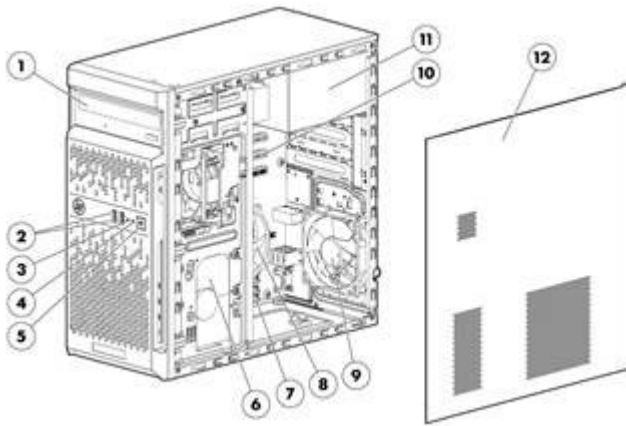


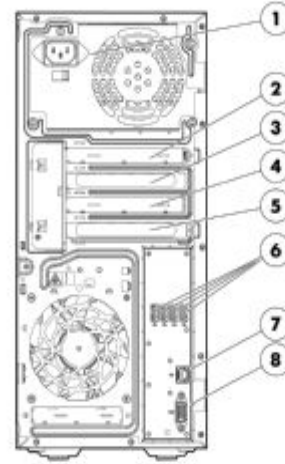
### Overview

The HP ProLiant ML10 Server is a single-socket 4U tower server, delivering excellent value in a large form factor that small businesses require to run a small network environment. It is outstanding for businesses looking for improved performance, number of available slots, and flexible storage options while staying within a tight budget.



#### Front View:

1. Optical Media Drive
2. USB Connectors
3. NIC Status LED
4. Drive Status LED
5. System Power Button/LED
6. LFF Drive
7. DIMM
8. CPU Fan
9. System Fan
10. PCIe2x16 (8,4,1) Slot
11. Power Supply
12. Access Panel



#### Rear View:

1. Power Supply Connector
2. Slot 1 PCIe
3. Slot 2 PCIe
4. Slot 3 PCIe
5. Slot 4 PCIe
6. USB Connector
7. NIC Connector
8. Video Connector

### What's New

- Supports up to 4 large form factor SATA drives
- Allows businesses to increase local storage as needed
- Provides low cost, reliable data storage solution

### Standard Features

**Processor** **Dual-Core Processor**  
Intel® Pentium® G2130 (3.20GHz/2-core/3MB/55W, 1600) Processor

**Cache Memory** Integrated 1x3MB Level3 Intel® Smart Cache

**Chipset** Intel® C204 Series Chipset  
**NOTE:** For more information regarding Intel® chipsets, please see the following URL:  
<http://www.intel.com/products/server/chipsets/>.

**Upgradeability** Up to 4 DIMM slots available for higher memory capacity  
Up to 4 LFF Hard Drives  
4 PCIe 2.0 I/O slots for additional communications and storage expansion  
Optical Drive Bay

**On System Management Chipset** HP iLO (Firmware: HP iLO3)  
**NOTE:** For more information, visit: <http://www.hp.com/go/ilo>

**Memory Protection** ECC

|               |            |  |
|---------------|------------|--|
| <b>Memory</b> | Type       | PC3-12800E-11 unbuffered DDR3 ECC up to 1600MT/s |
|               | DIMM Slots | Total 4 DIMM slots                               |
|               | Standard   | 2GB GB (1x2GB)                                   |
|               | Maximum    | 32GB   |

**Network Controller** HP NC112i 1-Port Ethernet Server Adapter (X1)

| Expansion Slots | Expansion Slot # | Technology | Bus Width*** | Connector Width | Form Factor                    |
|-----------------|------------------|------------|--------------|-----------------|--------------------------------|
|                 | 1                | PCIe G2    | x16          | x16             | Full height & Half-length slot |
|                 | 2                | PCIe G2    | X4           | X8              | Full height & Half-length slot |
|                 | 3                | PCIe G2    | X4           | X8              | Full height & Half-length slot |
|                 | 4                | PCIe G2    | X1           | X4              | Full height & Half-length slot |

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

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

### Standard Features

#### HP Server ROM

HP ROM (Read Only Memory) is now digitally signed using HP's Corporate Signing Service. This signature is verified before the flash process starts, reducing accidental programming and preventing malicious efforts to corrupt system ROM.

HP ROM provides for essential initialization and validation of hardware components before control is passed to the customer-installed operating system. The ROM also provides the capability of booting from various fixed media (HDD, CD-ROM) and removable media (USB), to continue operation to the operating system.

HP ROM performs very early configuration of the video controller, to allow monitoring of initialization progress via an attached monitor. If configuration or hardware errors are discovered during this early phase of hardware initialization, suitable messages are now displayed on the connected monitor. Additionally, these configuration or hardware errors are logged to the Integrated Management Log (IML) to assist in diagnosis.

HP's ProLiant ROM is used to configure the following:

- Processor and chipset status registers
- System memory, memory map, and memory initialization
- System hardware configuration (Integrated PCI devices and optional PCIe cards).
- Customer-specific BIOS configuration (using the HP ROM-Based Setup Utility (RBSU)).

**NOTE:** For further information, please refer to HP's RBSU (ROM based setup utility) user guide: [www.hp.com/support/rbsu](http://www.hp.com/support/rbsu).

