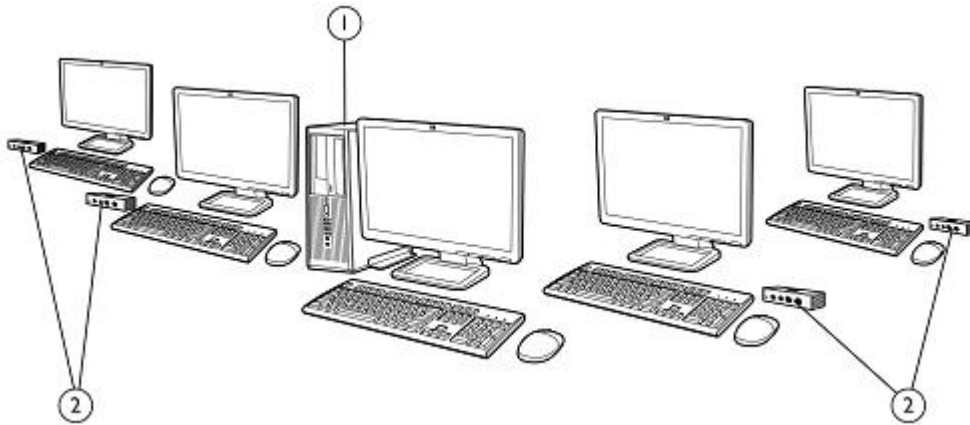


### HP Compaq MultiSeat ms6200 Desktop – Standard Features

This innovative shared resource computing solution from trusted industry leaders HP and Microsoft stretches your corporate computing budget by delivering the familiar, reliable computing experience to multiple users from a single, dedicated PC for maximum cost savings and power.

### HP MultiSeat Computing Solution Components



1. HP Compaq MultiSeat ms6200 Desktop; monitor (sold separately), keyboard and mouse
2. HP t100, t150 or t200 Zero Client for MultiSeat Monitor sold separate. Keyboard and mouse (sold separately for t100/t150; included with t200)

### Part Numbers

|  | Windows® MultiPoint™<br>Server 2011<br>Standard | Windows® MultiPoint™<br>Server 2011<br>Premium | Windows® MultiPoint™<br>Server 2011<br>Academic OEM <sup>1</sup> | Windows® MultiPoint™<br>Server 2011<br>Academic Volume<br>License <sup>1,2</sup> |
|--|---|--|--|--|
| <b>ms6200</b>  |   |  |  |  |
| Intel Core i5 2400; 4GB<br>DDR3 memory; 500GB<br>HDD; PS/2 Keyboard &<br>Mouse; DVD/RW | QS134AW<br>QS135AW*                             | QS136AW<br>QS137AW*                            | QS138AW  | QS140AW  |
| Intel Core i7 2600; 8GB<br>DDR3 memory; 500GB<br>HDD; PS/2 Keyboard &<br>Mouse; DVD/RW | QS141AW<br>QS142AW*                             | QS143AW<br>QS144AW*                            | QS145AW  | QS161AW  |
| <b>t100</b>  | BM490AA<br>WB215AA*                             | BM490AA<br>WB215AA*                            | QS971AA  | WB216AA  |
| <b>t150</b>  | QM176AA<br>QM178AA*                             | QM176AA<br>QM178AA*                            | QS826AA  | QM177AA  |
| <b>t200</b>  | QV552AA<br>QV553AA*                             | QV552AA<br>QV553AA*                            | QV554AA  | QV555AA  |

\*Emerging Countries have alternate PN's



### HP Compaq MultiSeat ms6200 Desktop – Standard Features

<sup>1</sup> Available for Qualified Education Users only

<sup>2</sup> Ships with FreeDOS and does not include Microsoft license. Customer obtains Academic Volume License and CALs from Microsoft Reseller.

#### ms6200 configuration

|                        |   |
|------------------------|---|
| Form factor            | Small form factor                                       |
| Operating system       | Windows® MultiPoint™ Server 2011                        |
| Chipset                | Intel Q65 Express                                       |
| Processor <sup>2</sup> | Intel® Core™ i5-2400                                    |
| Memory                 | 4GB DDR3 (1333 MHz)                                     |
| Hard drive             | 500 GB SATA 6.0Gb/s                                     |
| Removable media        | SATA DVD Writer Drive                                   |
| Graphics               | Integrated Intel® HD                                    |
| Audio                  | Realtek ALC261 HD Audio                                 |
| Communications         | Integrated Intel 82579LM Gigabit                        |
| Input devices          | HP PS/2 Standard Keyboard and PS/2 optical scroll mouse |

#### ms6200 configuration

|                        |   |
|------------------------|---|
| Form factor            | Small form factor                                       |
| Operating system       | Windows® MultiPoint™ Server 2011                        |
| Chipset                | Intel Q65 Express                                       |
| Processor <sup>2</sup> | Intel® Core™ i7-2600                                    |
| Memory                 | 8GB DDR3 (1333 MHz)                                     |
| Hard drive             | 500 GB SATA 6.0Gb/s                                     |
| Removable media        | SATA DVD Writer Drive                                   |
| Graphics               | Integrated Intel® HD                                    |
| Audio                  | Realtek ALC261 HD Audio                                 |
| Communications         | Integrated Intel 82579LM Gigabit                        |
| Input devices          | HP PS/2 Standard Keyboard and PS/2 optical scroll mouse |

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|                  |   |
|------------------|---|
| Operating System | Windows® MultiPoint™ Server 2011<br><b>NOTE:</b> FreeDOS available with Academic edition only |
|------------------|---|

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|   |  |
|---|--|
| Value-added Software<br>(not included with<br>Academic edition) | PDF complete<br>Microsoft Internet Explorer<br>Hp Classroom Manager Trial (pre-loaded) |
|---|--|

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|         |                   |
|---------|-------------------|
| Chipset | Intel Q65 Express |
|---------|-------------------|

---

|                             |  |
|-----------------------------|--|
| Processors<br>One of these: | Intel® Core™ i5-2400 (3.10 GHz, 6 MB cache, 4 cores)<br>Intel® Core™ i7-2600 (3.40 GHz, 8 MB cache, 4 cores) |
|-----------------------------|--|

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### HP Compaq MultiSeat ms6200 Desktop – Standard Features

#### Memory

##### Supports unbuffered non-ECC DDR3 SDRAM

The Intel Q65 Express chipset supports unbuffered non-ECC DDR3 SDRAM (synchronous dynamic random access memory) at a frequency of up to 1333MHz.

