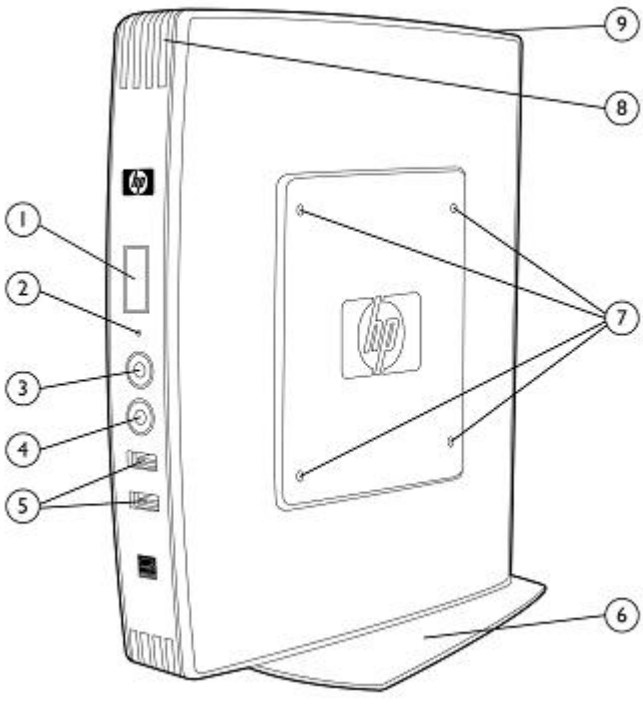
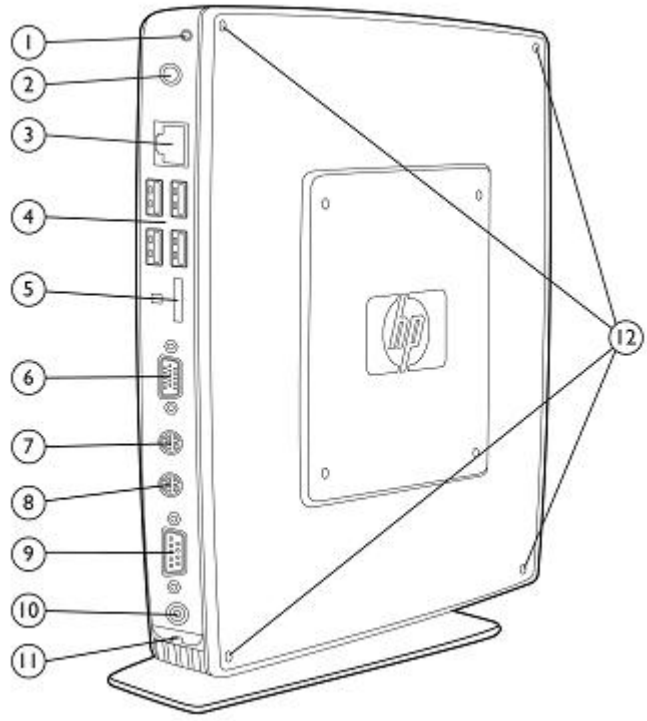
*Overview*




**Front**

1. Power button (with integrated power indicator light)
2. Flash drive activity indicator light
3. Audio connector (headphone/speaker out)
4. Audio connector (mic in)
5. USB connectors (two)
6. Removable stand for vertical orientation
7. Mounting points for HP Quick Release or other VESA mount
8. Secure USB compartment cover
9. Cable lock slot (secures unit and secure USB compartment)