#### Storage Controller

HP Embedded Smart Array B110i SATA RAID Controller (RAID 0/1/10)

**NOTE:** Supports up to two (2) 3.0Gb/s SATA hard disk drives only

**NOTE:** For set up instructions, please refer to the HP ProLiant ML100 series server user guide at: <http://bizsupport1.austin.hp.com/bc/docs/support/SupportManual/c01708878/c01708878.pdf>

**NOTE:** For general information about HP Smart Array B110i SATA RAID Controller, please go to: <http://h18004.www1.hp.com/products/servers/proliantstorage/arraycontrollers/smartarrayb110i/index.html>

#### Internal Storage Devices

Optical Drive HP Half-Height SATA DVD (Optional)

Standard Hard Drive (1) Non hot-plug LFF SATA

Hard Drive Bay

Configurations

(depending on option)

2 HDDs (no optical)

Convert optical bay to 2nd LFF HDD bay

**NOTE:** Requires purchase of HP ML10 Hard Drive Enablement Kit (#730641-B21)

3 HDDs (with optical)

Replace internal single HDD carrier with a 3 x LFF carrier (leaving optical bay available)

**NOTE:** Requires purchase of HP ML10 4 LFF Hard Drive Enablement Kit (#742971-B21)

NOTE: The ML10 4LFF Hard Drive Enablement Kit: includes one carrier to convert the Optical Drive bay to one LFF Drive and includes a second carrier to support 3 internal LFF HDDs. The 3 x LFF carrier replaces the standard 1 x LFF carrier. For 3HDD Configurations, the carrier to convert the Optical Drive day to one LFF Drive is left unused.

4 HDDs (no optical)

Replace internal single HDD carrier with a 3 x LFF carrier and convert optical bay to support 1 x LFF HDD

**NOTE:** Requires purchase of HP ML10 4 LFF Hard Drive Enablement Kit (#742971-B21)

NOTE: The ML10 4LFF Hard Drive Enablement Kit: includes one carrier to convert the Optical Drive bay to one LFF Drive and includes a second carrier to support 3 internal LFF HDDs. The 3 x LFF carrier replaces the

### Standard Features

standard 1 x LFF carrier. Both carriers need to be installed.

|                                 |                           |         |
|---------------------------------|---------------------------|---------|
| <b>Maximum Internal Storage</b> | Non-Hot Plug LFF SATA 8TB | 4 x 2TB |
|---------------------------------|---------------------------|---------|

**NOTE:** Requires purchase of optional HP ML10 4 LFF Hard Drive Enablement Kit (#742971-B21)

|                   |                          |   |
|-------------------|--------------------------|---|
| <b>Interfaces</b> | Video Port               | 1   |
|                   | USB 2.0 Ports            | 7 total (4 rear, 2 front panel, 1 internal) |
|                   | Network RJ-45 (Ethernet) | 1 (shared for HP Integrated Lights-Out)     |
|                   | Remote Management        | iLO3 remote management support              |

|  |  |
|--|--|
| <b>Industry Standard Compliance</b>              | ACPI V3.0b Compliant                         |
|  | PCI Express Rev 2.0                          |
|  | PXE Support                                  |
|  | WOL Support                                  |
|  | IPMI 2.0 compliance                          |
|  | DCMI 1.0                                     |
|  | Microsoft® Logo certifications               |
|  | Red Hat Enterprise Linux Logo certifications |
| SUSE Linux Enterprise Server Logo certifications |  |
| USB 2.0  |  |

|                           |   |
|---------------------------|---|
| <b>Server Power Cords</b> | The ML10 server ships standard with a 6 country specific NEMA power cord. If customers require a local power cord, they can check the power cord matrix for the appropriate country specific sku. Please see the following power cord matrix: <a href="http://www.hp.com/go/powercordmatrix">http://www.hp.com/go/powercordmatrix</a> |
|---------------------------|---|

|                     |   |
|---------------------|---|
| <b>Power Supply</b> | 300 Watts 80+ Bronze Non-Hot Plug, Non redundant Power Supply |
|---------------------|---|

|                    |   |
|--------------------|---|
| <b>System Fans</b> | One Non-redundant system fan ships standard       |
|                    | One Non-redundant CPU heatsink fan ships standard |

|   |  |
|---|--|
| <b>Operating Systems and Virtualization Software Support for ProLiant Servers</b> | <a href="#">Microsoft Windows Server</a>   |
|   | <a href="#">SUSE Linux Enterprise Server (SLES)</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="#">HP ProLiant ML10</a> |

|                    |                       |
|--------------------|-----------------------|
| <b>Form Factor</b> | Micro ATX Tower (4U). |
|--------------------|-----------------------|

|                              |                                |  |
|------------------------------|--------------------------------|--|
| <b>HP Insight Management</b> | HP Integrated Lights-Out 3 (3) | HP Integrated Lights-Out 3 (iLO) simplifies server setup, health monitoring, and lights-out remote administration of ProLiant ML, DL, and BL servers. HP iLO functions without additional software and can be accessed from any location via a web browser. HP iLO works hand-in-hand with HP Systems Insight Manager, Insight Control suites, and Insight Dynamics for ProLiant, helping customers unleash the value of the ProLiant platform and deliver the highest possible quality of IT service. For more information, visit: <a href="http://www.hp.com/go/iLO">www.hp.com/go/iLO</a> |
|------------------------------|--------------------------------|--|

### Standard Features

#### Security

Power-on password  
Setup password  
Secure Sockets Layer (SSL)  
Secure Shell (SSH)  
iLO 3 (Integrated Lights-Out 3) has 12 customizable user accounts and SSL encryption  
iLO 3 can be disabled via a Global Setting  
iLO Advanced supports directory services integration

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#### Warranty

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners. Hardware diagnostic support and repair are available for one year 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. Hard drives have one year warranty; refer to the specific hard drive QuickSpecs for details.

