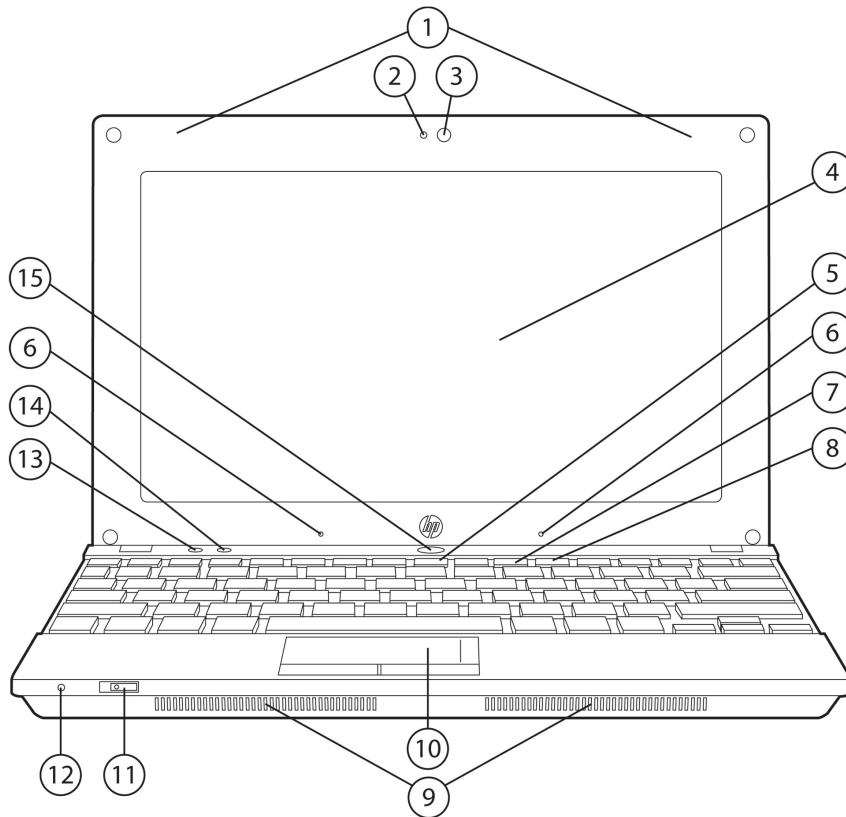
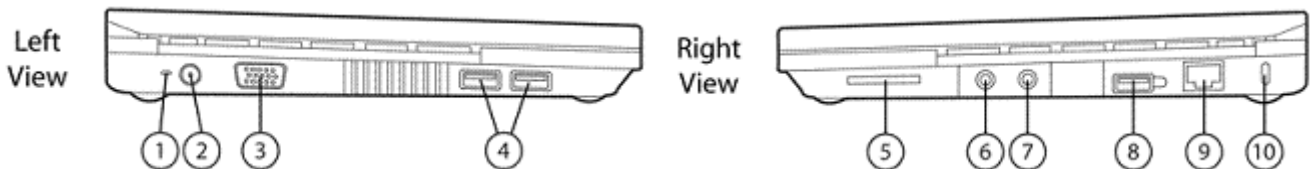


Overview



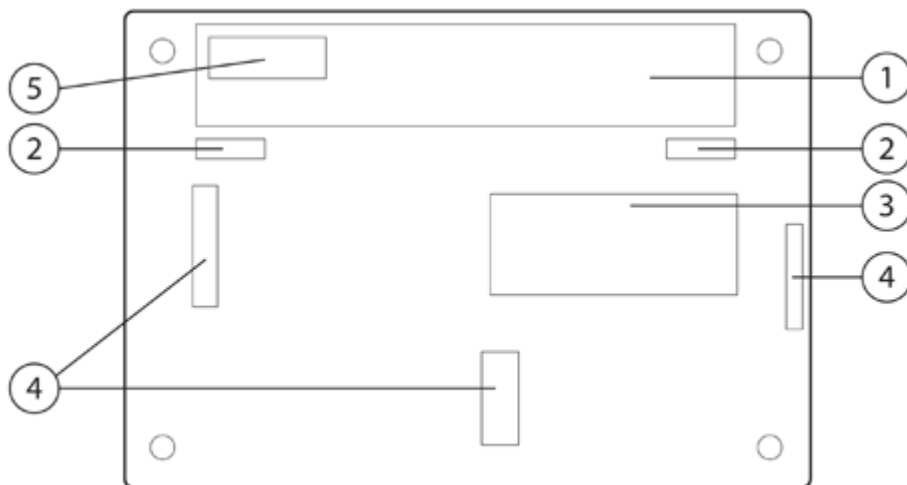
- | | |
|---|---|
| 1. WLAN and WWAN antennas (select models) | 9. Stereo speakers |
| 2. Webcam LED | 10. Touchpad with scroll zone |
| 3. 2 MP Webcam | 11. Wireless on/off button with LED indicator |
| 4. Optional touch screen | 12. Internal storage activity LED indicator |
| 5. Volume mute function key | 13. QuickWeb button |
| 6. Integrated stereo microphones | 14. QuickLook 3 button |
| 7. Volume down function key | 15. Power button with LED indicator |
| 8. Volume up function key | |