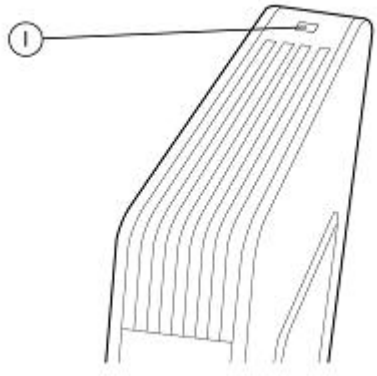



**Back**

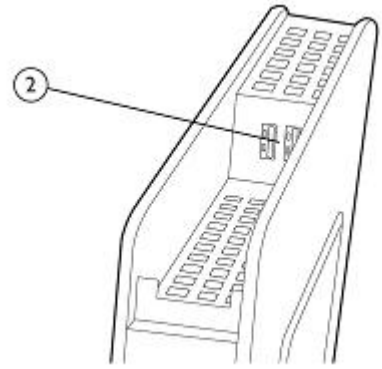
1. Cabling exit from secure USB compartment
2. Wi-Fi antenna connector (depends on model)
3. Ethernet RJ-45 connector
4. USB connectors (four)
5. DisplayPort monitor connector
6. VGA monitor connector
7. PS-2 keyboard connector
8. PS-2 mouse connector
9. Serial connector
10. +19V DC power input
11. Power cable retention slot
12. Mounting location for four (4) horizontal mounting feet

*Overview*

**Top**



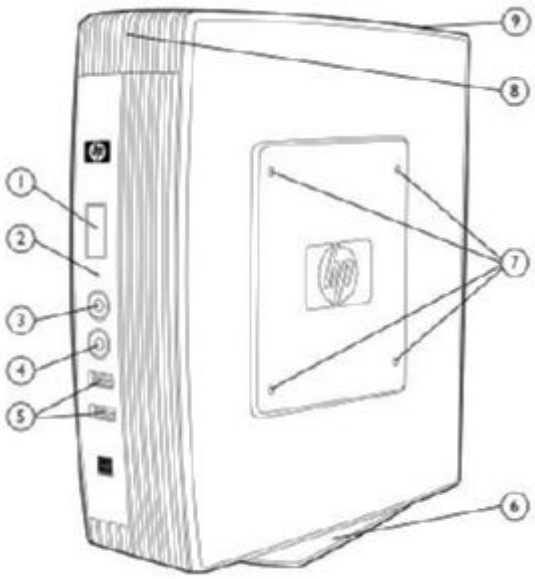
1. Cable lock slot – secures unit and secure USB compartment



2. Secure USB compartment with cover removed – 2 USB connectors

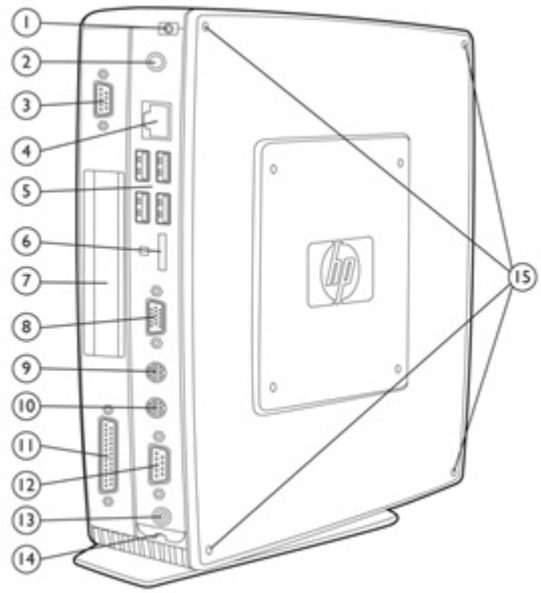
---

**with optional HP t5740/t5745 PCIe x4/PCI Expansion Module Kit**



**Front**

1. Power button (with integrated power indicator light)
2. Flash drive activity indicator light
3. Audio connector (headphone/speaker out)
4. Audio connector (mic in)
5. USB connectors (two)
6. Removable stand for vertical orientation
7. Mounting points for HP Quick Release or other VESA mount
8. Secure USB compartment - 2 USB connectors
9. Cable lock slot (secures unit and secure USB compartment)



**Back**

1. Cabling exit from secure USB compartment
2. WIFI antenna connection (depends on model)
3. Serial connector
4. Ethernet RJ-45 connector
5. USB 2.0 connectors (four)
6. DisplayPort monitor connector
7. PCIe/PCI slot access
8. VGA monitor connector
9. PS/2 keyboard connector
10. PS/2 mouse connector
11. Parallel connector
12. Second serial connector
13. +19V DC power input
14. Power cable retention slot
15. Mounting location for four (4) horizontal mounting feet

