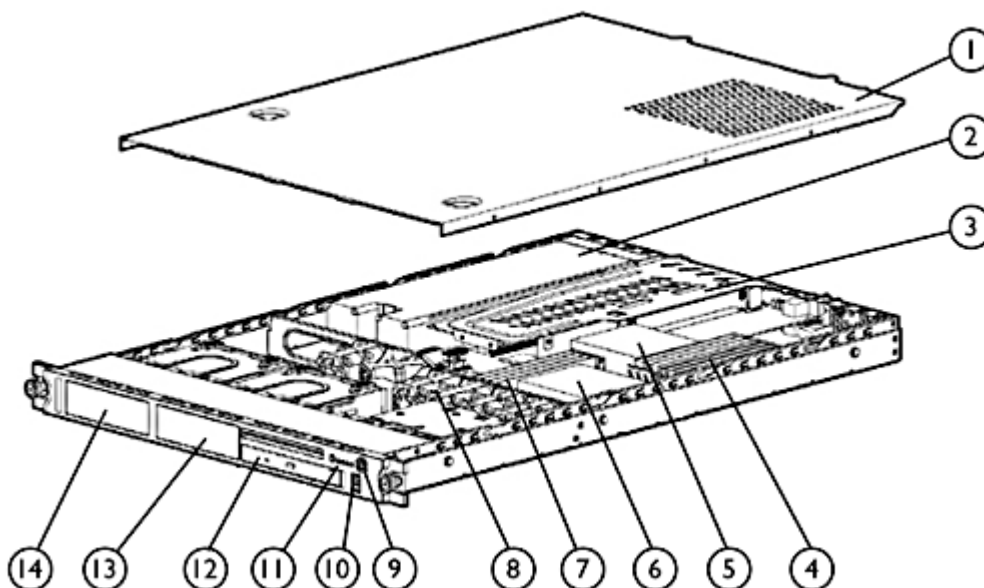


### Overview



- |  |  |
|--|--|
| 1. Access Panel  | 8. System Fans                               |
| 2. 500 Watt Power Supply   | 9. Power ON/OFF Button                       |
| 3. PCI-X I/O Expansion Assembly with (1) 133MHz Full Height, Full-Length PCI-X slot which supports PCI Express with optional riser board and (1) 133MHz Low-Profile, Half-Length PCI-X Slot. | 10. Front USB Ports                          |
| 4. Memory Bank 1A & 1B, supporting up to 8 GB PC3200 DDR1 SDRAM  | 11. System LEDs                              |
| 5. Processor 1   | 12. Optional CD or DVD-ROM Drive             |
| 6. Processor 2   | 13. Non-Hot Plug SATA OR SCSI Hard Drive Bay |
| 7. Memory Bank 2A & 2B, supporting up to 8 GB PC3200 DDR1 SDRAM  | 14. Non-Hot Plug SATA OR SCSI Hard Drive Bay |

### What's New

- Supports 1 or 2 AMD Opteron Rev. E processors with 1 GHz HyperTransport Technology

### Overview

#### At A Glance

- **Processors:**
  - AMD 8132 Chipset for PCI-X support and NVIDIA nForce Professional 2200 MCP for PCI Express
- **Memory:**
  - 1 or 2 GB of PC3200 DDR SDRAM running at 400 MHz with Advanced ECC capabilities standard (depending on model), expandable to 16 GB
- **Storage Controller:**
  - Integrated Dual Broadcom 10/100/1000 5721 NICs (Wake on LAN and PXE capable)
  - Embedded SATA Controller
- **Internal Drive Support:**
  - Support for up to two SATA and or SCSI Non Hot Plug hard drives
  - Internal storage capacity of up to 1TB (2 x 500GB non-hot plug 2.5" SATA HDDs), or 292GB (2 x 146GB NHP SCSI HDDs)
- **Network Controller:**
  - Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)
- **Expansion Slots:**
  - Two PCI-X 64-bit/133MHz PCI slots operating at 3.3 volts (one full-length/full-height, one low-profile); optional PCI Express x16 in place of full-size slot
- **USB Ports:**
  - Four USB ports (two rear, two front)
- **Optical Drives:**
  - Optional DVD- or CD-ROM drive
- **Power Supply:**
  - 500W Power Supply (Non-Hot Plug, autoswitching)
- **Form Factor:**
  - Rack Mount (1U)
- **Management:**
  - HP ProLiant Lights Out 100i Remote Management standard
  - IPMI 2.0 support
  - ROM Setup Utility
- **Warranty:**
  - Protected by HP Services, including a one-year, limited warranty, Parts only 1 year limited Global warranty - Certain restrictions and exclusions apply.

Standard Features

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

|  |  |  |  |
|--|--|--|--|
| Processor<br>One of the following depending on Model | AMD Opteron Model 285 (2.6 GHz/1MB) dual-core processor supporting 1 GHz HyperTransport Technology   |  |  |
|  | AMD Opteron Model 275 (2.2 GHz/1MB) dual-core processor supporting 1 GHz HyperTransport Technology   |  |  |
|  | AMD Opteron Model 252 (2.6 GHz/1MB) single-core processor supporting 1 GHz HyperTransport Technology |  |  |
|  | AMD Opteron Model 248 (2.2 GHz/1MB) single-core processor supporting 1 GHz HyperTransport Technology |  |  |
|  | AMD Opteron Model 246 (2.0 GHz/1MB) single-core processor supporting 1 GHz HyperTransport Technology |  |  |

|              |                                   |
|--------------|-----------------------------------|
| Cache Memory | 1MB Level 2 cache memory per core |
|--------------|-----------------------------------|

|                |                                |
|----------------|--------------------------------|
| Upgradeability | Upgradeable to dual processing |
|----------------|--------------------------------|

|         |  |
|---------|--|
| Chipset | AMD 8132 Chipset for PCI-X support and NVIDIA nForce Professional 2200 MCP for PCI Express |
|---------|--|

|                   |                           |
|-------------------|---------------------------|
| Memory Protection | Advanced ECC capabilities |
|-------------------|---------------------------|

|  |  |  |              |
|--|--|--|--------------|
| Memory<br>One of the following<br>depending on Model | Type   | PC3200 DDR SDRAM running at 400 MHz                          |              |
|  | Standard   | 1 GB   | (2 x 512 MB) |
|  |  | <b>NOTE:</b> Available with 2.0 & 2.2GHz single core models. |              |
|  |  | 2 GB   | (2 x 1 GB)   |
|  | <b>NOTE:</b> Available with 2.6 single core models and all dual core models (2.2 & 2.6). |  |              |
| Maximum  | 16 GB  | (8 x 2 GB)   |              |

|                    |  |
|--------------------|--|
| Network Controller | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable) |
|--------------------|--|