- | | |
|-----------------------------------|------------------------------|
| 1. Battery charging LED indicator | 6. Stereo headphone/line out |
| 2. Power connector | 7. Stereo microphone in |
| 3. VGA/external monitor | 8. USB 2.0 port (powered) |
| 4. (2) USB 2.0 ports | 9. RJ-45/Ethernet |
| 5. Secure Digital (SD)/MMC slot | 10. Kensington lock slot |



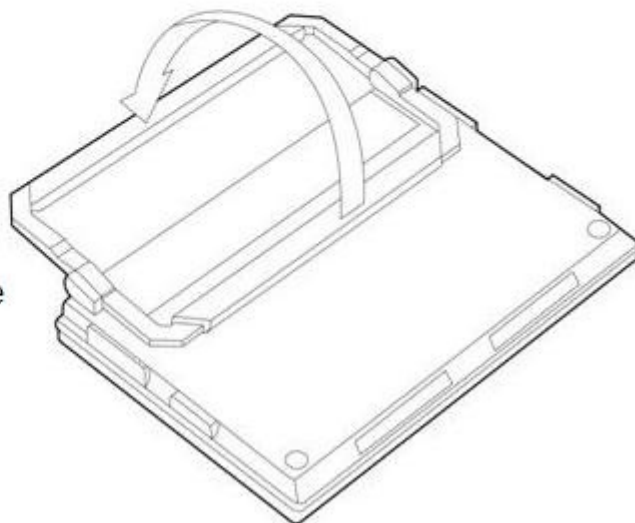
Overview



1. Battery bay
2. Battery/memory module release latches
3. Memory module compartment
4. Vent
5. WWAN SIM module access (under battery)



With Optional Handle



Overview

At A Glance

- Genuine Windows 7 versions, SUSE Linux Enterprise 11, or FreeDOS
- 10.1-inch diagonal LED-backlit display available in WSVGA (1024 x 600) or 16:9 HD (1366 x 768) resolution; optional capacitive multi-touch screen (Windows only)
- Corel Office productivity suite of software included for word processing, spreadsheets and presentations
- Ultra-portable light-weight design starting at 2.64 lb (1.2 kg) and 0.91 in (23.2 mm) thin at front
- All metal case with magnesium alloy support structure and metal alloy hinges
- Choice of Espresso, Blue, or Red color; optional handle
- 95% full-size, spill-resistant QWERTY keyboard with HP DuraKeys; touchpad with scroll zone; touch-sensitive controls
- Flexible wireless connectivity options:
 - Integrated HP un2420 EV-DO/HSDPA Mobile Broadband Module provides worldwide Gobi mobile Internet technology with GPS
 - Integrated 802.11 a/b/g/n or b/g/n wireless LAN module
 - Integrated 802.11 b/g/n wireless and Bluetooth combo adapter
 - Bluetooth® v2.1
- Flexible battery solutions: 4-cell for lightest weight or 6-cell for longer battery life; HP Fast Charge
- HP QuickSync for synchronization; HP QuickLook 3 and HP QuickWeb; HP Daystarter
- Intel® NM10 Express chipset and Intel Atom™ processor
- Up to 320 GB 7200 rpm hard drive with HP 3D DriveGuard protection, or 80/128 GB Solid State Drive
- Optional Broadcom Crystal HD Enhanced Video Accelerator enables 720p and 1080p HD video playback
- Integrated 2 MP Webcam
- Face Recognition for easy login by simply looking into your notebook's camera
- Optional HP USB 2.0 Docking Station and HP External USB 2.0 CD/DVD R/RW Drive