## At A Glance

**Hardware features**:

- Intel Atom N280* processor, with Intel GL40 chipset (*Intel's numbering is not a measurement of higher performance)
- Up to 4 GB* flash memory provides ample storage for drivers and applications
- 1 or 2 GB DDR3/667MHz system memory (64 MB minimum reserved for graphics memory)
- Available empty DDR3 SO-DIMM slot (and RAM upgrade options) for dual-channel system memory expansion
  - Minimum of 1GB and a maximum of 4GB* (2 x 2GB) can be supported (*Up to 1 GB may not be available with 32-bit operating systems due to system resource requirements.)
- Built in dual monitor support (VGA and DisplayPort native)
- Integrated wireless (802.11 a/b/g/n*) technology (select models) *Wireless access point and Internet required.
- Optional Expansion Module with PCIe x4/PCI slot for installing a wide range of devices (includes a parallel and second serial port)
- Secure USB compartment is ideal for protecting USB wireless and USB Flash devices as well as for protecting USB keyboard and mouse connectors
- Additional SATA II connector for adding optional secondary solid state Flash drive (16 GB available)
- 8 USB 2.0 ports
- Legacy support includes parallel (via Expansion Module), serial, and PS/2 connections

**Software features**:

- Highly extensible Microsoft® Windows® Embedded Standard 2009 OS with support for local applications including custom applications
- Excellent rich multimedia experience and enhanced USB device support in blade PC and VDI environments
- Enhanced Write Filter and File-Based Write Filter provide complete flexibility to protect the entire Flash disk, or configure areas of the disk for persistent access by local applications
- HP Symantec Endpoint Protection for enhanced data security
- HP TeemTalk Terminal Emulator enables connection and communication with applications on mainframes and midrange systems
- HP Easy Tools including:
  - The HP Easy Update utility that makes it quick and easy to identify and choose the latest image and add-on settings helping get up, running and productive faster than ever before.
  - Exclusive HP ThinState Tools offers in-box, easy-to-use image deployment and recovery tools
  - And more features coming soon
- Enterprise class HP Device Manager, lets you remotely manage devices from a central location
- HP Client Automation for quick and easy deployment of images and thin client management. For more details visit: http://www.hp.com.
- HP Universal Print Driver (available as add-on) for a variety of printers

**Warranty**:

- Protected by Hewlett-Packard Services, including a limited three-year mail-in warranty (certain restrictions and exclusions apply)

## Models without integrated WIFI adapter

| | | |
|---|---|---|
| Worldwide:<br>VU899AA<br><br>Americas and EMEA:<br>VU899AT<br>(Smart Buy/Top Value) | **Processor/Chipset** | Intel Atom N280* 1.66 GHz/Intel GL40<br>*Intel's numbering is not a measurement of higher performance. |
| | **Operating System** | Microsoft Windows Embedded Standard 2009 |
| | **Flash Memory** | 2 GB |
| | **Memory** | 1 GB DDR-3 SODIMM<br>**NOTE:** 64 MB minimum reserved for graphics memory. |
| | **Graphics** | Intel GL40 graphics |
| | **Browser** | Microsoft Internet Explorer 7 |
| | **Client Management Software** | HP Device Manager agent<br>HP Client Automation agent<br>HP ThinState for image capture and redeploy |
| | **Keyboard** | USB or PS/2 (varies by region) |
| | **Mouse** | USB or PS/2 (varies by region) |
| | * Product complies with U.S. Trade Agreement (TAA). Available in U.S only. | |