**NOTE:** Server Warranty includes 1 year parts, 1 year labor, 1-year on-site 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>

### Optional Features

#### HP Insight management software

#### HP Insight Control

HP Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. For more information, visit: [www.hp.com/go/insightcontrol](http://www.hp.com/go/insightcontrol).

HP Insight Control includes 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>.

**NOTE:** HP Insight Control 7.2 introduces Insight Control server provisioning, a new capability ideal for multi-server OS and firmware provisioning to ProLiant and BladeSystem servers. Insight Control server provisioning is included and licensed as part of HP Insight Control. A media kit, "HP Insight Control server provisioning USB media kit" (#BD883A), including a USB, is available for customers who require a physical copy of the media loaded with Insight Control server provisioning software. Please note that this media kit is separate and in addition to the "HP Insight Management DVD media kit" (#C6N31A).

### Service and Support

#### Service and Support

##### **HP Technology Services for Industry Standard Servers and BladeSystem**

Capitalizing on HP ProLiant server and HP BladeSystem capabilities requires a service partner who understands your increasingly complex business technology environment. That's why it makes sense to team up with the people who know HP infrastructure hardware and software best - the experienced professionals at HP Services.

##### **Protect your business beyond warranty with HP Care Pack Services**

HP Care Pack services offer complete care and support expertise with committed response choices designed to meet your IT and business needs.

HP Foundation Care services offer scalable reactive support-packages for HP industry-standard servers and software. You can choose the type and level of service that is most suitable for your IT and business needs. HP Proactive Care delivers high levels of system availability through proactive service management and advanced technical response.

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#### Optimized Care

##### **Supports maintaining servers at optimum performance availability**

###### **3-Year HP 24x7 4 hour response, Proactive Care Service\***

This service gives you combined reactive and proactive support including rapid access to our Advanced Solution Center to manage and prevent problems and a Technical Support Specialist with a broad level of technical knowledge that will engage with additional technical expertise as needed from HP's vast global resources.

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855EEE.pdf>

###### **HP ProLiant Server Hardware Installation**

Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf>

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#### Standard Care Package Supports maintaining high level of server availability

##### **3-Year HP Next Business Day, Proactive Care Service\***

This service gives you combined reactive and proactive support including rapid access to our Advanced Solution Center to manage and prevent problems and a Technical Support Specialist with a broad level of technical knowledge that will engage with additional technical expertise as needed from HP's vast global resources.

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855EEE.pdf>

###### **HP ProLiant Server Hardware Installation**

Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf>

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#### Basic Care Package

##### **Delivers minimum recommended support service level**

###### **HP Foundation Care Next Business Day Service**

HP Foundation Care Next Business Day connects you to HP during business hours for assistance on resolving issues - features next business day hardware onsite response and software call back within two hours after opening your case. Make HP your first call for hardware or software questions; Collaborative Support is included in all Foundation Care Services for this product and provides troubleshooting assistance on software such as Microsoft Server, Red Hat Linux, VMware and more. Three years' coverage recommended with HP Care Pack Service.

<http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en>



### Service and Support

#### HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf>

#### Related Services

#### HP Proactive Care Personalized Support - Environmental Option

The Personalized Support option provides an assigned Account Support Manager who can bring best practices from across the industry plus extra technical skills to your IT team. This option is only available as an add-on to HP Proactive Care Support.

#### HP Proactive Select Service

Provides a flexible way to purchase HP best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months. <http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN.pdf>

Additional HP Care Pack services can be found at:

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

#### Insight Online/Insight Remote Support

HP Insight Remote Support provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. This comes at no additional cost with your HP solution\*. Learn more about Insight Remote Support <http://www.hp.com/go/insightremotesupport> and Insight Online <http://www.hp.com/go/insightonline>

\* Insight Remote Support is a prerequisite for Proactive Care.

#### HP Support Center

Personalized online support portal with access to information, tools and experts to support HP business products. Submit support cases online, chat with HP experts, access support resources or collaborate with peers. Learn more <http://www.hp.com/go/hpsc>

HP's Support Center Mobile App\*\* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime. HP Insight Remote Support and HP Support Center are available at no additional cost with a HP warranty, HP Care Pack or HP contractual support agreement.

\*\* HP Support Center Mobile App is subject to local availability

#### Parts and Materials

HP will provide HP-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HP due to malfunction.

#### For more information

To learn more on HP ProLiant servers, please contact your HP sales representative or HP Authorized Channel Partner or visit: <http://www.hp.com/services/proliant>



### Pre-configured Models

#### SATA Model

**NOTE:** Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.

**NOTE:** HP does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.

**NOTE:** Not all models are available in all regions. Check with your local country HP offices for availability.

**NOTE:** For general information about HP Smart Array B110i SATA RAID Controller, please visit:

<http://h18004.www1.hp.com/products/servers/proliantstorage/arraycontrollers/smartarrayb110i/index.html>