**NOTE:** 1066MHz system memory frequency of operation requires at least PC3-8500 (DDR3-1066) memory type for all populated memory modules, and an Intel processor with FSB (front side bus) of at least 1066MHz.

System Memory upgrades are accomplished by adding DDR3 SDRAM module(s) to empty DIMM slots on the System Board.

**CAUTION:** Voltage is supplied to the memory modules whenever the computer is connected to an active AC outlet. Adding or removing memory modules while voltage is present may cause irreparable damage to the memory modules or system board. The computer must be shut down with the AC power removed (disconnect AC power cord at rear chassis or at AC outlet) prior to adding or removing SDRAM modules.

HP recommends dual-channel symmetric configurations for the best memory performance. For dual-channel symmetric performance, the total amount of memory in each channel must be equal. Do not inter-mix memory module speeds or memory operating frequency will default to lowest speed.

#### Maximum Memory\*

Supports up to 16GB of un-buffered non-ECC DDR3 SDRAM.

Slot 1 is black and must always be populated. Not all possible memory configurations are represented in the table below.

\*For systems configured with more than 3GB of memory and a 32-bit operating system, all memory may not be available to the OS due to system resource requirements. Addressing memory above 4GB requires a 64-bit operating system.

| Total Memory                     | DIMM Slot Population* |           |           |           |
|----------------------------------|-----------------------|-----------|-----------|-----------|
|                                  | Channel A             |           | Channel B |           |
|                                  | 1 (black)             | 2 (white) | 3 (white) | 4 (white) |
| 4 GB<br>(Dual Channel Symmetric) | 2GB                   |           | 2GB       |           |
| 8 GB<br>(Dual Channel Symmetric) | 4GB                   |           | 4GB       |           |

\* The HP Compaq 6200 Elite Series supports the 2nd generation Intel® Core™ processor family. Based on a new PC micro-architecture, the processor is designed for a two-chip platform consisting of a processor and Platform Controller Hub (PCH). Unlike previous generations, the processor includes an integrated memory controller (IMC). The IMC supports DDR3 protocols with two independent, 64-bit wide channels each accessing one or two DIMMs.



### HP Compaq MultiSeat ms6200 Desktop – Standard Features

#### Expandability

|                                  |                     |
|----------------------------------|---------------------|
| PCI slots                        | 1 low-profile       |
| Max power per slot               | 25W                 |
| PCIe x1 slot                     | 2 low-profile       |
| Max power per slot               | 10W                 |
| PCI x16 slot                     | 1 low-profile       |
| Max power per slot               | 25W                 |
| <b>External Bays:</b>            |                     |
| 3.5"                             | 1                   |
| 5.25"                            | 1                   |
| <b>Internal Bays:</b>            |                     |
| 3.5"                             | 1                   |
| Hard Drive Controller supported  | SATA                |
| Hard Drive Interfaces supported: | SATA 3.0 & 6.0 Gb/s |

#### Storage - Drive Support

|                    | Media Card Reader | 5.25" Serial ATA Devices | 3.5" Serial ATA Devices |
|--------------------|-------------------|--------------------------|-------------------------|
| Qty Supported      | 1                 | 1                        | 2                       |
| Position Supported | 2                 | 2                        | 2,3                     |
| Controller         | USB/Diskette      | SATA                     | SATA                    |

**Hard Drive** 500 GB SATA 6.0 Gb/s, 16 MB cache, 7200 rpm, NCQ, SMART IV

**Graphics** Integrated Intel HD

**Network** Integrated Intel 82579LM Gigabit

**Audio** Integrated high definition audio with Realtek ALC261 codec (all ports are stereo)  
Microphone and Headphone front ports  
Line-out and Line-in rear ports  
Internal speaker

**Power Supply** 240W 90% efficient power supply - active PFC (ms6200)



## HP Compaq MultiSeat ms6200 Desktop – Standard Features

### Ports

- USB 2.0 10 (4 front, 6 rear)  
Two (2) internal headers on system board
- Serial 1 standard
- PS/2 2 standard

### Input Devices

- PS/2 Standard keyboard
- PS/2 2-Button Optical Scroll mouse

| MultiSeat Configurations  | Number of Users   |   |   |  |   |   |  |   |    |    |    |    |    |    |  |
|---------------------------|---|---|---|--|---|---|--|---|----|----|----|----|----|----|--|
|                           | 2   | 3 | 4 | 5                                      | 6 | 7 | 8                                      | 9 | 10 | 11 | 12 | 13 | 14 | 15 |  |
| t100 or t150 Solution     |   |   |   |  |   |   |  |   |    |    |    |    |    |    |  |
| Host PC version           | Essential<br>Core i5/4 GB configuration   |   |   | Extended<br>Core i7/8 GB configuration |   |   |  |   |    |    |    |    |    |    |  |
| Qty of t100s or t150s     | 1   | 2 | 3 | 4                                      | 5 | 6 | 7                                      | 8 | 9  |    |    |    |    |    |  |
| Qty of Monitors           | 2   | 3 | 4 | 5                                      | 6 | 7 | 8                                      | 9 | 10 |    |    |    |    |    |  |
| Qty of PS2 Keyboards/Mice | 1   | 2 | 3 | 4                                      | 5 | 6 | 7                                      | 8 | 9  |    |    |    |    |    |  |
|                           | Number of Users   |   |   |  |   |   |  |   |    |    |    |    |    |    |  |
| t200 Solution             | 2   | 3 | 4 | 5                                      | 6 | 7 | 8                                      | 9 | 10 | 11 | 12 | 13 | 14 | 15 |  |
| Host PC version           | Essential<br>Core i5/4 GB configuration   |   |   |  |   |   | Extended<br>Core i7/8 GB configuration |   |    |    |    |    |    |    |  |
| Qty of t200s              | 1   | 2 | 3 | 4                                      | 5 | 6 | 7                                      | 8 | 9  | 10 | 11 | 12 | 13 | 14 |  |
| Qty of Monitors           | 2   | 3 | 4 | 5                                      | 6 | 7 | 8                                      | 9 | 10 | 11 | 12 | 13 | 14 | 15 |  |
| USB Keyboards/Mice        | Included  |   |   |  |   |   |  |   |    |    |    |    |    |    |  |
|                           | <p><b>NOTE:</b> If using the Ethernet to connect to the host, power is required by purchasing the power adapter or by using the MultiSeat Power-Pass-Through Monitor.</p> <p><b>NOTE:</b> You cannot mix t100 series clients and t200 Zero Clients connected to the same MultiSeat host PC, but you can mix t100 and t150 client devices.</p> |   |   |  |   |   |  |   |    |    |    |    |    |    |  |