| | | |
|---|---|---|
| Worldwide:<br>VU900AA<br><br>Americas and EMEA:<br>VU900AT<br>(Smart Buy/Top Value) | **Processor/Chipset** | Intel Atom N280* 1.66 GHz/Intel GL40<br>*Intel's numbering is not a measurement of higher performance. |
| | **Operating System** | Microsoft Windows Embedded Standard 2009 |
| | **Flash Memory** | 2 GB |
| | **Memory** | 2 GB DDR-3 SODIMM<br>**NOTE:** 64 MB minimum reserved for graphics memory. |
| | **Graphics** | Intel GL40 graphics |
| | **Browser** | Microsoft Internet Explorer 7 |
| | **Client Management Software** | HP Device Manager Agent<br>HP ThinState for image capture and redeploy<br>HP Client Automation agent |
| | **Keyboard** | USB or PS/2 (varies by region) |
| | **Mouse** | USB or PS/2 (varies by region) |

| | | |
|---|---|---|
| Americas:<br>VU901AA | **Processor/Chipset** | Intel Atom N280* 1.66 GHz/Intel GL40<br>*Intel's numbering is not a measurement of higher performance. |
| | **Operating System** | Microsoft Windows Embedded Standard 2009 |
| | **Flash Memory** | 4 GB |
| | **Memory** | 2 GB DDR-3 SODIMM<br>**NOTE:** 64 MB minimum reserved for graphics memory. |
| | **Graphics** | Intel GL40 graphics |
| | **Browser** | Microsoft Internet Explorer 7 |
| | **Client Management Software** | HP Device Manager Agent<br>HP ThinState for image capture and redeploy<br>HP Client Automation agent |
| | **Keyboard** | USB or PS/2 (varies by region) |
| | **Mouse** | USB or PS/2 (varies by region) |

*Standard Features - Models*

## Models with integrated WIFI adapter

Worldwide:
VU902AA

Americas:
VU902AT
(Smart Buy)

| | |
|---|---|
| **Processor/Chipset** | Intel Atom N280* 1.66 GHz/Intel GL40<br>*Intel's numbering is not a measurement of higher performance. |
| **Operating System** | Microsoft Windows Embedded Standard 2009 |
| **Flash Memory** | 2 GB |
| **Memory** | 2 GB DDR-3 SODIMM (1 x 2 GB SODIMM)<br>**NOTE:** 64 MB minimum reserved for graphics memory. |
| **Graphics** | Intel GL40 graphics |
| **Integrated Wireless**[2] | Atheros 802.11 a/b/g/n Wi-Fi adapter |
| **Browser** | Microsoft Internet Explorer 7 |
| **Client Management Software** | HP Device Manager agent<br>HP Client Automation agent<br>HP ThinState for image capture and redeploy |
| **Keyboard** | USB or PS/2 (varies by region) |
| **Mouse** | USB or PS/2 (varies by region) |

[1]Product complies with U.S. Trade Agreement (TAA). Available in U.S only.

[2]A standard WLAN (Wi-Fi) infrastructure with wireless access points is required and is not included.