#### Entry Model

|  |   |  |
|--|---|--|
| <b>HP ProLiant ML10<br/>G2130 1P 2GB-U B110i<br/>300W PS Entry Server<br/>730651-xx1</b> | <b>Processor</b><br><br><b>Cache Memory</b><br><br><b>Memory</b><br><br><br><b>Network Controller</b><br><b>Storage Controller</b><br><b>Hard Drive</b><br><b>Optical Drive</b><br><br><b>Power Supply</b><br><b>Fans</b><br><br><b>Accessories</b><br><b>Management</b><br><b>Form Factor</b><br><b>Warranty</b> | (1) Intel® Pentium® Processor G2130 (3.20GHz/2-core/3MB/55W, 1600) Processor<br><br>3MB Intel® Smart Cache<br>2GB (1x2GB) PC3-12800E (DDR3-1600) Unbuffered DIMM<br>32GB Maximum memory capacity<br><b>NOTE: Total 4 DIMM slots.</b><br><br>HP NC112i 1-Port Ethernet Server Adapter (x1)<br>HP Embedded Smart Array B110i SATA RAID Controller<br>None ships standard (Single LFF carrier included)<br>HP Half-Height SATA DVD ROM JackBlack Optical Drive (Optional)<br>HP Half-Height SATA DVD RW JackBlack Optical Drive (Optional)<br><br>300 Watts 80+ Bronze Non-Hot Plug, Non redundant Power Supply<br><br>One (1) - Non-redundant system fan ships standard<br>One (1) - Non-redundant CPU heatsink fan ships standard<br><br>Keyboard/mouse optional<br>HP Integrated Lights-Out Standard (iLO 3)<br>Micro ATX Tower (4U)<br><br>Server Warranty includes 1 year parts, 1 year labor, 1-year on-site support with next business day response. |
|--|---|--|

**NOTE:** Server model PN (757643-425) available in Europe only.

|  |   |   |
|--|---|---|
| <b>HP ProLiant ML10 Xeon Processor<br/>E3-1220 v2 1P 4GB-U<br/>Server<br/>757643-425</b> | <b>Cache Memory</b><br><br><b>Memory</b><br><br><br><b>Network Controller</b><br><b>Storage Controller</b><br><b>Hard Drive</b><br><br><b>Optical Drive</b><br><b>Power Supply</b><br><b>Fans</b><br><br><b>Accessories</b><br><b>Management</b><br><b>Form Factor</b><br><b>Warranty</b> | (1) Intel® Xeon® Processor E3-1220 v2 (3.10GHz/4-core/8MB/69W) Processor<br><br>3MB Intel® Smart Cache<br>4GB (1x4GB) PC3-12800E (DDR3-1600) Unbuffered DIMM<br>32GB Maximum memory capacity<br><b>NOTE: Total 4 DIMM slots.</b><br><br>HP NC112i 1-Port Ethernet Server Adapter (x1)<br>HP Embedded Smart Array B110i SATA RAID Controller<br>1TB x 2<br><b>NOTE: HP ML10-4 LFF Hard Drive Enablement Kit (742971-B21) is embedded</b><br><br>HP Half-Height SATA DVD ROM JackBlack Optical Drive<br>300 Watts 80+ Bronze Non-Hot Plug, Non redundant Power Supply<br><br>One (1) - Non-redundant system fan ships standard<br>One (1) - Non-redundant CPU heatsink fan ships standard<br><br>Keyboard/mouse optional<br>HP Integrated Lights-Out Standard (iLO 3)<br>Micro ATX Tower (4U)<br><br>Server Warranty includes 1 year parts, 1 year labor, 1-year on-site support with next business day response. |
|--|---|---|

### Pre-configured Models

**NOTE:** Server model PN (757643-295) available in Japan only.

**NOTE:** Server model PN (757643-375) available in Asia Pacific only.

**NOTE:** Server model PN (757643-AA5) available in China only.

|  |                           |  |
|--|---------------------------|--|
| <b>HP ProLiant ML10 Xeon Processor</b> |                           | (1) Intel® Xeon® Processor E3-1220 v2 (3.10GHz/4-core/8MB/69W)   |
| <b>E3-1220 v2 1P 4GB-U</b>             |                           | Processor  |
| <b>Server</b>                          | <b>Cache Memory</b>       | 3MB Intel® Smart Cache   |
| 757643-295                             | <b>Memory</b>             | 4GB (1x4GB) PC3-12800E (DDR3-1600) Unbuffered DIMM   |
| 757643-375                             |                           | 32GB Maximum memory capacity   |
| 757643-AA5                             |                           | <b>NOTE: Total 4 DIMM slots.</b>   |
|  | <b>Network Controller</b> | HP NC112i 1-Port Ethernet Server Adapter (x1)  |
|  | <b>Storage Controller</b> | HP Embedded Smart Array B110i SATA RAID Controller   |
|  | <b>Hard Drive</b>         | 1TB  |
|  |                           | <b>NOTE: HP ML10-4 LFF Hard Drive Enablement Kit (742971-B21) is embedded</b>                                |
|  | <b>Optical Drive</b>      | HP Half-Height SATA DVD ROM JackBlack Optical Drive  |
|  | <b>Power Supply</b>       | 300 Watts 80+ Bronze Non-Hot Plug, Non redundant Power Supply  |
|  | <b>Fans</b>               | One (1) - Non-redundant system fan ships standard<br>One (1) - Non-redundant CPU heatsink fan ships standard |
|  | <b>Accessories</b>        | Keyboard/mouse optional  |
|  | <b>Management</b>         | HP Integrated Lights-Out Standard (iLO 3)  |
|  | <b>Form Factor</b>        | Micro ATX Tower (4U)   |
|  | <b>Warranty</b>           | Server Warranty includes 3 year parts, 3 year labor, 3-year on-site support with next business day response. |

|                         |        |        |
|-------------------------|--------|--------|
| <b>Country Code Key</b> | xx= 00 | US     |
|                         | xx=42  | Europe |