### Standard Features

| Expansion Slots | Slot # | Bus Speed           | Hot Plug (Y/N) | Voltage/Connector | Notes                    |
|-----------------|--------|---------------------|----------------|-------------------|--------------------------|
|                 | 1      | 64-bit/133MHz PCI-X | No             | 3.3 Volt          | Full length, full height |
|                 | 1      | X16 PCI Express     | No             | 3.3 Volt          | Full length, full height |
|                 | 2      | 64-bit/133MHz PCI-X | No             | 3.3 Volt          | Low Profile              |

**NOTE:** For more information regarding PCI-X, please see the following URL:  
<http://www.hp.com/servers/pci-x>.

**NOTE:** All slots can accept qualified universal keyed PCI cards.

|                    |                          |
|--------------------|--------------------------|
| Storage Controller | Embedded SATA Controller |
|--------------------|--------------------------|

|         |                 |   |
|---------|-----------------|---|
| Storage | Diskette Drives | via USB only (optional)   |
|         | DVD-ROM         | 8x IDE (ATAPI) DVD-ROM drive, slim (optional)   |
|         | CD-ROM          | 24x IDE (ATAPI) CD-ROM drive (optional)   |
|         | Hard Drives     | 80-GB SATA (non-hot plug)<br>36-GB 15,000 rpm, Ultra NHP SCSI Drives (all non-hot plug) |

|  |      |       |           |
|--|------|-------|-----------|
| Maximum Internal Storage<br>(Depending on model) | SATA | 1TB   | 2 x 500GB |
|  | SCSI | 292GB | 2 x 146GB |

|            |                          |   |
|------------|--------------------------|---|
| Interfaces | Parallel                 | None  |
|            | Network RJ-45(Ethernet)  | 1-Dedicated for HP ProLiant Lights Out 100i Remote Management   |
|            | Pointing Device (Mouse)  | 1   |
|            | Graphics/Keyboard        | 1/1   |
|            | Serial                   | 1   |
|            | USB                      | 4 (two front; two rear)<br><b>NOTE:</b> Please see the following URL for additional information regarding USB support:<br><a href="http://h18004.www1.hp.com/products/servers/platforms/usb-support.html">http://h18004.www1.hp.com/products/servers/platforms/usb-support.html</a> . |
|            | Network RJ-45 (Ethernet) | 2   |

|          |   |
|----------|---|
| Graphics | Integrated NVIDIA GeForce2 GPU with 16MB DDR video memory |
|----------|---|

|             |                 |
|-------------|-----------------|
| Form Factor | Rack Mount (1U) |
|-------------|-----------------|

### Standard Features

#### ProLiant Essentials Foundation Pack Software

#### Optional ProLiant Essentials Value Packs

Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs:

- Intelligent Networking Pack - detects and analyzes network bottlenecks or broken network linkages and steers traffic to the optimum route based on network conditions, plus it provides an extra layer of protection. The virus throttle feature of the solution slows the propagation of fast spreading virus.
- Rapid Deployment Pack (RDP) is an automated deployment and provisioning solution for all ProLiant servers. RDP includes the ProLiant Integration Module featuring ProLiant server pre-configured events for OS installation, and optimized software drivers, firmware and management agents. Every RDP disc includes 10-node trial licenses for evaluation purposes. RDP requires a license for each server deployed and is available for purchase with HP servers. For more information, visit: <http://www.hp.com/servers/rdp>.
- Vulnerability and Patch Management Pack - identifies and remediates software security vulnerabilities due to missing patches as well as operating system configurations that can be exploited by viruses, worms and other blended threats.

**NOTE:** Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to

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

or the various ProLiant Essentials Value Pack product QuickSpecs for more information.

**NOTE:** For more information regarding ProLiant Essentials Software, please see the following URL:

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

#### Industry Standard Compliance

ACPI V2.0 Compliant  
PCI 2.2 Compliant  
PXE Support  
WOL Support  
Microsoft® Logo certifications  
IPMI 2.0 Compliant

#### Manageability

HP ProLiant Lights Out 100i Remote Management integrated standard

#### Security

Power-on password  
Setup password

#### Server Power Cords

One 10' Highline IEC Power cord ships standard (for connection to a Power Distribution Unit).

**NOTE:** Rack models ship standard with a 10' IEC cable.

### Standard Features

#### 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:

<ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf>.

#### Power Supply

500 Watts, auto-switching, PFC (Power Factor Correcting)

#### System Fans

6 - Non-hot plug, Non-redundant system fans shipped standard

#### OS Support

Microsoft Windows® 2000 Server (32-bit)  
Microsoft Windows 2000 Advanced Server (32-bit)  
Microsoft Windows 2003 Standard Edition (32-bit)  
Microsoft Windows 2003 Enterprise Edition (32-bit)  
Microsoft Windows 2003 Web Edition (32-bit)  
Microsoft Windows 2003 for Extended Systems Standard Edition (64-bit)  
Microsoft Windows 2003 for Extended Systems Enterprise Edition (64-bit)  
Red Hat Enterprise Linux  
SUSE Linux 8 Enterprise Server  
Solaris 10 32/64-bit

**NOTE:** For an up-to-date listing of the latest OS support matrix, please see:

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

**NOTE:** For an up-to-date listing of the latest drivers available for the HP ProLiant DL145, please see:

<http://h18023.www1.hp.com/support/files/server/us/index.html>.

**NOTE:** For more complete and up-to-date information on how to buy server operating systems from HP please visit the OS product site at:

<http://h18004.www1.hp.com/products/servers/software/OEM.html>

**NOTE:** Drivers may also found on the base media for some Linux OS's. When configuring your server, please consult your base media driver base, or visit HP.com at:

<http://h18023.www1.hp.com/support/files/server/us/index.html>

**NOTE:** For more Linux OS support & certification information, please visit our the ProLiant & Bladesystem Server Linux matrix <http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html>

### 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 5,350 sq cm (830 square inches) of hole 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 7 cm (2.75 inches)

**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: <http://h18000.www1.hp.com/products/servers/proliantdl140/index.html>

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#### Telco Rack Support

##### 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>

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#### HP Factory Express Capability

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 MSA1000, 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>.

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#### HP Enterprise Configurator

The HP eCo-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.

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### Standard Features

#### Service and Support

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of resellers and service providers. 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. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services or customized service agreements.

**NOTE:** Server Warranty includes 1 year Parts only. Additional information regarding worldwide limited warranty and technical support is available at:

<http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

HP Care Pack services include coverage for the HP branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as 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, 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.

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

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 business. Whether an SMB or large global corporation HP has a ProLiant server support offer to help you speedily deploy and maximize system uptime.

Enhanced Care – Minimum recommended service support offer designed to ensure customers have access to expert assistance, whenever they need it.

- *Next Business Day on site coverage, 3 Years*

Continuance Care – Recommended service, delivering cost-effective support options designed to extend HP Services committed response and guaranteed fix times, designed to speed problem identification and resolution.

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

Total Care – Highest HP Support service level recommend to help increase IT performance and availability with comprehensive, integrated hardware and software services

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

Deployment Services – HP Installation and Start Up services designed to take time, risk, and worry out of the deployment of ProLiant servers – and free customers IT support staff to focus on what they do best, their business.