*Options*

| | | |
|---|---|---|
| | **NOTE:** Optional accessories are available as separate purchase. | **Part Number** |
| **Accessories** | HP t5740/t5745 Expansion Module[8] | AZ551AA |
| | HP Quick Release Kit | EM870AA |
| | HP Integrated Work Center Stand | GN783AA |
| | HP/Kensington Cable Lock | PC766A |
| | 65 Watt External Power Supply replacement | AZ552AA |
| **Communications** | HP Neoware NA USB Wireless Adapter[1]<br>(US and Canada: not certified for use in Latin America)<br>(Asia/Pacific: Taiwan, Philippines)<br>Security: WEP except 256-bit, WPA and WPA2 only | AK256AA |
| | HP Neoware EMEA USB Wireless Adapter[1]<br>(EMEA; not certified for use in Russia or Belarus)<br>(Asia/Pacific: Australia, Hong Kong, Indonesia, Japan, Malaysia, New Zealand, Singapore)<br>Security: WEP except 256-bit, WPA and WPA2 only | AK257AA |
| | Cisco Aironet 802.11a/b/g Wireless PCI Adapter[2] | AIR-PI21AG-A-K9 |
| | Allied Telesis PCIe x1 Fast Ethernet Fiber Network Interface Card[2] | AT-2711FX |
| | Allied Telesis PCI-e x1 Gigabit Fiber Network Interface Card[2] | AT-2972SX |
| **Input Devices** | HP PS/2 Standard Keyboard | DT527A |
| | HP USB Standard Keyboard | DT528A |
| | HP USB Smartcard Keyboard | ED707AA |
| | HP PS/2 2-Button Optical Mouse | EY703AA |
| | HP USB 2-Button Optical Scroll Mouse | DC172B |
| **Monitors**[3] | HP L5009tm Touchscreen Monitor | VK202AA |
| | ELO Touch 1529L Flat Panel - USB/serial combo[2,4] | E926109 |
| | HP Digital Signage Display Wall Mount | EM894AA |
| **Graphics** | HP DisplayPort to DVI-D Adapter | FH973AA<br>FH973AT |
| **Storage** | HP 16GB SATA II IDE Solid State Flash Drive (for secondary storage)[5] | AZ550AA |
| | HP USB External CD/DVD R/RW Drive (read only support) | FS943AA<br>FS934UT |
| | Apacer 4GB AH522 USB 2.0 Flash Drive[3] | 91.HDE2S.HP00C |
| | Apacer 8GB AH522 USB 2.0 Flash Drive[2] | 91.HDF2S.HP00C |
| **Memory** | 1GB DDR3 SO-DIMM Memory Upgrade Kit (1 x 1 GB) | AZ548AA |
| | 2GB DDR3 SO-DIMM memory Upgrade Kit (1 x 2 GB) | AZ549AA |

*Options*

| | | |
|---|---|---|
| **Security** | HP USB Smartcard Keyboard | ED707AA |
| | HP USB CCID Smartcard Keyboard (BFR/PVC free) | BV813AA |
| | Gemalto PC USB-TR Card Reader[2] | HWP117685 |
| | Gemalto .NET v2+ Smart Card[2] | HWP115303B<br>HWP115647C |
| | SCM SCR331 USB Smart Card Reader[2] | 904054 |
| | HP/Kensington Cable Lock | PC766A |
| **Care Pack Services**[6] | 9x5 Next-Business-Day Advanced Exchange - 3 Years | 331653-001;<br>U4847E[7] |
| | 9x5 Next-Business-Day On-Site Coverage - 3 Years | 331655-001;<br>U4849E[7] |
| | Hardware Installation | 331686-001;<br>U4865E |

[1] Wireless functionality is not supported for roaming environments. Thin client must be stationary for wireless device to properly function. A standard WLAN (Wi-Fi) infrastructure with wireless access points is required and is not included.
[2] Option, drivers, warranty, and support are available directly from third party.
[3] Drivers must be installed. For a complete list of monitors compatible with HP thin clients, it is important to cross-reference the supported video resolutions of the HP thin client to the supported resolutions of the monitor. Most HP monitors have one or more supported resolutions that match HP thin client products.
[4] Only serial is supported.
[5] The 16GB SATA module should not be used with the HP PCIe/PCI Expansion Module. The secondary storage drive is not supported as a primary boot drive for the thin client OS image or in a hardware or software RAID configuration. Remote Management tools may manage content on the secondary storage drive, but cannot be used to install the thin client OS image onto this drive. Additional HP OS Image tools including but not limited to ThinState Capture, RAMDisk Manager, and the write filters will not function or support the secondary storage drive. Pagefiles are not supported in a primary or secondary drive environment.
[6] Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Restrictions and limitations apply. For details, visit: www.hp.com/go/carepack.
[7] 4U4847E is available in all regions; U4849E is available in Americas and Asia-Pacific/Japan.
[8] The PCIe/PCI Expansion Module should not be used if the HP 16GB SATA module is installed.