### Core Options

**NOTE:** Some options may not be integrated at the factory. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for additional information.

|                          |  |
|--------------------------|--|
| <b>HP Unique Options</b> | <p>HP ML10 Hard Drive Enablement Kit <span style="float: right;">730641-B21</span><br/> <b>NOTE:</b> The ML10 HDD enablement Kit converts the Optical Drive bay to one LFF HDD Carrier</p> <p>HP ML10 4 LFF Hard Drive Enablement Kit <span style="float: right;">742971-B21</span><br/> <b>NOTE:</b> The ML10-4LFF Hard Drive Enablement Kit: includes one carrier to convert the Optical Drive bay to one LFF Drive and includes a second carrier to support 3 internal LFF HDDs. The 3 x LFF carrier replaces the standard 1 x LFF carrier.</p> |
|--------------------------|--|

|                  |  |
|------------------|--|
| <b>HP Memory</b> | <p><b>Unbuffered with ECC DIMMs (UDIMMs)</b></p> <p>HP 2GB (1x2GB) Single Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit <span style="float: right;">669320-B21</span></p> <p>HP 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit <span style="float: right;">669322-B21</span></p> <p>HP 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit <span style="float: right;">669324-B21</span></p> <p><b>NOTE:</b> All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: <a href="http://www.hp.com/go/ddr3memory-configurator">www.hp.com/go/ddr3memory-configurator</a>.</p> <p><b>NOTE:</b> Depending on the memory configuration and processor model, 1600MHz memory may operate at a lower speed. Please see the "Memory" section later in this document and the Online Memory Configuration Tool for details at <a href="http://www.hp.com/go/ddr3memory-configurator">www.hp.com/go/ddr3memory-configurator</a>.</p> <p><b>NOTE:</b> For additional memory rules and guidelines, see the "Memory" section later in this document.</p> <p><b>NOTE:</b> For more information on ProLiant Energy Efficient Features, see: <a href="http://www.hp.com/go/proliant-energy-efficient">www.hp.com/go/proliant-energy-efficient</a></p> |
|------------------|--|

|                          |  |
|--------------------------|--|
| <b>HP Optical Drives</b> | <p>HP Half-Height SATA DVD ROM JackBlack Optical Drive <span style="float: right;">624189-B21</span></p> <p>HP Half-Height SATA DVD RW JackBlack Optical Drive <span style="float: right;">624192-B21</span></p> |
|--------------------------|--|

|                       |  |
|-----------------------|--|
| <b>HP Hard Drives</b> | <p><b>NOTE:</b> The components of a storage subsystem (e.g. the drive, the HBA/controller, and firmware) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.</p> <p><b>NOTE:</b> Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.</p> <p><b>SATA Non-Hot Plug LFF (3.5-inch) Midline (MDL) Drives</b></p> <p>HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive <span style="float: right;">507774-B21</span></p> <p>HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive <span style="float: right;">507772-B21</span></p> <p>HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive <span style="float: right;">458941-B21</span></p> <p><b>NOTE:</b> Please see the QuickSpecs for Technical Specifications and additional information:<br/> <a href="http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html">http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html</a></p> |
|-----------------------|--|

### Core Options

#### HP ML10 HDD enablement Kit

**NOTE:** The ML10 HDD enablement Kit convert Optical Drive to one LFF Drive  
Carrier x 1  
SATA Cable x1  
Mini SAS Cable x1

730641-B21

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#### HP Networking

##### Gigabit Ethernet Adapters

HP NC112T PCI Express Gigabit Server Adapter

503746-B21

HP NC365T 4-port Ethernet Server Adapter

593722-B21

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information: [www.hp.com/go/ProLiantNICs](http://www.hp.com/go/ProLiantNICs)

### Additional Options

**NOTE:** Some options may not be integrated at the factory. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for additional information.

|                            |   |          |
|----------------------------|---|----------|
| <b>HP Insight Software</b> | <b>HP Insight Control</b>   |          |
|                            | HP Insight Control including 1yr 24x7 Technical Support and Updates Electronic License  | C6N28AAE |
|                            | HP Insight Control Server Provisioning Media Kit  | BD883A   |
|                            | HP Insight Management Media Kit   | C6N31A   |
|                            | <p><b>NOTE:</b> Insight Software DVD media without licenses. Contains HP Systems Insight Manager, HP Insight Control, HP Insight Dynamics, HP Insight Control for Microsoft System Center, and Virtual Connect Enterprise Manager software. Uses an integrated installer to perform quick and accurate software installation and updates.</p> <p><b>NOTE:</b> Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.</p> <p><b>NOTE:</b> Customer will receive a license entitlement certificate. 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> Licenses ship without media. The HP Insight Control Media Kit can be ordered separately, or can be downloaded at:<br/> <a href="http://www.hp.com/go/insightupdates">http://www.hp.com/go/insightupdates</a></p> <p><b>NOTE:</b> For additional license options please see the QuickSpecs at:<br/> <a href="http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html">http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html</a>.</p> <p><b>NOTE:</b> Licenses ship without media. The HP Insight Management Media Kit can be ordered separately, or can be downloaded at:<br/> <a href="http://www.hp.com/go/insightupdates">http://www.hp.com/go/insightupdates</a>.</p> <p><b>NOTE:</b> Customer will receive a license entitlement certificate, which 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.</p> <p><b>NOTE:</b> For additional license kits please see the Insight Control QuickSpecs at:<br/> <a href="http://h18004.www1.hp.com/products/quickspecs/12631_div/12631_div.html">http://h18004.www1.hp.com/products/quickspecs/12631_div/12631_div.html</a>.</p> |          |
|                            | <b>HP Integrated Lights-Out (iLO)</b>   |          |
|                            | <b>HP Integrated Lights-Out (iLO) Advanced for ProLiant</b>   |          |
|                            | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Electronic License   | TA850AAE |