- *Installation of a ProLiant server as per Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays*

For a complete listing of service offerings and information visit:

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

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

HPC Interconnects

**NOTE:** High Performance Computing (HPC) interconnect technologies are available for the DL145 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>

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

### Models

#### Dual-Core Models

|  |                           |  |
|--|---------------------------|--|
| <b>ProLiant DL145 G2</b><br><b>2.6GHz /1MB Opteron</b><br><b>DC 2GB 80GB NHP</b><br><b>SATA</b><br><b>411095-001</b> | <b>Processor</b>          | AMD Opteron Model 285 (2.6 GHz/1MB) processor (Dual-Core)                            |
|  | <b>Cache Memory</b>       | 1MB L2 cache per core  |
|  | <b>Memory</b>             | 2 GB (2 x 1 GB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|  | <b>Network Controller</b> | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)         |
|  | <b>Storage Controller</b> | Embedded SATA Controller   |
|  | <b>Hard Drive</b>         | 80GB NHP SATA (non-hot plug)   |
|  | <b>Internal Storage</b>   | 1TB maximum (with optional hard drive)   |
|  | <b>Form Factor</b>        | Rack Mount (1U)  |

|  |                           |  |
|--|---------------------------|--|
| <b>ProLiant DL145 G2</b><br><b>2.6GHz /1MB Opteron</b><br><b>DC 2GB 36GB NHP SCSI</b><br><b>411094-001</b> | <b>Processor</b>          | AMD Opteron Model 285 (2.6 GHz/1MB) processor (Dual-Core)                            |
|  | <b>Cache Memory</b>       | 1MB L2 cache per core  |
|  | <b>Memory</b>             | 2 GB (2 x 1 GB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|  | <b>Network Controller</b> | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)         |
|  | <b>Storage Controller</b> | U320 Single Channel PCI-X controller (in low profile slot)                           |
|  | <b>Hard Drive</b>         | 36GB 15,000 Ultra 320 NHP SCSI   |
|  | <b>Internal Storage</b>   | 292GB maximum (with optional hard drive)   |
|  | <b>Form Factor</b>        | Rack Mount (1U)  |

|  |                           |  |
|--|---------------------------|--|
| <b>ProLiant DL145 G2</b><br><b>2.2GHz /1MB Opteron</b><br><b>DC 2GB 80GB NHP</b><br><b>SATA</b><br><b>390846-001</b> | <b>Processor</b>          | AMD Opteron Model 275 (2.2 GHz/1MB) processor (Dual Core)                            |
|  | <b>Cache Memory</b>       | 1MB L2 cache per core  |
|  | <b>Memory</b>             | 2 GB (2 x 1 GB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|  | <b>Network Controller</b> | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)         |
|  | <b>Storage Controller</b> | Embedded SATA Controller   |
|  | <b>Hard Drive</b>         | 80GB NHP SATA (non-hot plug)   |
|  | <b>Internal Storage</b>   | 1TB maximum (with optional hard drive)   |
|  | <b>Form Factor</b>        | Rack Mount (1U)  |

### Models

|   |                    |   |
|---|--------------------|---|
| ProLiant DL145 G2<br>2.2GHz/1MB Opteron<br>DC 2GB 36GB NHP SCSI<br>390845-001 | Processor          | AMD Opteron Model 275 (2.2 GHz/1MB) processor (Dual-Core)                           |
|   | Cache Memory       | 1MB L2 cache per core   |
|   | Memory             | 2 GB (2 x 1GB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|   | Network Controller | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)        |
|   | Storage Controller | U320 Single Channel PCI-X controller (in low profile slot)                          |
|   | Hard Drive         | 36GB 15,000 Ultra 320 NHP SCSI  |
|   | Internal Storage   | 292GB maximum (with optional hard drive)  |
|   | Form Factor        | Rack Mount (1U)   |

### Single-Core Models

|  |                    |  |
|--|--------------------|--|
| ProLiant DL145 G2<br>2.6GHz/1MB Opteron<br>2GB 80GB NHP SATA<br>377888-001 | Processor          | AMD Opteron Model 252 (2.6 GHz/1MB) processor  |
|  | Cache Memory       | 1MB L2 cache   |
|  | Memory             | 2 GB (2 x 1 GB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|  | Network Controller | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)         |
|  | Storage Controller | Embedded SATA Controller   |
|  | Hard Drive         | 80GB NHP SATA (non-hot plug)   |
|  | Internal Storage   | 1TB maximum (with optional hard drive)   |
|  | Form Factor        | Rack Mount (1U)  |

|  |                    |  |
|--|--------------------|--|
| ProLiant DL145 G2<br>2.6GHz/1MB Opteron<br>2GB 36GB NHP SCSI<br>377887-001 | Processor          | AMD Opteron Model 252 (2.6 GHz/1MB) processor  |
|  | Cache Memory       | 1MB L2 cache   |
|  | Memory             | 2 GB (2 x 1 GB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|  | Network Controller | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)         |
|  | Storage Controller | U320 Single Channel PCI-X controller (in low profile slot)                           |
|  | Hard Drive         | 36GB 15,000 rpm Ultra 320 NHP SCSI   |
|  | Internal Storage   | 292GB maximum (with optional hard drive)   |
|  | Form Factor        | Rack Mount (1U)  |

### Models

|  |                    |  |
|--|--------------------|--|
| ProLiant DL145 G2<br>2.2GHz/1MB Opteron<br>1GB 80GB NHP SATA<br>377886-001 | Processor          | AMD Opteron Model 248 (2.2 GHz/1MB) processor  |
|  | Cache Memory       | 1MB L2 cache   |
|  | Memory             | 1 GB (2 x 512 MB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|  | Network Controller | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)           |
|  | Storage Controller | Embedded SATA Controller   |
|  | Hard Drive         | 80GB NHP SATA (non-hot plug)   |
|  | Internal Storage   | 1TB maximum (with optional hard drive)   |
|  | Form Factor        | Rack Mount (1U)  |

|   |                    |  |
|---|--------------------|--|
| ProLiant DL145 G2<br>2.2GHz/1MB Opteron<br>1GB<br>36GB NHP SCSI<br>377885-001 | Processor          | AMD Opteron Model 248 (2.2 GHz/1MB) processor  |
|   | Cache Memory       | 1MB L2 cache   |
|   | Memory             | 1 GB (2 x 512 MB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|   | Network Controller | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)           |
|   | Storage Controller | U320 Single Channel PCI-X controller (in low profile slot)                             |
|   | Hard Drive         | 36GB 15,000 rpm Ultra 320 NHP SCSI   |
|   | Internal Storage   | 292GB maximum (with optional hard drive)   |
|   | Form Factor        | Rack Mount (1U)  |

|  |                    |  |
|--|--------------------|--|
| ProLiant DL145 G2<br>2.0GHz/1MB Opteron<br>1GB 80GB NHP SATA<br>377884-001 | Processor          | AMD Opteron Model 246 (2.0 GHz/1MB) processor  |
|  | Cache Memory       | 1MB L2 cache   |
|  | Memory             | 1 GB (2 x 512 MB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|  | Network Controller | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)           |
|  | Storage Controller | Embedded SATA Controller   |
|  | Hard Drive         | 80GB NHP SATA (non-hot plug)   |
|  | Internal Storage   | 1TB maximum (with optional hard drive)   |
|  | Form Factor        | Rack Mount (1U)  |