## Memory Configurations

| **Flash Memory** | **Memory Slot 1** (DDR-3) | **Memory Slot 2** (DDR-3) |
|---|---|---|
| 2 GB | 1 GB | Empty |
| 2 GB | 2 GB | Empty |
| 4 GB | 2 GB | Empty |

| | | |
|---|---|---|
| **Processor** | Intel Atom N280 1.66 GHz | |
| **Memory** | **Flash Memory** | Up to 4 GB (for boot drive) |
| | **System Memory** | Up to 2 GB DDR-3 SODIMM in standard configurations (up to 8 GB supported)<br>**NOTE:** 64 MB minimum reserved for graphics memory (Intel GL40 chipset dynamically allocates graphics memory) |
| **Graphics** | Intel GL40 graphics with support for two high-resolution monitors up to 2048 x 1536, or up to 32 bit color depth* | |

| **Mode** | **Color depth** | **Refresh rate** |
|---|---|---|
| 640 x 480 | 8/16/32bit | 60, 70, 75, 85 |
| 800 x 600 | 8/16/32bit | 60, 75, 85 |
| 1024 x 768 | 8/16/32bit | 60, 70, 75, 85 |
| 1280 x 720 | 8/16/32bit | 60, 75, 85 |
| 1280 x 768 | 8/16/32bit | 60, 75, 85 |
| 1280 x 1024 | 8/16/32bit | 60, 75, 85 |
| 1400 x 1050 | 8/16/32bit | 60, 75, 85 |
| 1440 x 900 | 8/16/32bit | 60, 75, 85 |
| 1600 x 1200 | 8/16/32bit | 60, 75 ,85 |
| 1680 x 1050 | 8/16/32bit | 60 |
| 1920 x 1080 | 8/16/32bit | 60, 75, 85 |
| 1920 x 1200 | 8/16/32bit | 60, 75 |
| 2048 x 1536 | 8/16/32bit | 60 |

**NOTE:** This table represents a sample of possible modes that this controller is capable of displaying but various factors such as the capability and EDID info returned by the attached monitor, the interface used (D-SUB/DisplayPort or optional DVI-D with dongle), and dual monitor mode may limit the availability of modes, color depth, and/or refresh rate.

| | | |
|---|---|---|
| **Input/Output/ Peripheral Support** | **Keyboard** | USB or PS/2 (varies by region) |
| | **Mouse** | USB or PS/2 (varies by region) |
| | **Printer** | Local and/or network printers (RDP, ICA, LPD) |
| | **Video** | Intel GL40 graphics |
| **Audio** | **Output** | Internal amplified speaker, 1/8-inch mini, full 16-bit stereo, 44-kHz sample rate. |
| | **Input** | 1/8-inch mini microphone |
| **Hardware Security** | Security lock slot (cable lock sold separately)<br>Secure USB compartment with 2 USB 2.0 ports | |
| **Networking** | 10/100/1000 Gigabit Ethernet (RJ-45) | |
| | TCP/IP with DNS and DHCP | |
| | Point-to-Point Protocol (PPP), Direct Connection through RS-232, Point-to-Point over Ethernet (PPPoE),<br>Point-to-Point Tunneling Protocol (PPTP), Layer-2 Tunneling Protocol (L2TP), Wake on LAN (WOL), PXE | |
| | Server Network Time Protocol (SNTP) | |