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|   |   |        |
|---|---|--------|
| <b>HP Uninterruptible Power Systems</b> | <b>HP Tower - UPS</b>   |        |
|   | <b>HP T750 G2 UPS Models</b>  |        |
|   | HP T750 G2 750VA INTL Tower Uninterruptible Power System  | AF447A |
|   | <p><b>NOTE:</b> For additional information please go to:<br/> <a href="http://www.hp.com/go/rackandpower">http://www.hp.com/go/rackandpower</a> (Worldwide)</p> <p><b>NOTE:</b> Please see QuickSpecs for Technical Specifications and additional information:<br/> <a href="http://h18004.www1.hp.com/products/quickspecs/13160_div/13160_div.html">http://h18004.www1.hp.com/products/quickspecs/13160_div/13160_div.html</a></p> |        |

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### Additional Options

|  |   |        |
|--|---|--------|
| <b>HP Remote Monitoring Power Distribution Units (mPDU)</b>  | <b>HP Remote Monitored Power Distribution Unit: Full Height Version</b>                     |        |
|  | HP 17.3kVA 208 Volt IEC309 60A 3-Phase Watertight Input (12xC13/12xC19) NA/JP Monitored PDU | G9Z07A |
|  | HP 22kVA 400 Volt IEC309 32A 3-Phase Watertight Input (12xC13/12xC19) INTL Monitored PDU    | G9Z08A |
| <b>NOTE:</b> Please see the QuickSpecs for additional information:<br><a href="http://h18000.www1.hp.com/products/quickspecs/14669_div/14669_div.html">http://h18000.www1.hp.com/products/quickspecs/14669_div/14669_div.html</a><br>(Worldwide) |   |        |

|   |  |            |
|---|--|------------|
| <b>HP Rack Options</b>  | <b>HP USB Keyboard and Mouse</b>                                       |            |
|   | HP USB BFR with PVC Free US Keyboard/Mouse Kit                         | 631341-B21 |
|   | HP USB BFR with PVC Free UK Keyboard/Mouse Kit                         | 631344-B21 |
|   | HP USB BFR with PVC Free FR Keyboard/Mouse Kit                         | 631346-B21 |
|   | HP USB BFR with PVC Free ES Keyboard/Mouse Kit                         | 631348-B21 |
|   | HP USB BFR with PVC Free DE Keyboard/Mouse Kit                         | 631358-B21 |
|   | HP USB BFR with PVC Free JP Keyboard/Mouse Kit                         | 631360-B21 |
|   | HP USB BFR with PVC Free IT Keyboard/Mouse Kit                         | 631362-B21 |
|   | HP USB BFR with PVC Free CN Keyboard/Mouse Kit                         | 631364-B21 |
|   | HP USB BFR with PVC Free AE Keyboard/Mouse Kit                         | 638212-B21 |
|   | HP USB BFR with PVC Free RU Keyboard/Mouse Kit                         | 638214-B21 |
|   | HP USB BFR with PVC Free SE Keyboard/Mouse Kit                         | 672097-103 |
|   | HP USB BFR with PVC Free CH Keyboard/Mouse Kit                         | 672097-113 |
|   | HP USB BFR with PVC Free PT Keyboard/Mouse Kit                         | 672097-133 |
|   | HP USB BFR with PVC Free TR Keyboard/Mouse Kit                         | 672097-143 |
|   | HP USB BFR with PVC Free CZ Keyboard/Mouse Kit                         | 672097-223 |
|   | HP USB BFR with PVC Free FI Keyboard/Mouse Kit                         | 672097-353 |
|   | HP USB BFR with PVC Free AP-Intl Keyboard/Mouse Kit                    | 672097-373 |
|   | HP USB BFR with PVC Free Intl Keyboard/Mouse Kit                       | 672097-B33 |
|   | HP USB BFR with PVC Free IN Keyboard/Mouse Kit                         | 672097-D63 |
| HP USB BFR with PVC Free KR Keyboard/Mouse Kit  | 672097-KD3   |            |
| <b>NOTE:</b> Please see the QuickSpecs for Technical Specifications and additional information:<br><a href="http://h18000.www1.hp.com/products/quickspecs/13972_div/13972_div.html">http://h18000.www1.hp.com/products/quickspecs/13972_div/13972_div.html</a><br>(Worldwide) |  |            |
|   | <b>HP Server Console Switches</b>                                      |            |
|   | HP Server Console 0x2x8 Port Analog Switch                             | AF616A     |
|   | HP Server Console 0x2x16 Port Analog Switch                            | AF617A     |
|   | HP KVM Console USB 2.0 Virtual Media CAC Interface Adapter             | AF629A     |
| <b>NOTE:</b> Please see the QuickSpecs for Technical Specifications and additional information:<br><a href="http://h18000.www1.hp.com/products/quickspecs/11834_div/11834_div.html">http://h18000.www1.hp.com/products/quickspecs/11834_div/11834_div.html</a><br>(Worldwide) |  |            |
|   | <b>HP Server Console Switch G2 with Virtual Media &amp; CAC</b>        |            |
|   | HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software | AF618A     |
|   | HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software | AF619A     |
|   | HP KVM Console USB 2.0 Virtual Media CAC Interface Adapter             | AF629A     |
| <b>NOTE:</b> Please see the QuickSpecs for Technical Specifications and additional information:<br><a href="http://h18000.www1.hp.com/products/quickspecs/13475_div/13475_div.html">http://h18000.www1.hp.com/products/quickspecs/13475_div/13475_div.html</a><br>(Worldwide) |  |            |

## Memory

### HP ProLiant ML10 Models

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

### Standard Memory

2GB PC3-12800E-11 unbuffered DDR3 ECC up to 1600MT/s

### Maximum Memory with Optional Memory

Up to 32GB of memory is available with the installation of optional memory, 4x 8 GB PC3-12800E un-buffered ECC DDR3 SDRAM DIMM Memory kits.