### HP Compaq MultiSeat ms6200 Desktop – Standard Features

| Application Scenario  | Zero Client | ms6200 Core i5 | ms6200 Core i7 | Notes   |
|---|-------------|----------------|----------------|---|
| <b>Productivity</b><br>Office, line-of-business applications                                    | t150        | Up to 10       | Up to 10       | <ul style="list-style-type: none"> <li>No Professional AutoCAD</li> <li>No video/Flash/audio editing - consider independent desktops</li> </ul>   |
|   | t200        | Up to 12       | Up to 15       |   |
| <b>Web-based browsing - Low</b><br>-News sites<br>-Wikipedia<br>-Encyclopedia; general research | t150        | Up to 8        | Up to 10       | <ul style="list-style-type: none"> <li>Site w/numerous links can cause higher CPU numbers</li> <li>These sites don't include video - example: if "news" has a video link, changes to "High" category</li> </ul> |
|   | t200        | Up to 10       | Up to 14       |   |
| <b>Web-based browsing - High</b><br>-pbskids.org, sparky.org<br>-Disney.com<br>-YouTube         | t150        | Up to 5        | Up to 5        | <ul style="list-style-type: none"> <li>If extensive use of Flash - consider independent desktops</li> <li>Maximum rated 480p Flash video</li> </ul>   |
|   | t200        | Up to 8        | Up to 12       |   |
| <b>Multimedia</b><br>-Maximum rated 720p HD video   | t150        | Up to 5        | Up to 5        | <ul style="list-style-type: none"> <li>If extensive use of Multimedia - consider independent desktops</li> <li>Maximum rated 720p HD video</li> <li>DVD playback not recommended</li> </ul>                     |
|   | t200        | Up to 8        | Up to 8        |   |

#### Dimensions & Weight

**Chassis Dimensions**  
(H x W x D)

4.0 x 13.3 x 14.9 in  
10.0 x 33.80 x 37.9 cm

**System weight**

16.7 lb (7.6 kg)

**System volume**

790.3 cu in (13.0 L)

**Shipping weight**

17.9 lb (8.1 kg)

**Maximum supported weight**  
(desktop orientation)

77.0 lb (35.0 kg)

**Eco-Label Certifications & declarations** The HP Compaq MultiSeat ms6200 Desktop is ENERGY STAR® qualified.

#### Service and Support

On-site Warranty and Service [Note 1](#): This three-year (3-3-3), limited warranty and service offering delivers three years of parts, labor and on-site repair. Response time is next business-day [Note 2](#) and includes free telephone support [Note 3](#) 24 x 7. Global coverage [Note 2](#) ensures that any product purchased in one country and transferred to another non-restricted country will remain fully covered under the original warranty and service offering. Some countries/regions do not offer one year onsite and labor. For HP Care Pack services see: <http://www.hp.com/go/lookuptool>.

**NOTE 1:** Terms and conditions may vary by country. Certain restrictions and exclusions apply.

**NOTE 2:** On-site service may be provided pursuant to a service contract between HP and an authorized HP third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country.

**NOTE 3:** Technical telephone support applies only to HP-configured, HP and HP-qualified, third-party hardware and software. Toll-free calling and 24 x 7 support may not be available in some countries.



### HP Compaq MultiSeat ms6200 Desktop – Technical Specifications

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#### Unit Environment and Operating Conditions

#### General Unit Operating Guidelines

- Keep the computer away from excessive moisture, direct moisture and the extremes of heat and cold, to ensure that unit is operated within the specified operating range.
- Leave a 10.2 cm (4 in) clearance on all vented sides of the computer to permit the required airflow.
- Never restrict airflow into the computer by blocking any vents or air intakes.
- Do not stack computers on top of each other or place computers so near each other that they are subject to each other's re-circulated or preheated air.
- Occasionally clean the air vents on the front, back, and any other vented side of the computer. Lint, dust and other foreign matter can block the vents and limit the airflow.

If the computer is to be operated within a separate enclosure, intake and exhaust ventilation must be provided on the enclosure, and the same operating guidelines listed above will still apply.

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#### Temperature Range

Operating: 50° to 95°F (10° to 35°C)\*  
Non-operating: -22° to 140 F (30° to 60 C)

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#### Relative Humidity

Operating: 10% to 90% (non-condensing at ambient)  
Non-operating: 5% to 95% (non-condensing at ambient)

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#### Maximum Altitude (unpressurized)

Operating: 10,000 ft (3048 m)  
Non-operating: 30,000 ft (9144 m)

\*Operating temperature is de-rated 1.0 deg C per 300 m (1000 ft) to 3000 m (10,000 ft) above sea level, no direct sustained sunlight. Maximum rate of change is 10 deg C/Hr. The upper limit may be limited by the type and number of options installed.