*Technical Specifications*

| | | |
|---|---|---|
| | Simple Network Management Protocol (SNMP) | |
| **Wireless LAN** (select models) | **Adapter** | Atheros 802.11a/b/g/n WIFI Adapter |
| | **Form Factor** | PCI-Express Half Mini Card |
| | **Security** | Supports 64- and 128-bit WEP, WPA, WPA2, AES, TKIP, 802.1x authentication types EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST, LEAP<br>Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4). |
| **I/O ports and connectors** | Eight USB 2.0 ports (two in front, four in rear, two in secure USB compartment), 1 VGA, 1 DisplayPort, 2 PS/2, 1 serial, 1 RJ-45, and 1 optional Expansion Module with X4 PCI-EI or PCI slot, also including 1 parallel and second serial port | |
| **Server OS Compatibility/ Support** | Citrix XenApp 5 and 6<br>Citrix XenDesktop 3 and 4<br>Citrix Presentation Server 4.0<br>Windows Server 2008 Terminal Services<br>Windows 2000/2003 Server families, Windows 2000/2003 Server Terminal Services<br>VMware Virtual Desktop Infrastructure using RDP | |
| **Software** | **Operating System/ Protocols/Components** | Windows Embedded Standard 2009<br>Microsoft RDP 7.0<br>Citrix ICA 12.0 (Citrix Online Plugin12.0)<br>Microsoft Internet Explorer 7<br>Windows Media Player 11<br>HP TeemTalk Terminal Emulator 7<br>HP Remote Graphics Software Receiver 5.4 for VMware View and Microsoft Terminal Services<br>Adobe Flash Player 10.1 |
| | **Security** | Configure to use Enhanced Write Filter or File-based Write Filter<br>Symantec Endpoint Protection<br>Microsoft Firewall available as add-on<br>Administrator and user passwords<br>Remote BIOS configurability to disable ports |
| | **Session Allocation Managers/Session Brokers** | Citrix Desktop Delivery Controller enabled through web browser<br>VMware View Manager 4.0.1<br>VMware View Manager 4.5 (available as an add-on)<br>HP Session Allocation Manager (SAM) 3.0 (available as add-on)<br>Leostream Desktop Connection Broker (contact vendor directly for sale/support)<br>Provision Networks (Quest) broker (contact vendor directly for sale/support) |
| | **Multimedia and USBR solutions** | HP Remote Graphics Software Receiver 5.3 for VMware View and Microsoft Terminal Services<br>HP RDP Multimedia and USB Redirection software enhancements for VMware View and Windows Terminal Server<br>Citrix HD-X support for XenApp<br>Citrix HD-X support for XenDesktop |
| | **Management** | HP Easy Tools<br>HP Device Manager agent<br>HP Client Automation agent<br>HP ThinState for rapid deployment<br>Altiris Deployment Solution (must purchase license directly from vendor) |
| | Other add-on software available (see: www.hp.com/support for latest list of available add-ons) | |
| **Languages** (MUI) | English, French, German, Spanish, Dutch, Norwegian, Korean, Simplified Chinese, Traditional Chinese, and Japanese | |

*Technical Specifications*

| | | |
|---|---|---|
| **Dimensions HxWxD** (approximate) | **Without stand** | 10.04 x 1.73 x 8.74 in (255 x 44 x 222 mm) |
| | **With stand** | 10.39 x 1.73 x 8.74 in (266.7 x 44 x 222 mm) |
| | **With Expansion Module** | 10.04 x 2.91 x 8.74 in (255 x 74 x 222 mm) |
| **Weight** (approximate) | **With stand** | 3.48 lb (1.58 kg) |
| | **With Expansion Module** | 4.14 lb (1.88 kg) |
| **Power supply** | Worldwide auto-sensing 100-240 VAC, 50-60 Hz energy-saving automatic power-down, surge-tolerant, ENERGY STAR® Star 2.0 qualified 65-watt power supply | |
| **Environmental** | **Temperature range** | Operating: 50° to 104° F (10° to 40° C)<br>Operating, using Quick Release with a flat panel monitor: 50° to 95° F (10° to 35° C)<br>Operating, using PCI Expansion Unit: 50° to 104° F (10° to 40° C)<br>Non-operating:-22° to 140° F (-30° to 60° C)<br>**NOTE:** Specifications are at sea level with altitude derating of 1° C/300m (1.8° F/1000ft) to a maximum of 3 Km (10,000 ft), with no direct, sustained sunlight. Upper limit may be limited by the type and number of options installed. |
| | **Humidity** | 20% to 80% condensing<br>10% to 90% non-condensing |
| **Regulatory Compliance** | **Ergonomics** | German ZH1/618; EN29241-3, approved |
| | **Safety** | UL 1950, CSA 950; TÜV-GS (EN60 950) approved |
| | **RF Interference** | FCC Class B; CE Mark; EN55022B; VCCI |
| **Warranty** | Three-year limited hardware warranty.<br>**NOTE:** Certain restrictions apply. Consult the HP Customer Support Center for details. | |