**NOTE:** The below chart does not represent all possible memory configurations.

**NOTE:** For best performance, it is recommended that customer installs memory in identical pairs (Slots 2A and 4B are interleaving pair. Slots 1C and 3D are interleaving pair).

| Memory                           |              | Slot   |        |        |        |
|----------------------------------|--------------|--------|--------|--------|--------|
|                                  |              | DIMM1C | DIMM2A | DIMM3D | DIMM4B |
| <b>Standard</b><br>(Entry Model) | <b>2 GB</b>  | Empty  | 2 GB   | Empty  | Empty  |
| <b>Maximum</b>                   | <b>32 GB</b> | 8 GB   | 8 GB   | 8 GB   | 8 GB   |

### Following are memory options available from HP:

|                  |   |            |
|------------------|---|------------|
| <b>HP Memory</b> | HP 2GB (1x2GB) Single Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669320-B21 |
|                  | HP 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit   | 669322-B21 |
|                  | HP 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit   | 669324-B21 |

**NOTE:** All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: [www.hp.com/go/ddr3memory-configurator](http://www.hp.com/go/ddr3memory-configurator).



### Storage



1 Media Drive Bay

Optional: DVD Drive or DVD-RW Drive  
Optional: HDD cage for single HDD

Internal Optional: 3 bay LFF HDD cage. Internal access, replaces single LFF HDD

### Drive Support

| Media        | Quantity Supported | Position Supported | Controller      |
|--------------|--------------------|--------------------|-----------------|
| DVD Drive    | 1                  | 1                  | Integrated SATA |
| DVD-RW Drive | 1                  | 1                  | Integrated SATA |
| LFF SATA HDD | 1                  | 1                  | B110i           |

| Maximum Storage Capacity - SATA Models |      |   |
|--|------|---|
| Internal                               | SATA | 8TB (4 x 2TB)<br>With optional 4LFF HDD Cage Option Kit |

| Gamay 300W ATX, E-star*6 PSU, BronzeF  |            |         |         |         |         |         |         |
|--|------------|---------|---------|---------|---------|---------|---------|
| Part Number  | 699549-001 |         |         |         |         |         |         |
| Operational Input Voltage Range (Vrms)   | 100 to 240 |         |         |         |         |         |         |
| Frequency Range (Nominal) (Hz)   | 50/60      |         |         |         |         |         |         |
| Nominal Input Voltage (Vrms)   | 100        | 120     | 200     | 208     | 220     | 230     | 240     |
| Max Rated Output Wattage Rating  | 299.659    | 299.529 | 299.342 | 298.996 | 298.809 | 298.643 | 298.477 |
| Nominal Input Current (A rms)  | 3.6942     | 3.0526  | 1.8369  | 1.7685  | 1.68    | 1.6149  | 1.555   |
| Max Rated Input Wattage Rating (Watts)   | 362.401    | 357.197 | 350.015 | 349.342 | 348.86  | 348.381 | 347.917 |
| Max. Rated VA (Volt-Amp)   | 369.42     | 366.769 | 367.509 | 367.883 | 369.751 | 371.685 | 373.542 |
| Efficiency (%)   | 82.69      | 83.86   | 85.52   | 85.59   | 85.65   | 85.72   | 85.79   |
| Power Factor   | 0.981      | 0.9739  | 0.9524  | 0.9496  | 0.9435  | 0.9373  | 0.9314  |
| Leakage Current (mA)   | 0.26       | 0.3     | 0.44    | 0.46    | 0.49    | 0.52    | 0.54    |
| Maximum British Thermal Unit Rating (BTU-Hr)   | 1243.4     | 1225.54 | 1200.9  | 1198.59 | 1196.94 | 1195.29 | 1193.7  |
| <b>NOTE:</b> To review typical system power ratings use the 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> or <a href="http://www.hp.com/go/hppoweradvisor">www.hp.com/go/hppoweradvisor</a> |            |         |         |         |         |         |         |