Models

|  |                    |  |
|--|--------------------|--|
| ProLiant DL145 G2<br>2.0GHz/1MB Opteron<br>1GB 36GB NHP SCSI<br>377883-001 | Processor          | AMD Opteron Model 246 (2.0 GHz/1MB) processor  |
|  | Cache Memory       | 1MB L2 cache   |
|  | Memory             | 1 GB (2 x 512 MB) PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities |
|  | Network Controller | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)           |
|  | Storage Controller | U320 Single Channel PCI-X controller (in low profile slot)                             |
|  | Hard Drive         | 36GB 15,000 rpm Ultra 320 NHP SCSI   |
|  | Internal Storage   | 292GB maximum (with optional hard drive)   |
|  | Form Factor        | Rack Mount (1U)  |

Configuration Information - Factory Integrated Models

**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:** This product offering does not support HP Factory Express Server Configuration Level 1.  
**NOTE:** FIO indicates that this option is a Factory Installable Option.

Step 1: Base Configuration

|            |  |            |
|------------|--|------------|
| SCSI Model | HP ProLiant DL145 G2 SCSI Rack Chassis   | 378024-405 |
|            | <b>Factory Integrated Model ships with:</b>  |            |
|            | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)   |            |
|            | HP U320 Internal SCSI Cable Kit  |            |
|            | Two available 64-bit/133MHz PCI-X slots, including one full-length/full height and one low-profile/half height slot  |            |
|            | <b>NOTE:</b> The low-profile/half height slot houses the SCSI HBA when installed.  |            |
|            | 500 Watt power supply  |            |
|            | <b>NOTE:</b> Must select HP Low Profile U320 SCSI HBA, (P/N 390402-B21) in Step 2 when selecting the SCSI Rack Chassis, (P/N 378024-405)                                     |            |
|            | <b>NOTE:</b> The selection of SCSI Model (P/N 376343-405), requires the selection of (1) SCSI Controller. Please see Step 3 of this section for compatible SCSI Controllers. |            |
| SATA Model | HP ProLiant DL145 G2 SATA Rack Chassis   | 389695-405 |
|            | <b>Factory Integrated Model ships with:</b>  |            |
|            | Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)   |            |
|            | Embedded SATA Controller   |            |
|            | Two available 64-bit/133MHz PCI-X slots, including one full-length/full height and one low-profile/half height slot  |            |
|            | 500 Watt power supply  |            |
|            | Rack Mount (1U)  |            |

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

|                 |   |            |
|-----------------|---|------------|
| Base Processors | AMD O285 2.6 GHz/1MB DL145 G2 FIO BASE  | 411097-L21 |
|                 | <b>NOTE:</b> If 2 processors are desired, select one 411097-L21 and one 411097-B21. |            |
|                 | AMD O280 2.4 GHz/1MB DL145 FIO BASE   | 399444-L21 |
|                 | <b>NOTE:</b> If 2 processors are desired, select one 399444-L21 and one 399444-B21. |            |
|                 | AMD O275 2.2 GHz/ 1MB DL145 G2 FIO BASE   | 391782-L21 |
|                 | <b>NOTE:</b> If 2 processors are desired, select one 391782-L21 and one 391782-B21. |            |
|                 | AMD O254 2.8 GHz/1MB DL145 G2 FIO BASE  | 396861-L21 |
|                 | <b>NOTE:</b> If 2 processors are desired, select one 396861-L21 and one 396861-B21. |            |
|                 | AMD O252 2.6 GHz/1MB DL145 G2 FIO BASE  | 378690-L21 |
|                 | <b>NOTE:</b> If 2 processors are desired, select one 378690-L21 and one 378690-B21. |            |
|                 | AMD O248 2.2 GHz/1MB DL145 G2 FIO BASE  | 379259-L21 |
|                 | <b>NOTE:</b> If 2 processors are desired, select one 379259-L21 and one 379259-B21. |            |

### Configuration Information - Factory Integrated Models

|                    |  |            |
|--------------------|--|------------|
|                    | AMD O246 2.0 GHz/ 1MB DL145 G2 FIO BASE  | 378755-L21 |
|                    | <b>NOTE:</b> If 2 processors are desired, select one 378755-L21 and one 378755-B21.      |            |
| Base Memory        | 1 GB PC3200 DDR1 SDRAM DIMM Memory Kit (2 x 512 MB)                                      | 376638-B21 |
|                    | 2 GB PC3200 DDR1 SDRAM DIMM Memory Kit (2 x 1 GB)  | 376639-B21 |
|                    | 4 GB PC3200 DDR1 SDRAM DIMM Memory Kit (2 x 2 GB)  | 379300-B21 |
| Hard Drives        | <b>SATA Non-Hot Plug</b>   |            |
|                    | HP 80GB 1.5G SATA 7.2K NHP 3.5" HDD  | 383410-B21 |
|                    | HP 160GB 1.5G SATA 7.2K NHP 3.5" HDD   | 411275-B21 |
|                    | HP 250GB 1.5G SATA 7.2K NHP 3.5" HDD   | 411276-B21 |
|                    | HP 500GB 1.5G SATA 7.2K NHP 3.5" HDD, FIO*   | 404469-B21 |
|                    | <b>NOTE:</b> * Factory Integrated Only   |            |
| Storage Controller | <b>U320 SCSI Non-Hot Plug</b>  |            |
|                    | HP 36GB U320 15K NHP HDD   | 357012-B21 |
|                    | HP 72GB U320 10K NHP HDD   | 332751-B21 |
|                    | HP 146GB U320 10K NHP HDD  | 356990-B21 |
|                    | HP Low Profile U320 SCSI HBA, FIO  | 390402-B21 |
|                    | <b>NOTE:</b> Must select this HBA when selecting the SCSI Rack Chassis, (P/N 378024-405) |            |

### Step 3: Choose Additional Options for Factory Integration

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

|             |  |            |
|-------------|--|------------|
| Controllers | HP Single Channel U320 SCSI Controller   | 374654-B21 |
|             | <b>NOTE:</b> Must choose one of the above listed Controllers when selecting the SCSI Model (P/N 376343-405) in step 1 of this section. |            |