| **Emulations** | **Emulation** | **Terminal ID** |
|---|---|---|
| | ADDS A2 | |
| | AIXTerm | |
| | ANSI BBS | |
| | AT 386 | |
| | ATT4410 | |
| | HP 700-92/96 | 70092, 70094, 70096, 2392A, 2622A |
| | HZ1500 | |
| | IBM3151 | Mod11, Mod31 |
| | IBM3270 | 3278-2 (24x80), 3278-3 (32x80), 3278-4 (43x80), 3278-5 (27x132), 3278-2-E (24x80), 3278-3-E (32x80), 3278-4-E (43x80), 3278-5-E (27x132), 3279-2 (24x80), 3279-3 (32x80), 3279-4 (43x80), 3279-5 (27x132), 3287-1 |
| | IBM5250 | 5291-1, 5292-2, 5251-11, 3179-2, 3196-A1, 3180-2, 3477-FC (27x132), 3477-FG (24x80), 3486-BA, 3487-HA, 3487-HC, 3812-1 |
| | SCO Console | |
| | Stratus V102 | |
| | TA6530 | |
| | TVI910 | |
| | TVI920 | |
| | TVI925 | |
| | TVI950 | |
| | TVI955 | |

| | |
|---|---|
| VT52, VT100, VT100+, VT500 (7- or 8-bit) | VT100, VT101, VT102, VT125, VT131, VT132, M2200, VT220, VT240, VT320, VT340, VT420, VT510, VT520, VT525 |
| VT HP220, VT UTF8 | VT100, VT101, VT102, VT125, VT220, VT240, VT320, VT340, VT420, VT131, VT132, M2200, VT510, VT520, VT525 |
| VT PCTerm | |
| Wyse PCTerm | |
| WY50 | |
| WY50+ | |
| WY60 | |

*Technical Specifications – Environmental Data*

**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:

- ENERGY STAR® Category B
- EPEAT® registered where applicable/supported, see www.epeat.net for registration status by country

| **Energy Consumption** | **115 VAC (60Hz)** | **230 VAC (50Hz)** | **100 VAC (60Hz)** |
|---|---|---|---|
| Idle State: | 10.70 W | 10.80 W | 10.80 W |
| Off Mode: | 0.51 W | 0.30 W | 0.51 W |

**NOTE:** This product is in compliance with US executive order 13221, WOL (wake on LAN) disabled. Off Mode measurements are made with WOL disabled.
**NOTE:** The actual power consumption at your location could vary and is dependent on many factors including but not limited to software load on the thin client, attached peripherals, and environmental factors.

| **Heat Dissipation*** | **115 VAC (60Hz)** | **230 VAC (50Hz)** | **100 VAC (60Hz)** |
|---|---|---|---|
| Idle State: | 36.51 BTU/hr | 36.85 BTU/hr | 36.85 BTU/hr |
| Off Mode: | 2.05 BTU/hr | 1.02 BTU/hr | 1.74 BTU/hr |

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

**Batteries**

This product complies with ISO standards:

- EU Directive 91/ 157/ EEC
- EU Directive 93/ 86/ EEC
- EU Directive 98/ 101/ EEC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight
- Lead greater than 4000ppm by weight.

Battery size: CR2032 (coin cell)
Battery type: Lithium

**Recycled material**

**Product**

- This product contains 0% recycled materials (by weight).
- This product is 95% (by weight) recyclable when disposed of properly at end of life.

**Packaging**

- The EPE foam packaging material contains at least 5% (by weight) post-consumer recycled content.
- The corrugated paper packaging materials contains at least 80% (by weight) post-consumer recycled content.
- The packaging for this product is 100% (by weight) recyclable when disposed of properly.

**Environment-friendly Products and Approach**

**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. By July 1, 2006, RoHS substances will be 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):

- 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
- 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 treatmen 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:<br>Global Citizenship Report<br>http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html<br>Eco-label certifications<br>http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html<br>ISO 14001 certificates:<br>http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html |

© 2011 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice and is provided "as is" without warranty of any kind. The warranties for HP products and services are set forth in the express limited warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein. Microsoft and Windows are trademarks of the Microsoft Group of Companies. ENERGY STAR is a registered mark owned by the U.S. government.