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#### Power Supply

240-watt 90% efficient BTX power supply - Active PFC (ms6200)

Operating Voltage Range 100-240VAC

Rated Voltage Range 115V/230V

Rated Line Frequency 50/60 Hz

Operating Line Frequency 47-63 Hz  
Range

Rated Input Current 4A

Heat Dissipation Typical: 270 btu/hr  
(68 kg-cal/hr)

Maximum 1025 btu/hr  
(258 kg-cal/hr)

Power Supply Fan Variable speed fan

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### HP Compaq MultiSeat ms6200 Desktop – Technical Specifications

#### ROM BIOS Information

Key features of the HP BIOS include

- Deployment and manageability: HP BIOS provides several technologies that help integrate the HP Business desktop computer into the enterprise, such as PXE, remote configuration, remote control, and F10 Setup support for 12 languages.
- Security: HP BIOS offers a robust and flexible set of security features to help the system administrator secure their systems from removal of sensitive data, and help prevent access by unauthorized users. Ability to disable USB ports
- Tracking and tracing capabilities in case of theft available in select countries (subscription sold separately).
- Thermal and power management - The HP BIOS provides and enables thermal and power management technologies to assist in operating the HP Business Desktop computer in any enterprise environment.
- Serviceability - HP BIOS provides diagnostic and detailed service information.
- Administrator password - Also known as the setup password, this helps prevent unauthorized changes to the system configuration. If the administrator password is not known, the BIOS version cannot be changed and changes cannot be made to BIOS settings using F10 setup or under the OS.
- Advanced Configuration and Power Interface (ACPI) - Represents a significant innovation in power and configuration management, allowing operating systems and applications to manage power based on activity and usage.
- Mute internal speaker
- Disable USB ports

Additional HP BIOS Features

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#### Serviceability Features

System

- System/Emergency ROM
- Flash ROM
- CMOS Battery Holder for easy Replacement
- Flash Recovery with Video
- 5 Aux Power LED on System PCA
- Processor ZIF Socket for easy Upgrade
- Over-Temp Warning on Screen (Requires IM Agents)
- Clear Password Jumper
- DIMM Connectors for easy Upgrade
- Restore CDo
- Clear CMOS Switch
- NIC LEDs (integrated) (Green & Amber) Dual Color Power LED on Front of Computer (Indicates Normal Operations and Fault Conditions)

Diagnostic LED Explanation Table

Number of 1--second red LED blinks followed by 2-second pause, then repeats:

- 2-processor thermal protection activated
- 3-processor not installed
- 4-power supply failure
- 5-memory error
- 6-video error
- 7-PCA failure (ROM detected failure prior to video)
- 8-invalid ROM, bootblock recover mode





### HP Compaq MultiSeat ms6200 Desktop – Technical Specifications

|   |   |
|---|---|
| Chassis   | <ul style="list-style-type: none"><li>• Dual Color Power and HD LED - To Indicate Normal Operations and Fault Conditions</li><li>• Color coordinated cables and connectors</li><li>• Tool-less Hood Removal - spring-loaded latch</li><li>• Front power switch</li><li>• Tool-less Hard Drive, CD &amp; Diskette Removal</li></ul>  |
| <b>Other Features</b>   |   |
| Towerable   | Small Form Factor can be oriented as a tower (in addition to desktop orientation)   |
| Drive Self Tests (DPS)  | <u>DPS Access through F10 Setup during Boot</u> <ul style="list-style-type: none"><li>• Drive Protection System</li><li>• A diagnostic hard drive self test. It scans critical physical components and every sector of the hard drive for physical faults and then reports any faults to the user.</li><li>• Running independently of the operating system, it may be accessed through the computer's setup procedure. It produces an evaluation on whether the hard drive is the source of the problem and needs to be replaced.</li><li>• The system expands on the Self-Monitoring, Analysis, and Reporting Technology (SMART), a continuously running systems diagnostic that alerts the user to certain types of failures.</li><li>• Allows hard drives to monitor their own health and to raise flags if imminent failures were predicted</li><li>• Predicts failures before they occur. Tracks fault prediction and failure indication parameters such as re-allocated sector count, spin retry count, calibration retry count</li><li>• By avoiding actual hard drive failures, SMART hard drives act as "insurance" against unplanned user downtime and potential data loss from hard drive failure</li><li>• A standards initiative for representing out-of-band management capability for computer systems. It is a secure, web-services based successor to ASF.</li></ul> |
| SMART IV Technology (Self-Monitoring, Analysis and Reporting Technology)    | <ul style="list-style-type: none"><li>• Industry-standard specification for network alerting in operating system-absent environments</li></ul>  |
| DASH 1.1 support (Desktop and Mobile Architecture for System Hardware)      | <ul style="list-style-type: none"><li>• Allows the system to wake from a low power mode.</li><li>• Controls system power consumption, making it possible to place individual cards and peripherals in a low-power or powered-off state without affecting other elements of the system.</li></ul>  |
| ASF 2.0 support (Alert Standard Format)                                     | <ul style="list-style-type: none"><li>• System Management BIOS, previously known as DMI BIOS, for system management information</li></ul>   |
| ACPI-Ready Hardware (Advanced Configuration and Power Management Interface) | <ul style="list-style-type: none"><li>• Intel-driven, industry-wide initiative to make Intel architecture-based PCs, servers and mobile computers more inherently manageable right out of the box and over the network</li></ul>  |
| SMBIOS Ver. 2.6   | <ul style="list-style-type: none"><li>• Power button acts as both an on/off button and suspend-to-sleep button</li></ul>  |
| Wired for Management Support  |   |
| Dual-State Power Button   |   |



### HP Compaq MultiSeat ms6200 Desktop – Technical Specifications

#### High Definition Audio

|   |   |
|---|---|
| Type  | Integrated high definition 4-channel Realtek ALC261 stereo codec  |
| Audio Jacks                                 | <ul style="list-style-type: none"><li>• Front microphone-In (150-K ohm Input Impedance)</li><li>• Rear Line-In/Microphone input (150-K ohm Input Impedance, function is configurable by audio driver)</li><li>• Rear Line-Out* (190 ohms Output Impedance, expects at least a 10-K ohm load)</li><li>• Front Headphone-Out (0.5 Ohm Output Impedance, expects at least a 32 ohm load)</li></ul> |
|   | <p>*Internal Speaker Amplifier is for Internal Speaker only. External Speakers need to be powered externally. Microsoft® MultiPoint Server™ 2011 supports audio on the host PC when using PS/2 keyboard and mouse.</p>  |
| Sampling                                    | 8 kHz - 192 kHz   |
| Wavetable Syntheses (software)              | Yes - Uses OS soft wavetable  |
| Analog Audio                                | Yes   |
| Number of Changes on Line Out (mono/stereo) | Stereo (Left & Right channels)  |
| Internal Audio Speaker Power Rating         | 1.5W  |
| Internal Speaker                            | Yes; ability to mute internal speaker through F10 Setup   |
| External Speaker Jack (Line-Out)            | Yes   |