### Options

|   |   |            |
|---|---|------------|
| ProLiant Essentials Licensing and Packaging | <b>ProLiant Essentials Intelligent Networking Pack Windows Edition and Linux Edition</b>  |            |
|   | ProLiant Essentials Intelligent Networking Pack Windows Edition, Single Server License  | 372906-B21 |
|   | <b>NOTE:</b> For use with a single server. Contains one license with a unique license activation key and documentation.   |            |
|   | ProLiant Essentials Intelligent Networking Pack Linux Edition, Single Server License .  | 436229-B21 |
|   | <b>NOTE:</b> For use with a single server. Contains one license with a unique license activation key and documentation.   |            |
|   | <b>NOTE:</b> For additional ProLiant Intelligent Networking Pack License Kits please see the QuickSpecs at:<br><a href="http://h18000.www1.hp.com/products/quickspecs/12062_na/12062_na.HTML">http://h18000.www1.hp.com/products/quickspecs/12062_na/12062_na.HTML</a><br><a href="http://h18000.www1.hp.com/products/quickspecs/12327_na/12327_na.HTML">http://h18000.www1.hp.com/products/quickspecs/12327_na/12327_na.HTML</a> |            |
|   | <b>ProLiant Essentials Rapid Deployment Pack Windows</b>  |            |
|   | Rapid Deployment Pack, Single-Server License  | 267196-B21 |
|   | <b>NOTE:</b> This license allows 1 server to be deployed and managed via RDP.   |            |
|   | <b>NOTE:</b> For additional ProLiant Essentials Rapid Deployment Pack License Kits please see the QuickSpecs at:<br><a href="http://h18000.www1.hp.com/products/quickspecs/11053_na/11053_na.HTML">http://h18000.www1.hp.com/products/quickspecs/11053_na/11053_na.HTML</a>   |            |
|   | <b>ProLiant Essentials Vulnerability and Patch Management Pack</b>  |            |
|   | ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License  | 371645-B21 |
|   | <b>NOTE:</b> For additional ProLiant Vulnerability and Patch Management Pack License Kits, please see the QuickSpecs at:<br><a href="http://h18000.www1.hp.com/products/quickspecs/12111_na/12111_na.HTML">http://h18000.www1.hp.com/products/quickspecs/12111_na/12111_na.HTML</a>   |            |
|   | <b>NOTE:</b> Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to <a href="http://www.hp.com/servers/proliantessentials">http://www.hp.com/servers/proliantessentials</a> or the various ProLiant Essentials Value Pack product QuickSpecs for more information.   |            |
|   | <b>NOTE:</b> For more information regarding ProLiant Essentials Software, please see the following URL: <a href="http://www.hp.com/servers/proliantessentials">http://www.hp.com/servers/proliantessentials</a> .   |            |
| <hr/>                                       |   |            |
| Processor                                   | AMD O285 2.6 GHz/1MB Dual-Core Processor Option Kit   | 411097-B21 |
|   | AMD O280 2.4 GHz/1MB Dual-Core Processor Option Kit   | 399444-B21 |
|   | AMD O275 2.2 GHz/1MB Dual-Core Processor Option Kit   | 391782-B21 |
|   | AMD O270 2.0 GHz/1MB Dual-Core Processor Option Kit   | 393300-B21 |
|   | AMD O254 2.8 GHz/1MB Single-Core Processor Option Kit   | 396861-B21 |
|   | AMD O252 2.6 GHz/1MB Single-Core Processor Option Kit   | 378690-B21 |
|   | AMD O248 2.2 GHz/1MB Single-Core Processor Option Kit   | 379259-B21 |
|   | AMD O246 2.0 GHz/1MB Single-Core Processor Option Kit   | 378755-B21 |
| <hr/>                                       |   |            |
| Memory (DIMMs)                              | 1 GB Advanced ECC PC3200 DDR1 SDRAM DIMM Memory Kit (2 x 512 MB)  | 376638-B21 |
|   | 2 GB Advanced ECC PC3200 DDR1 SDRAM DIMM Memory Kit (2 x 1 GB)  | 376639-B21 |
|   | 4 GB Advanced ECC PC3200 DDR1 SDRAM DIMM Memory Kit (2 x 2 GB)  | 379300-B21 |

### Options

#### Hard Drives

##### SATA - Non-Hot Plug

|                                      |            |
|--------------------------------------|------------|
| HP 80GB 1.5G SATA 7.2K NHP 3.5" HDD  | 383410-B21 |
| HP 160GB 1.5G SATA 7.2K NHP 3.5" HDD | 411275-B21 |
| HP 250GB 1.5G SATA 7.2K NHP 3.5" HDD | 411276-B21 |

**NOTE:** When purchasing systems with the 500GB NHP SATA drives, please reference the Configuration Information Section of this QuickSpecs to order via Configuration to Order.

##### U320 SCSI - Not-Hot Plug

|                           |            |
|---------------------------|------------|
| HP 36GB U320 15K NHP HDD  | 357012-B21 |
| HP 72GB U320 10K NHP HDD  | 332751-B21 |
| HP 146GB U320 10K NHP HDD | 356990-B21 |

#### Optical Drives

|  |            |
|--|------------|
| DVD-ROM Drive  | 361040-B21 |
| CD-ROM Drive   | 349046-B21 |
| Multibay II DVD/CD-RW Combo Drive  | PA850A     |
| <b>NOTE:</b> When purchasing the Multibay II DVD/CD-RW Combo Drive, (PN PA850A), the USB 2.0 Multibay II Cradle (PN PA509A) is required. |            |
| USB 2.0 Multibay II Cradle , External  | PA509A     |
| <b>NOTE:</b> When purchasing the Multibay II DVD/CD-RW Combo Drive (P/N 850A), the USB 2.0 Multibay II Cradle (P/N PA509A) is required.  |            |

#### Storage Controllers and options

|  |            |
|--|------------|
| HP U320 Internal SCSI Cable Kit                    | 385749-B21 |
| 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 | 374654-B21 |
| HP 8 Internal Port SAS HBA with RAID               | 347786-B21 |
| <b>NOTE:</b> For use with SATA drives only         |            |
| HP SATA/SAS 1U Cable Kit                           | 398307-B21 |
| <b>NOTE:</b> For use with SATA drives only         |            |
| HP PL 100 SCSI RAID Controller                     | 355671-B21 |
| HP PCI Express Riser Board Kit                     | 378841-B21 |