### Technical Specifications

|   |   |   |   |                    |   |                   |  |
|---|---|---|---|--------------------|---|-------------------|--|
| <b>System Unit</b>                                  | <b>Dimensions</b> (H x W x D) (with feet)   | 14.3 x 6.5 x 15 in (36.39 x 16.5 x 38.1 cm)   |   |                    |   |                   |  |
|   | <b>Weight</b> (approximate)   | <table border="0"> <tr> <td>Non Hot Plug LFF Full Loading Single Package weight</td> <td>9.74 kg (21.45 lb)</td> </tr> <tr> <td>Non Hot Plug LFF Full Loading without Package</td> <td>7.80kg (17.18 lb)</td> </tr> <tr> <td>Non Hot Plug LFF light Loading without Package</td> <td>5.94kg (13.08 lb)</td> </tr> </table>  | Non Hot Plug LFF Full Loading Single Package weight | 9.74 kg (21.45 lb) | Non Hot Plug LFF Full Loading without Package | 7.80kg (17.18 lb) | Non Hot Plug LFF light Loading without Package |
| Non Hot Plug LFF Full Loading Single Package weight | 9.74 kg (21.45 lb)  |   |   |                    |   |                   |  |
| Non Hot Plug LFF Full Loading without Package       | 7.80kg (17.18 lb)   |   |   |                    |   |                   |  |
| Non Hot Plug LFF light Loading without Package      | 5.94kg (13.08 lb)   |   |   |                    |   |                   |  |
| <b>300W Input Requirements</b> (per power supply)   | Rated Line Voltage  | 90 to 140 VAC, 180 to 264 VAC   |   |                    |   |                   |  |
|   | Rated Input Current   | 8A (at 100 VAC)<br>4A (at 200 VAC)  |   |                    |   |                   |  |
|   | Rated Input Frequency   | 47 to 63 Hz   |   |                    |   |                   |  |
|   | Rated Input Power   | 410W (at 115 VAC),<br>410W (at 200 VAC)   |   |                    |   |                   |  |
| <b>Power Specifications</b>                         | To review typical system power ratings use the Power Advisor which is available via the online tool located at URL:<br><a href="http://www.hp.com/go/hppoweradvisor">http://www.hp.com/go/hppoweradvisor</a>  |   |   |                    |   |                   |  |
| <b>Power Supply Output</b> (per power supply)       | Rated Steady-State Power  | 300 W (at 100 VAC),<br>300 W (at 200 VAC)   |   |                    |   |                   |  |
|   | Maximum Peak Power  | 320 W (at 100 VAC),<br>320 W (at 200 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.<br>System may shut down if operating with a fan fault or above 42°C (107.6°F). |   |                    |   |                   |  |
|   | Non-operating   | -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/r (36°F/hr)  |   |                    |   |                   |  |
| <b>Relative Humidity</b> (non-condensing)           | Operating   | 10% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.  |   |                    |   |                   |  |
|   | Non-operating   | 5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.  |   |                    |   |                   |  |
| <b>Altitude</b>                                     | Operating   | Maximum allowable altitude change rate is 457 m/min (1500 ft/min).  |   |                    |   |                   |  |
|   | Non-operating   | Maximum allowable altitude change rate is 457 m/min (1500 ft/min).  |   |                    |   |                   |  |
| <b>Acoustic Noise</b>                               | 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).<br><br>Level C (idle 5.6 bel/OP 6.0 bel) |   |   |                    |   |                   |  |
|   | <b>NOTE:</b> The listed sound levels above apply to standard SATA configurations. Additional options may result in increased sound levels.  |   |   |                    |   |                   |  |

### Technical Specifications

|                                       |                                   |   |
|---------------------------------------|-----------------------------------|---|
| <b>Emissions Classification (EMC)</b> | FCC Rating<br>Normative Standards | Class B<br>CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; 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.

|  |   |  |
|--|---|--|
| <b>Integrated Lights-Out Standard (iLO 3) integrated on system board</b> | <b>Architecture</b>   | PCI Express based health and remote management ASIC                |
|  | <b>Processor</b>  | PCI Express RISC processor core running at 250MHz                  |
|  | <b>Upgradeability</b>   | Option firmware upgradeable via Flash ROM.                         |
|  | <b>Video Support</b>  | 1600 x 1200 DVR max resolution                                     |
|  | <b>Interfaces</b>   | One Ethernet Sideband connection (10/100/1000 Mb/s)                |
|  | <b>Memory</b>   | 128-MB SDRAM with ECC  |
|  | <b>Operating System Support</b>   | Microsoft Windows 2008 R2  |
|  |   | Microsoft Windows 2008 (32 bit and 64 bit)                         |
|  |   | Microsoft Windows Server 2008 Standard Edition (32bit and 64bit)   |
|  |   | Microsoft Windows Server 2008 Enterprise Edition (32bit and 64bit) |
|  |   | SUSE LINUX Enterprise Server 11 (32bit and 64bit)                  |
|  | <b>Client System Support</b>  | SUSE LINUX Enterprise Server 10 (32bit and 64bit)                  |
|  |   | Microsoft Windows 7  |
|  |   | Microsoft Windows XP Professional Edition                          |
| Microsoft Windows Vista Business and Ultimate Editions                   |   |  |
| SUSE Linux Enterprise Desktop 11   |   |  |
| <b>Client Browser Support</b>  | SUSE Linux Enterprise Desktop 10  |  |
|  | Microsoft Internet Explorer 8   |  |
|  | Microsoft Internet Explorer 7   |  |
|  | Microsoft Internet Explorer 6   |  |
|  | Firefox 3.5 (on supported Windows and Linux systems)  |  |
| <b>Command Line Support Security</b>                                     | Firefox 3.0 (on supported Windows and Linux systems)  |  |
|  | Secure Shell and serial port access   |  |
|  | Secure Socket Layer   |  |
|  | Secure Shell version 2 (Password and certificate)   |  |
|  | Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser, CLP and XML scripting interface |  |
| <b>Directory Support Services</b>  | AES encryption of video   |  |
|  | RC4 encryption of video   |  |
| <b>Driver Support</b>  | Active Directory v1.0 (Windows 2008)  |  |
| <b>Management protocols supported</b>                                    | HP ProLiant iLO 3 Management Controller Driver Package  |  |
|  | iLO Management Channel Interface Driver   |  |

### Technical Specifications

**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: <http://www.hp.com/go/green>. To recycle your product, please go to: <http://www.hp.com/go/green> 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: <http://www.hp.com/go/green>. 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.