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#### Integrated Intel 82567LM Gigabit Network Connection

|                       |  |
|-----------------------|--|
| Connector             | RJ-45  |
| Controller            | Intel 82567LM Gigabit platform LAN Connect Networking Controller   |
| Memory                | Integrated 96KbB on chip buffer memory   |
| Data rates supported  | 10/100/1000 Mbps   |
| Compliance            | IEEE 802.1P, 802.1Q, 802.2, 802.3, 802.3ab and 802.3u compliant  |
| Bus architecture      | GLCI, LCI interface. Intel specific MAC to PHY interface   |
| Data transfer mode    | At gigabit GLCI (802.3 serdes) is for Data, LCI (parallel bus)for MDIO, at 10/100 LCI for both data and MDIO, GLCI is idle.  |
| Power requirement     | Require 3.3Vaux, 1.8V and 1.0V or just 3.3V with integrated regulators<br>Power consumption 1.16 Watts for 82566, whole LOM 2.53 Watts   |
| Boot ROM support      | Yes  |
| Network transfer mode | Full-duplex<br>Half-duplex (not available for the 1000BASE-T transceiver)  |
| Network transfer rate | 10BASE-T (half-duplex) 10 Mbps<br>10BASE-T (full-duplex) 20 Mbps<br>100BASE-TX (half-duplex) 100 Mbps<br>100BASE-TX (full-duplex) 200 Mbps<br>1000BASE-T (full-duplex) 2000 Mbps |



### HP Compaq MultiSeat ms6200 Desktop – Technical Specifications

|                         |  |
|-------------------------|--|
| Environmental           | <u>Operating Temperature:</u><br>32° to 131°F (0° to 55°C)<br>To 70°C for external regulator |
|                         | <u>Operating Humidity:</u><br>85% at 131°F (55°C)  |
| Management capabilities | WOL, auto MDI crossover, PXE, Multi-port teaming, RSS, Advanced cable diagnostic.            |
| Alerting                | ASF 2.0 support, AMT 3.0 support   |

**Eco-Label Certifications & declarations** This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- IT ECO declaration (pending R&D testing)

**System Configuration** The configuration used for the Energy Consumption and Declared Noise Emissions data is based on a typically configured product.

| Energy Consumption                 | 115 VAC   | 230 VAC   | 100 VAC   |
|------------------------------------|-----------|-----------|-----------|
| Normal operation                   | 29.5659 W | 28.7916 W | 29.1392 W |
| Sleep (Energy Star low-power mode) | 2.4243 W  | 2.6419 W  | 2.4196 W  |
| Off                                | 0.7496 W  | 0.9092 W  | 0.7371 W  |

FEMP Standby Power Compliant (<1W in S5 - Power Off)\*\*

Power Consumption in ENERGY STAR Mode - Suspend to RAM (S3) (Instantly Available PC) <3W\*

\*Energy efficient power supply is a requirement for ENERGY STAR qualification in conjunction with a select range of processors and modules .

\*\*Power consumption in the Off/Apparent Off mode is measured and reported with the network interface controller "Wake on LAN" feature disabled in F10 Setup (default is "enabled").

| Heat Dissipation* | 115 VAC    | 230 VAC   | 100 VAC    |
|-------------------|------------|-----------|------------|
| Normal Operation  | 101 BTU/hr | 98 BTU/hr | 100 BTU/hr |
| Sleep             | 8 BTU/hr   | 9 BTU/hr  | 8 BTU/hr   |
| Off               | 3 BTU/hr   | 3 BTU/hr  | 3 BTU/hr   |

\*Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

**Declared Noise Emissions** (in accordance with ISO 7779 and ISO 9296)

| System Fan Off             | Sound Power (LWAd, bels) | Sound Pressure (LpAm, decibels) |
|----------------------------|--------------------------|---------------------------------|
| Idle                       | 3.8                      | 27                              |
| Fixed Disk (random writes) | 3.9                      | 28                              |

**Batteries** The battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:



### HP Compaq MultiSeat ms6200 Desktop – Technical Specifications

- Mercury greater than 5ppm by weight
- Cadmium greater than 10ppm by weight

Battery size: CR2032 (coin cell)

Battery type: Li Ion

#### Additional Information

- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.
- This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.
- This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).
- This product is in compliance with the IEEE 1680 (EPEAT) standard at the Silver level, see [www.epeat.net](http://www.epeat.net)
- Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.
- This product contains 0% post consumer recycled plastic (by wt.)
- This product is 95.1% recyclable when properly disposed of at end of life.

#### Packaging Materials

- External:
  - Corrugated Carton: 1705 g
- Internal:
  - EPE-Expanded Polyethylene: 198 g
  - Polyethylene low density foam: 39 g
- The EPE-Expanded Polyethylene packaging material is made from 100% recycled content.
- The Polyethylene low density foam packaging material is made from 100% recycled content.
- The Corrugated Carton packaging materials contains at least 75% recycled content.

#### RoHS Compliance

Hewlett-Packard is committed to compliance with all applicable environmental laws and regulations, including the European Union Restriction of Hazardous Substances (RoHS) Directive. HP's goal is to exceed compliance obligations by meeting the requirements of the RoHS Directive on a worldwide basis. As of July 1, 2006, RoHS substances are virtually eliminated (virtually = to levels below legal limits) for all HP electronic products subject to the RoHS Directive, except where it is widely recognized that there is no technically feasible alternative (as indicated by an exemption under the EU RoHS Directive).

#### Material Usage

This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at:

[http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen\\_specifications.html](http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html)):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants - may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates



### HP Compaq MultiSeat ms6200 Desktop – Technical Specifications

- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel - finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) - except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

#### Packaging

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

#### End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: <http://www.hp.com/go/reuse-recycle> 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/recyclers>. 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.