### Options

|                |  |            |
|----------------|--|------------|
| Communications | HP NC150T PCI 4-port Gigabit Combo Switch Adapter  | 367132-B21 |
|                | HP NC310F PCI-X 1000SX Gigabit Server Adapter  | 368169-B21 |
|                | HP NC320T PCI Express Gigabit Server Adapter   | 367047-B21 |
|                | HP NC340T PCI-X Quad-Port Gigabit Server Adapter   | 391661-B21 |
|                | HP NC360T PCI Express Dual Port Gigabit Server Adapter   | 412648-B21 |
|                | HP NC370F PCI-X Multifunction Gigabit Server Adapter   | 374193-B22 |
|                | HP NC370T PCI-X Single Port Multifunction Gigabit Server Adapter   | 374191-B22 |
|                | HP NC373F PCI Express Multifunction Gigabit Server Adapter   | 394793-B21 |
|                | HP NC373T PCI Express Multifunction Gigabit Server Adapter   | 394791-B21 |
|                | HP NC380T PCI Express Dual Port Multifunction Gigabit Server Adapter   | 394795-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.  |            |
|                | HP NC1020 PCI Single Gigabit Server Adapter  | 353377-B21 |
|                | HP NC7170 PCI-X Dual Port Gigabit Server Adapter (full height)   | 313881-B21 |
|                | HP NC7170 PCI-X Dual Port, Low Profile Gigabit Server Adapter  | 383738-B21 |
|                | HP NC7771 PCI-X Single Gigabit Server Adapter  | 290563-B21 |
|                | <b>NOTE:</b> A minimum of 1 GB of memory per port is required for NC370x adapters, with a maximum of two NC370x ports permitted in a server. |            |
|                | <b>NOTE:</b> For HPC interconnect adapters please refer to the HPC Interconnect section below.   |            |

|           |  |            |
|-----------|--|------------|
| Rack Kits | 1U Cable Management Arm                                  | 365403-B21 |
|           | <b>NOTE:</b> Package contains two cable management arms. |            |

|             |   |  |
|-------------|---|--|
| Tape Drives | <b>NOTE:</b> A separate SCSI Controller is required for connecting SCSI tape drives to this server. |  |
|-------------|---|--|

**NOTE:** The following tape drives are recommended for use with this HP ProLiant server. Additional HP tape drives are supported. For a complete listing of HP tape drive offerings supported with this HP ProLiant server, visit:

<http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>

#### USB Tape Drives

|   |        |
|---|--------|
| HP StorageWorks DAT 24 USB External Tape Drive, (Carbonite) | DW070A |
| HP StorageWorks DAT 40 USB External Tape Drive, (Carbonite) | DW023A |
| HP StorageWorks DAT 72 USB External Tape Drive, (Carbonite) | DW027A |

#### DAT External Tape Drives

|  |        |
|--|--------|
| HP StorageWorks DAT 40 SCSI External Tape Drive (Carbon) | C5687D |
| HP StorageWorks DAT 72 SCSI External Tape Drive (Carbon) | Q1523B |

#### Ultrium External Tape Drives

|   |        |
|---|--------|
| HP StorageWorks Ultrium 232 External Tape Drive (Carbonite) | DW065B |
|---|--------|

### Options

#### Rack-Mount Tape Drive

HP StorageWorks 1U Rack-mount kit

A7445B

**NOTE:** The 1U Rack-mount Kit (PN A7445A) can support up to (2) half-height tape drives and compatible with multiple Single-Ended and LVD SCSI tape drives including the DAT 24, DAT 40, DAT 72, DLT VS80, DLT VS160, Ultrium 215, Ultrium 232 and Ultrium 448 tape drives.

1U USB Cable Option Kit

396114-B21

**NOTE:** Converts a 1U SCSI rack-mount kit to a USB interface to support the USB tape drives.

**NOTE:** When attaching to an external tape drive, autoloader or jukebox, you must also purchase an HBA

**NOTE:** For a complete listing of HP tape drive offerings supported with the DL145 G2, visit

<http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>

#### StorageWorks Options

**NOTE:** The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see:

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

HP StorageWorks FC2142SR 4Gb PCI-e HBA

A8002A

HP StorageWorks FC2242SR Dual Channel 4 Gb PCI-e HBA

A8003A

HP StorageWorks FC1142SR 4Gb PCI-e HBA

AE311A

HP StorageWorks FC1242SR Dual Channel 4 Gb PCI-e HBA

AE312A

HP StorageWorks FC2143 4Gb PCI-X 2.0 - to Fibre Channel HBA

AD167A

HP StorageWorks FC2243 Dual Channel 4Gb PCI-X 2.0 HBA

AD168A

#### HP Data Protector Express Software

HP DP Express Backup Server Upgrade for ProLiant Software

BB117AP

HP DP Express Package for Microsoft Small Business Server

BB118AA

**NOTE:** Please see the HP Data Protector Express QuickSpecs for additional information regarding the purchase of HP Data Protector Express software:

[http://h18000.www1.hp.com/products/quickspecs/12337\\_na/12337\\_na.html](http://h18000.www1.hp.com/products/quickspecs/12337_na/12337_na.html)

**NOTE:** To obtain a free licensed copy of HP Data Protector Express for ProLiant edition software, please visit the "Protect Your Data" link accessible from your ProLiant server's System Management Homepage (SMH) software (SmartStart 7.5 or later).

#### USB Options

HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)

DC172B

HP USB 04 Standard Keyboard

DT528A#ABA

USB 2.0 4-port HUB

DG954A

HP 1GB Drive Key II – USB 2.0 Flash Drive

AG382AA

HP 512MB DriveKey II – USB Flash Drive

ED516AA

128MB HP Drive Key (USB 2.0)

DQ819B

256MB HP Drive Key II (USB 2.0)

PH657A

### Options

|                       |   |        |
|-----------------------|---|--------|
| HP KVM Switch Options | HP 1x4 Server Console Switch                | AF611A |
|                       | HP PS2 Server Console Cable, 6 foot, 2-Pack | AF612A |
|                       | HP USB Server Console Cable, 6 foot, 2-Pack | AF613A |

**NOTE:** required for supporting USB peripherals.

**NOTE:** For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL:  
<http://www.hp.com/go/kvm>

---

|                                  |   |        |
|----------------------------------|---|--------|
| HP Serial Console Server Options | HP 16 Port Serial Console Server            | AF101A |
|                                  | HP 48 Port Serial Console Server            | AF102A |
|                                  | Serial Adapter, RJ45-D89 DCE Female, 1-pack | AF103A |
|                                  | Serial Adapter, RJ45-D89 DCE Female, 8-pack | AF110A |

**NOTE:** Cat5e cables are required to connect Interface Adapters to Console Switches.  
 Cat5e cables can be found at the following URL: <http://www.hp.com/go/kvm>

|   |        |
|---|--------|
| 2x1x16 IP Console Switch with Virtual Media   | AF601A |
| 4x1x16 IP Console Switch with Virtual Media   | AF602A |
| 2x16 Server Console Switch with Virtual Media | AF600A |
| PS/2 Virtual Media Interface Adapter, 1 pack  | AF604A |

**NOTE:** Requires PS/2 and one USB port on server.

**NOTE:** For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL:  
<http://www.hp.com/go/kvm>

Service and Support, HP Care Pack, and Warranty Information

|   |   |        |
|---|---|--------|
| Service and Support Offerings (HP Care Pack Services) | Hardware Services 4-Hour On-site Service  |        |
|   | 13-Hour x 5-Day Coverage, 3 Years, Electronic   | U9509E |
|   | 24-Hour x 7-Day Coverage, 3 Years, Electronic   | U9510E |
|   | Hardware Services Next Business Day On-Site Service   |        |
|   | 9-Hour x 5-Day Coverage, 3 Years, Electronic  | U9508E |
|   | 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   | U9511E |
|   | Hardware Installation, Electronic   | U9520E |
|   | <b>NOTE:</b> For more information, customer/resellers can contact <a href="http://www.hp.com/services/carepack">http://www.hp.com/services/carepack</a> . |        |

Memory

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

HP ProLiant DL145 G2 Single Processor Models

Standard Memory

1 GB (2 x 512 MB) or 2 GB (2 x 1 GB) of PC3200 DDR1 SDRAM running at 400 MHz, with Advanced ECC capabilities Memory installed (depending on model).