#### Hewlett-Packard Corporate Environmental Information

For more information about HP's commitment to the environment:

Global Citizenship Report

<http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html>

Eco-label certifications

<http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html>

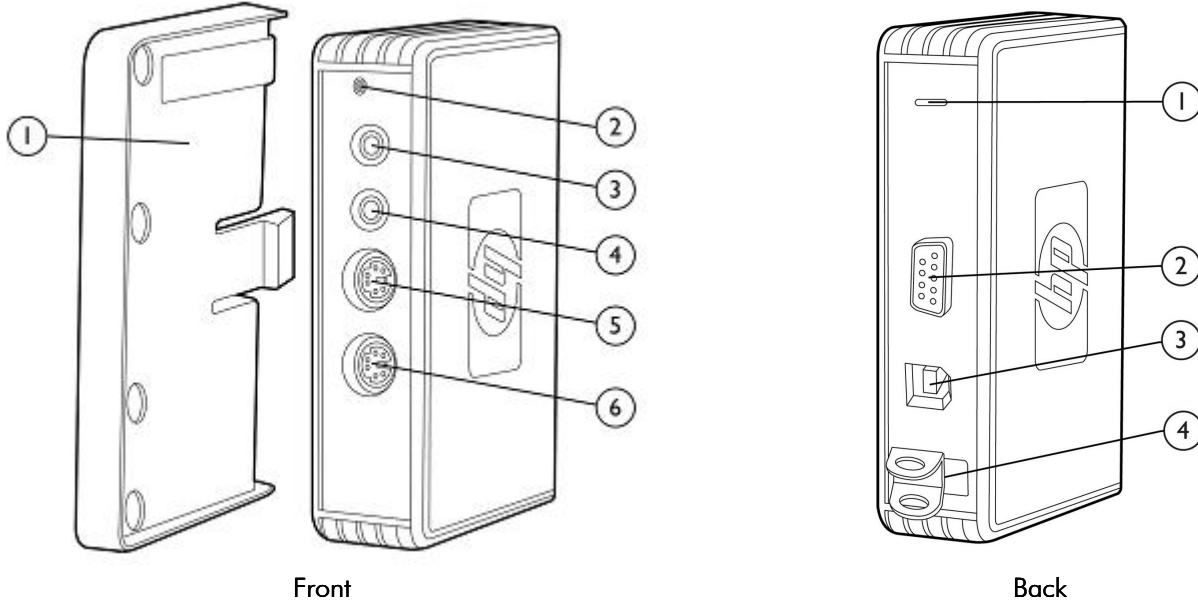
ISO 14001 certificates:

<http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html>



### HP t100, t150 and t200 Zero Clients for MultiSeat – Standard Features

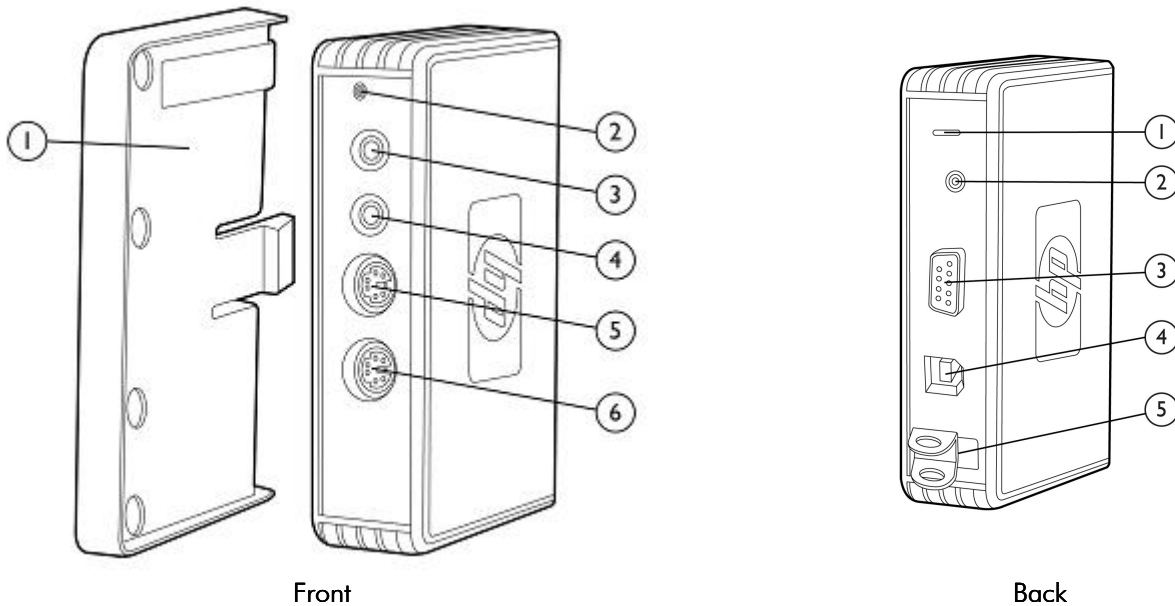
#### HP t100 Zero Client for MultiSeat



1. Mounting bracket
2. LED indicator
3. Audio connector (headphone out)
4. Audio connector (mic in)
5. PS/2 keyboard connector
6. PS/2 mouse connector

1. Cable lock slot
2. VGA display connector
3. USB Type A connector
4. Security clip slot

#### HP t150 Zero Client for MultiSeat



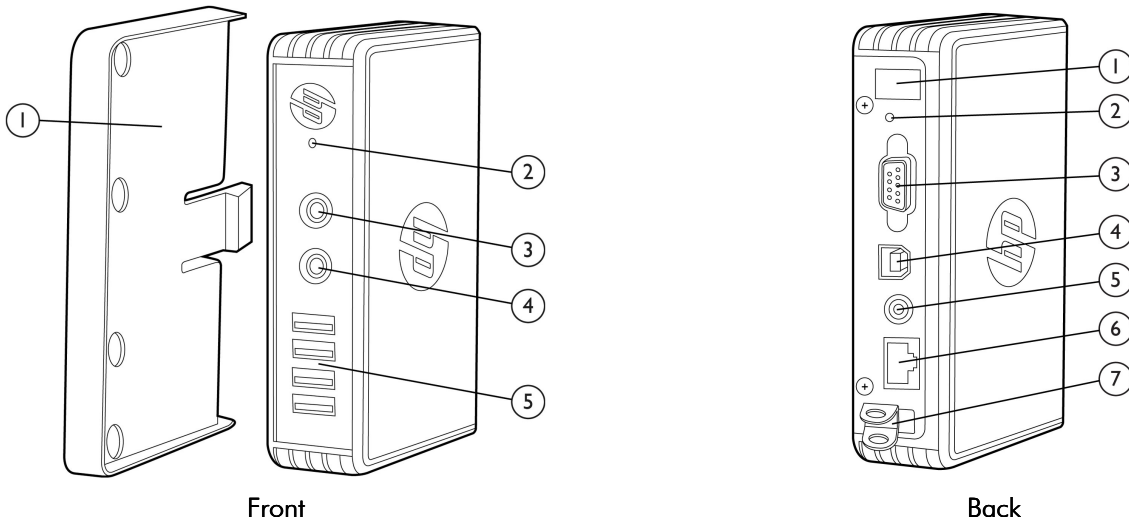
1. Mounting bracket

1. Cable lock slot

### HP t100, t150 and t200 Zero Clients for MultiSeat – Standard Features

- |                                    |  |
|------------------------------------|--|
| 2. Power LED                       | 2. DC power connector  |
| 3. Audio connector (headphone out) | 3. VGA display connector   |
| 4. Audio connector (mic in)        | 4. USB PC power connector to host PC (USB Type A/B cable included) |
| 5. PS/2 connectors                 | 5. Security clip slot  |
| 6. USB 2.0 connectors              |  |

### HP t200 Zero Client for MultiSeat



- |   |   |
|---|---|
| 1. Mounting bracket                     | 1. On/off switch                                    |
| 2. Power LED                            | 2. Reset button                                     |
| 3. Line-in (microphone) connector       | 3. VGA connector                                    |
| 4. Line-out (headphone) audio connector | 4. USB PC connector to host PC (USB Type A/B cable) |
| 5. USB 2.0 connectors (4)               | 5. DC power connector                               |
|   | 6. Ethernet RJ-45 connector                         |
|   | 7. Security clip slot                               |

**NOTE:** If the optional DC adapter is not connected, the t200 Zero Client supports a standard USB keyboard and USB mouse plus one 100 mA USB device (low power), such as some flash drives. If the optional DC adapter is connected to a working power outlet or to the monitor, the t200 Zero Client supports a USB keyboard, a USB mouse, and two 500 mA (high power) USB devices. HP monitors with power-pass-through (such as the HP LE1851wt 18-inch Widescreen LCD Monitor) can supply power to the t200 Zero Client.

**Software Licensing**      Microsoft Client Access License (CAL)

### HP t100, t150 and t200 Zero Clients for MultiSeat – Standard Features

| Power              | t100                                 | t150  | t200   |
|--------------------|--------------------------------------|---|--|
| Power supply       | No external power supply             | Optional external power supply*   | Optional external power supply*  |
| Power output (max) | 2.5W max                             | 2.5W max with no external power supply<br>7.5W max with external power supply                                   | 3.0W max with no external power supply   |
| LED                | One blue LED to indicate power is on | One blue LED to indicate power is on<br><br>*External power supply required when using high-powered USB devices | One blue LED to indicate the AC adapter is attached. If LED is Amber, the Zero Client is powered by USB cable.<br><br>*External power supply required when using high-powered USB devices or Ethernet to connect to the host |

| Input/output connectors | t100                                    | t150   | t200  |
|-------------------------|---|--|---|
| USB input               | 1 USB in (Type B) to connect to host PC | 1 USB in (Type B) to connect to host PC<br>2 USB 2.0*  | 1 USB in (Type B) to connect to host PC<br>4 USB 2.0*   |
| Ethernet RJ-45 input    | None                                    | None   | One 10/100/1000 Gigabit NIC   |
| Keyboard                | PS/2                                    | PS/2   | USB   |
| Mouse                   | PS/2                                    | PS/2   | USB   |
| Video                   | VGA-type video output (DB-15)           | VGA-type video output (DB-15)  | VGA-type video output (DB-15)   |
| Audio output            | 1/8-inch mini-jack, stereo              | 1/8-inch mini-jack, stereo   | 1/8-inch mini-jack, stereo  |
| Audio input             | 1/8-inch microphone mini-jack, stereo   | 1/8-inch microphone mini-jack, stereo  | 1/8-inch microphone mini-jack, stereo   |
|                         |   | * Data is private (visible only to the t150 user) when using Windows MultiPoint Server 2011. Can daisy-chain up to 3 HP t150 devices together (must have a power supply ).<br><br>For a list of supported USB devices, see <a href="http://technet.microsoft.com/en-us/library/wms-2011-usb-devices.aspx">http://technet.microsoft.com/en-us/library/wms-2011-usb-devices.aspx</a> | * Data is private (visible only to the t200 user) when using Windows MultiPoint Server 2011. Can daisy-chain up to 3 HP t200 devices together (must have a power supply).<br><br>For a list of supported USB devices, see <a href="http://technet.microsoft.com/en-us/library/wms-2011-usb-devices.aspx">http://technet.microsoft.com/en-us/library/wms-2011-usb-devices.aspx</a> |

|                          |  |  |                     |
|--------------------------|--|--|---------------------|
| Maximum video resolution | 1280x1024 (standard screen)<br>1440x900 (widescreen)<br>32-bit | 1280x1024 (standard screen)<br>1440x900 (widescreen)<br>32-bit | 2048x1152<br>32-bit |
|--------------------------|--|--|---------------------|





### HP t100, t150 and t200 Zero Clients for MultiSeat – Standard Features

|                          |   |  |                    |
|--------------------------|---|--|--------------------|
| <b>Hardware Security</b> | Cable lock slot and Security clip slot) | Cable lock slot and Security clip slot | Security clip slot |
|--------------------------|---|--|--------------------|