Maximum Memory

Up to 16 GB of memory is available with the removal of the standard 512 MB or 1 GB of memory and the optional installation of 2 GB PC3200 Registered ECC DDR1 SDRAM DIMM Memory kits.

Memory Options

The server provides double data rate (DDR) synchronous dynamic RAM (SDRAM) that can improve memory clock speed to at least 400-MHz. It activates output on both the rising and falling edge of the system clock rather than on just the rising edge, potentially doubling output. The server features the following advanced memory technologies:

- 1. Support for up to 16 GB of industry-standard PC3200 registered ECC DDR1 SDRAM memory
- 2. Dual-Channel Memory Architecture

Memory Guidelines

- 1. Bank 1A must always be populated.
- 2. DIMMs must be installed in pairs and starting at the bank farthest from the processor. Populate the SMALLEST DIMMs first.
- 3. If only installing 1 GB DIMMs, ensure that the Dual Rank DIMMs are installed closest to the processor. Dual Rank can be determined by looking for the "2R" or "2Rx8" wording on the label of the DIMM.
- 4. All DIMMs in a bank must have the same part number.
- 5. DIMMs on different banks can be of different sizes.
- 6. Processor 2 must be installed before banks 2A and 2B are populated.
- 7. If processor 2 is installed, it is recommended that bank 2A be populated before populating bank 1B.
- 8. For optimum performance it is recommended that a minimum of banks 1A and 1B be populated in a 2P configuration.

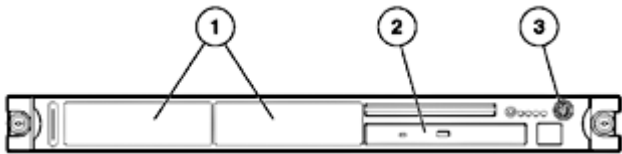
**NOTE:** Chart does not represent all possible memory configurations.

| Memory          | Slot   |        |       |       |       |       |       |       |
|-----------------|--------|--------|-------|-------|-------|-------|-------|-------|
|                 | 1      | 2      | 3     | 4     | 5     | 6     | 7     | 8     |
| Standard (1 GB) | 512 MB | 512 MB | Empty | Empty | Empty | Empty | Empty | Empty |
| Standard (2 GB) | 1 GB   | 1 GB   | Empty | Empty | Empty | Empty | Empty | Empty |
| Maximum (16 GB) | 2 GB   | 2 GB   | 2 GB  | 2 GB  | 2 GB  | 2 GB  | 2 GB  | 2 GB  |

Following are memory options available from HP:

|  |            |
|--|------------|
| 1 GB Advanced ECC PC3200 DDR1 SDRAM DIMM Memory Kit (2 x 512 MB) | 376638-B21 |
| 2 GB Advanced ECC PC3200 DDR1 SDRAM DIMM Memory Kit (2 x 1 GB)   | 376639-B21 |
| 4 GB Advanced ECC PC3200 DDR1 SDRAM DIMM Memory Kit (2 x 2 GB)   | 379300-B21 |

Storage



- 1 Two 1" Non-Hot Plug SATA or SCSI Hard Drive Bays
  - 2 Optional CD-ROM or DVD drive
  - 3 Power On/Off
- Number of drive positions to match table below.

Drive Support

Removable Media

|                                   | Quantity Supported | Position Supported | Controller                                    |
|-----------------------------------|--------------------|--------------------|---|
| DVD-ROM Drive                     | Up to 1            | 2                  | 8x IDE (ATAPI) DVD-ROM drive, slim (optional) |
| CD-ROM Drive                      | Up to 1            | 2                  | 24x IDE (ATAPI) CD-ROM drive (optional)       |
| Multibay II DVD/CD-RW Combo Drive | Up to 1            | 2                  | 24x IDE (ATAPI) CD-ROM drive (optional)       |

**NOTE:** When purchasing the Multibay II DVD/CD-RW Combo Drive, (PN PA850A), the USB 2.0 Multibay II Cradle (PN PA509A) is required.

Hard Drives (SCSI Models only)  
Ultra320 SCSI

|                       | Quantity Supported | Position Supported | Controller   |
|-----------------------|--------------------|--------------------|--|
| 36GB<br>72GB<br>146GB | Up to 2            | 1                  | U320 Single Channel PCI-X controller (in low profile slot) |

Hard Drives (SATA Models)  
7,200 rpm SATA

|                                  | Quantity Supported | Position Supported | Controller               |
|----------------------------------|--------------------|--------------------|--------------------------|
| 80GB<br>160GB<br>250GB<br>500GB* | Up to 2            | 1                  | Embedded SATA Controller |

**NOTE:** \* Available via CTO only.

## Storage

### Maximum Storage Capacity – SCSI Models

|          |                                    |
|----------|------------------------------------|
| Internal | 292GB (2 x 146GB SCSI hard drives) |
| Total    | 292GB (2 x 146GB SCSI hard drives) |

### Maximum Storage Capacity – SATA Models

|          |   |
|----------|---|
| Internal | 500GB (2 x 250GB SATA hard drives)  |
| Total    | 500GB (2 x 250GB SATA hard drives) or<br>1TB (2 x 500GB SATA drives – via CTO only) |

## Tape Drives, Tape Autoloaders, & Tape Libraries

**NOTE:** For an up-to-date listing of the latest O/S Support details for each of the Tape Drives listed below, please see the following:  
[http://h18000.www1.hp.com/products/quickspecs/North\\_America/10233.html](http://h18000.www1.hp.com/products/quickspecs/North_America/10233.html)

**NOTE:** For an up-to-date listing of the latest O/S Support details for each of the Tape Autoloaders and Tape Libraries listed below, please see the following:  
[http://h18000.www1.hp.com/products/quickspecs/North\\_America/10809.html](http://h18000.www1.hp.com/products/quickspecs/North_America/10809.html)

**NOTE:** For complete listing of tape drive offerings see  
<http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>

For supported tape drive offerings for this ProLiant server see the following:

|  | Quantity<br>Supported | Position<br>Supported | Controller   |
|--|-----------------------|-----------------------|--|
| HP StorageWorks Tape<br>Drives, USB External<br>DAT 24 USB<br>DAT 40 USB<br>DAT 72 USB | 1                     | External              | USB 2.0 port   |
| HP StorageWorks Tape<br>Drives, External<br>Ultrium 232<br>DAT 40<br>DAT 72            | 1 per SCSI<br>channel | External              | 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter<br>64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 |
| HP StorageWorks Rack-<br>mount Tape Drive<br>Enclosures<br>1U Rack-Mount Kit           | 1 per SCSI<br>channel | External              | 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter<br>64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 |