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|                 |  |
|-----------------|--|
| <b>Mounting</b> | 4 VESA holes; 2 spaced at 100 mm centers and 2 spaced at 75 mm centers |
|-----------------|--|

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|                                |   |
|--------------------------------|---|
| <b>Dimensions</b><br>W x D x H | t100/t150 Without mounting bracket: 4.4 x 2.56 x 1.11 in. (11.17 x 6.5 x 2.82 cm)<br>t200 Without mounting bracket: 5.35 x 3.58 x 1.38 in (13.6 x 9.1 x 3.5 cm)<br>t100/t150 With mounting bracket: 4.4 x 2.56 x 1.38 in. (11.17 x 6.5 x 3.48 cm)<br>t200 With mounting bracket: 5.35 x 3.58 x 1.61 in (13.6 x 9.1 x 1.36 cm) |
|--------------------------------|---|

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|                             |   |
|-----------------------------|---|
| <b>Weight (approximate)</b> | t100 and t150 Without mounting bracket: 4.78 oz. (135.7 g)<br>t200 Without mounting bracket: 12.1 oz (343 g)<br>t100 and t150 With mounting bracket: 5.71 oz. (162.0 g)<br>t200 With mounting bracket: 13.44 oz (381 g) |
|-----------------------------|---|

### Environmental

|                                 |  |
|---------------------------------|--|
| Operating temperature range     | 50° to 104° F/10° to 40° C<br>Max rate of change is 18°F/10°C per hour   |
| Non-operating temperature range | Operating: 10-90% (max wet bulb temperature 84.2°F/28°C)<br>Non operating: 5-95% (max wet bulb temperature 101.6°F/38.7°C)<br><b>NOTE:</b> Specifications are at sea level with altitude de-rating of 1.8°F/1000ft (1°C/300m) to a maximum of 10,000 ft (3Km), with no direct, sustained sunlight. Upper range may be limited by the type and number of options installed. |
| Humidity (non-condensing)       | Operating: 10,000 ft/3,048 m<br>Max rate of change is 1500 ft/457m per minute<br>Non-operating: 30,000 ft/9,144 m<br>Max rate of change is 1500 ft/457m per minute   |
| Maximum unpressurized altitude  | Operating: 10,000 ft/3,048 m<br>Max rate of change is 1500 ft/457m per minute<br>Non-operating: 30,000 ft/9,144 m<br>Max rate of change is 1500 ft/457m per minute   |

### Regulatory Compliances

|                |   |
|----------------|---|
| Product Safety | Certified to IEC EN 60950 and all applicable equivalent safety standards                      |
| Ergonomics     | The product has been tested and found to comply with all applicable GS ergonomic requirements |
| EMC            | FCC Class B; CISPR 22 (EN 55022) Class B; CISPR 24 (EN 55024)                                 |

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|                 |   |
|-----------------|---|
| <b>Warranty</b> | Three-year limited hardware warranty.<br><b>NOTE:</b> Certain restrictions apply. Consult the HP Customer Support Center for details. |
|-----------------|---|



### HP MultiSeat Computing Solution -- Options

|                                   |   | t100 | t150 | t200 | ms6200 | Part Number |
|-----------------------------------|---|------|------|------|--------|-------------|
| Hard Drives                       | HP 500-GB SATA 6.0-Gb/s 7200 rpm  |      |      |      | X      | QK554AA     |
|                                   | HP 1 TB SATA 6.0 Gb/s 7200 rpm  |      |      |      | X      | QK555AA     |
| Input/Output Devices              | HP USB Standard Keyboard  |      |      | X    | X      | DT528A      |
|                                   | HP PS/2 Standard Keyboard   | X    | X    |      |        | DT527A      |
|                                   | HP PS/2 2-Button Optical Scroll Mouse   | X    | X    |      |        | EY703AA     |
|                                   | HP USB 2-Button Optical Scroll Mouse  |      |      | X    | X      | DC172B      |
|                                   | HP USB and PS/2 Washable Keyboard and Mouse Kit   | X    | X    | X    | X      | BU207AA     |
|                                   | HP PS/2 Mouse/Keyboard/Mouse Pad Kit  | X    | X    |      |        | KF886AT     |
| Memory<br>PC3-10600 DIMMs Non-ECC | HP 4-GB PC3-10600 (DDR3 1333MHz) DIMM   |      |      |      | X      | VH638AA     |
|                                   | HP 2-GB PC3-10600 (DDR3 1333MHz) DIMM   |      |      |      | X      | AT024AA     |
| Monitors                          | HP Compaq LE1851wt 18-inch Widescreen LCD Monitor<br>(The HP Compaq LE1851wt 18-inch Widescreen LCD Monitor is the only HP monitor that can supply power to the HP t150 Zero Client for MultiSeat and the t200 Zero Client for MultiSeat) | X    | X    | X    | X      | LG142AA     |
| Brackets/Stand                    | HP 2009 Small Form Factor Tower Stand   |      |      |      | X      | VN569AA     |
| Security                          | HP Business PC Security Lock  |      |      |      | X      | PV606AA     |
|                                   | HP Chassis Security Kit   |      |      |      | X      | AR639AA     |
|                                   | HP Solenoid Lock and Hood Sensor Kit  |      |      |      | X      | BP428AA     |
| Audio/Visual                      | HP Business Headset   | X    | X    | X    | X      | QK550AA     |
|                                   | HP LCD Speaker Bar<br>(Speaker Bar requires optional HP t150/t200 Zero Client for MultiSeat Power Adapter or HP Compaq LE1851wt 18-inch Widescreen Monitor)   |      | X    | X    | X      | NQ576AT     |



### HP MultiSeat Computing Solution -- Options

|              |   |   |   |         |
|--------------|---|---|---|---------|
| Power Supply | HP Zero Client for MultiSeat Power Adapter NA   | X | X | QM345AA |
|              | HP Zero Client for MultiSeat Power Adapter EMEA | X | X | QM346AA |
|              | HP Zero Client for MultiSeat Power Adapter APJ  | X | X | QM347AA |

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