Power Specifications

|  |  |
|--|--|
| Spare Kit                              | 389322-001                                 |
| Operational Input Voltage Range (Vrms) | 90Vac to 264Vac full range at 25oC ambient |
| Frequency Range (Nominal) (Hz)         | 47 Hz to 63 Hz                             |
| Power Output                           | 500W Nominal                               |
| Power Cords (Nema 5-15P to IEC320-C13) |  |
| Standard Power Cord Part Number        | 307348-B21                                 |
| Optional Power Cord Part Number        | 307372-001                                 |

Technical Specifications

|  |   |   |
|--|---|---|
| System Unit                                  | Dimensions (HxWxD)                      | 1.70 x 16.78 x 26.75 in (4.32 x 42.62 x 67.95 cm) |
|  | Weight (approximate; fully configured)  | 35 lb (15.87 kg)                                  |
| Input Requirements (per power supply)        | Range Input Voltage                     | 90 to 140 VAC/180 to 264 VAC                      |
|  | Normal Line Voltage                     | 115 or 230 VAC                                    |
| Line Frequency                               |   | 47 to 63 Hz                                       |
| Rated Input Current load                     |   | 7.1A at 115VAC, 3.6A at 230VAC                    |
| BTU Rating                                   | BTU-Hr (max configuration)              | 2371  |
| Power Supply Output Power (per power supply) | Rated Steady-State Power                | 500W  |
| Temperature Range                            | Operating                               | 50° to 93° F (10° to 35° C)                       |
|  | Shipping                                | -40° to 140° F (-40° to 60° C)                    |
| Relative Humidity (non-condensing)           | Operating                               | 10% to 80%  |
|  | Non-operating                           | 10% to 95%  |
| Acoustic Noise                               | Idle (Fixed Disk Drives Spinning)       |   |
|  | L WAd (BELS)                            | 6.31  |
|  | Operating (Random Seeks to Fixed Disks) |   |
|  | L WAd (BELS)                            | 6.32  |

**NOTE:** All temperature ratings shown are for sea level. An altitude derating of 1.8° F per 1,000 ft (1° C per 304.8 m) to 10,000 ft (3048 m) is applicable. No direct sunlight allowed. Upper operating limit is 10,000 ft (3048 m) or 70 Kpa/10.1 psia. Upper non-operating limit is 30,000 ft (9144 m) or 30.3KPa/4.4 psia. System performance may be reduced if operating with a fan fault or above 30° C.

**NOTE:** Storage maximum humidity of 90% is based on a maximum temperature of 113° F (45° C). Altitude maximum for storage corresponds to a pressure minimum of 70 KPa.

### Technical Specifications

Non-Hot Plug SATA Hard Drives 80-GB 7.2K 383410-B21

|   |  |
|---|--|
| Capacity                                      | 80027 MB   |
| Height  | 1.028 in (2.61 cm)   |
| Width   | 4.0 in (10.16 cm)  |
| Interface                                     | SATA 100   |
| Transfer Rate Synchronous (Maximum)           | 100 MB/s   |
| Seek Time (typical reads, including settling) | Single Track<br>Average<br>Full-Stroke<br>Rotational Speed |
| Physical Configuration                        | Bytes/Sector<br>Logical Blocks                             |
| Operating Temperature                         | 41° to 131° F (5° to 55° C)                                |

Non-Hot Plug U320 SCSI Hard Drive 36.4-GB 15K 357012-B21

|   |   |
|---|---|
| Capacity                                      | 36419.2 MB  |
| Height  | 1.0 in (2.54 cm)  |
| Width   | 4.0 in (10.16 cm)   |
| Interface                                     | Ultra320 SCSI   |
| Seek Time (typical reads, including settling) | Single Track 0.4 ms<br>Average 3.8 ms<br>Full-Stroke 8ms<br>Rotational Speed 15,000 rpm |
| Physical Configuration                        | Bytes/Sector 512<br>Logical Blocks 71,132,000   |
| Operating Temperature                         | 50° to 95° F (10° to 35° C)   |

Embedded SATA Controller

|  |   |
|--|---|
| Drives Supported                         | Up to 2 SATA devices                        |
| Channels                                 | 2 (SATA Drives)                             |
| Storage Capacity                         | 1 TB internal storage                       |
| Data Transfer Method                     | 32-bit/33-MHz PCI bus-master                |
| Maximum SATA Channel Transfer Rate       | 100 MB/s per channel                        |
| Maximum Transfer Rate per PCI Bus (peak) | 266 MB/s per channel                        |
| Protocols                                | SATA<br>PIO Mode[0-4]                       |
| Cable                                    | SATA  |
| Internal ATA Connectors                  | Two SATA Connectors (primary and secondary) |

### Technical Specifications

|   |                                       |  |
|---|---------------------------------------|--|
| <b>64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2</b><br>(SCSI Model Standard) 374654-B21 | <b>Drives Supported</b>               | Up to 14 SCSI devices (only supports 2 internal SCSI drives on DL145 G2) |
|   | <b>Channels</b>                       | 1  |
|   | <b>Storage Capacity</b>               | 292 GB internal storage  |
|   | <b>Data Transfer Method</b>           | 64-bit/133-MHz PCI-X bus-master  |
|   | <b>Maximum Host Bus Transfer Rate</b> | 532 MB/s per channel   |
|   | <b>Maximum SCSI Transfer Rate</b>     | 320 MB/s per channel   |
|   | <b>Protocols</b>                      | Ultra320 SCSI<br>Ultra3 SCSI<br>Wide Ultra2 SCSI<br>Ultra SCSI           |
|   | <b>External SCSI Connector</b>        | One 68-Pin VHDCI connectors  |
|   | <b>Internal SCSI Connector</b>        | HP U320 Internal SCSI Cable Kit (See Storage Controller and I/O Options) |

|  |                              |  |
|--|------------------------------|--|
| <b>Integrated Dual Broadcom 5721 10/100/1000 NICs</b><br>(Wake on LAN and PXE capable) | <b>Network Interface</b>     | 10Base-T/100Base-TX/1000Base-TX                                  |
|  | <b>Compatibility</b>         | IEEE 802.3 10Base-T  |
|  |                              | IEEE 802.3 1000Base-T  |
|  |                              | IEEE 802.3 100Base-TX  |
|  | <b>Data Transfer Method</b>  | 64-bit, 133MHz PCI(X)1.0   |
|  | <b>Network Transfer Rate</b> | 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) 2000 Mb/s                     |
|  | <b>Connector</b>             | RJ-45  |
|  | <b>Cable Support</b>         | 10Base-T Categories 3, 4 or 5 UTP; up to 328 ft (100 m)          |
|  |                              | 10/100/1000Base-TX Category 5 UTP (2 Pair); up to 328 ft (100 m) |

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For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.