Standard Features

| | | |
|-------------------------|---------------------|--|
| Processors | | Intel Atom N550 Processor (Dual Core, 1.50 GHz, 1 MB L2 cache, 667 MHz FSB) Intel Atom N475 Processor (1.83 GHz, 512 KB L2 cache, 667 MHz FSB) Intel Atom N455 Processor (1.66 GHz, 512 KB L2 cache, 667 MHz FSB) NOTE: Intel's numbering is not a measurement of higher performance. Processor speed denotes maximum performance mode; processor will run at lower speeds in battery optimization mode. |
| Operating System | Preinstalled | Genuine Windows 7 Home Premium Edition 32* Genuine Windows 7 Starter 32* SUSE Linux Enterprise 11 FreeDOS |
| | Supported | Genuine Windows 7 Home Premium Edition 64* Genuine Windows 7 Home Basic* Genuine Windows 7 Starter 64* |
| | | * System may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See http://www.microsoft.com/windows/windows-7/ for details. |
| Chipset | | Intel NM10 Express Chipset |
| Graphics | | Intel Graphics Media Accelerator 3150 Optional Broadcom Crystal HD Enhanced Video Accelerator* with ArcSoft TotalMedia Theater 3 software * Can only be installed when HP un2420 EV-DO/HSPA Mobile Broadband Module is not installed. |
| Display | Internal | 10.1-inch diagonal LED-backlit WSVGA widescreen display with 1024 x 600 resolution 10.1-inch diagonal LED-backlit HD 16:9 widescreen display with 1366 x 768 resolution Optional capacitive multi-touch screen feature (Windows only) |
| | External | Up to 32-bit per pixel color depth VGA port supports resolutions up to 1680 x 1050 at 60 Hz, and lower resolutions at up to 100 Hz NOTE: Resolutions are dependent upon monitor capability, and resolution and color depth settings. |



Standard Features

Memory **Standard** 1 GB or 2 GB DDR3 1333 MHz SDRAM SODIMM*
one SODIMM slot

Maximum Supports up to 2 GB maximum**

* All memory modules operate at the maximum system supported speed of 667 MHz.

** Maximum memory is 1 GB with some configurations.

NOTE: Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility.

Communications Integrated Marvell Ethernet (10/100/1000 NIC)

Wireless Devices Support for secure, integrated wireless LAN and wireless WAN options featuring support for the latest industry standards. Mobile Broadband (WWAN) requires a Windows operating system and is available in select countries as a factory configurable feature only. Integrated Bluetooth is also available (factory configurable only) and can be combined with any of the supported wireless LAN options.

HP un2420 EV-DO/HSPA Mobile Broadband Module (Windows models only; can only be installed when ProtectTools.

Broadcom Crystal HD Enhanced Video Accelerator is not installed) **NOTE: Separately purchased mobile network operator service is required.** Two 850/900/1575/1800/1900/2100 MHz antennas integrated in the top of the display panel support current and future WWAN technologies.

All 802.11 integrated wireless LAN options Wi-Fi certified
Cisco Compatible Extensions support
Wired Equivalent Privacy (WEP) support up to 128-bit keys
Wi-Fi Protected Access (WPA) and WPA2 support
802.1x authentication support, including EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, and LEAP
Advanced Encryption Standard (AES) support
Dual antennas integrated in the display enclosure

Broadcom 43224AGN 802.11a/b/g/n Wi-Fi Adapter Integrated support for 802.11 a, b, g, and n
Up to 300 mbps data rate

Broadcom 4313GN 802.11b/g/n Wi-Fi Adapter Integrated support for 802.11 b, g, and n
Up to 72.2 mbps data rate

Broadcom 4313GN 802.11b/g/n 1x1 Wi-Fi and Bluetooth 3.0 + HS Combo Adapter Integrated support for 802.11 b, g, and n
Up to 72.2 mbps data rate
Bluetooth 3.0 + High Speed (HS)
Works with a wide range of Bluetooth devices

HP Integrated Module with Bluetooth 2.1 + EDR Wireless Technology Bluetooth Specification v2.1 compliant
Works with a wide range of Bluetooth devices



Standard Features

Keyboard Spill-resistant keyboard is 95% of full size, 101/102-key compatible with isolated inverted-T cursor control keys, both left and right control and alt keys, 12 function keys, and hotkey combinations for audio volume, power conservation, brightness, and other features. US and international key layouts are available.

Pointing Device Touchpad with scroll zone and two soft-touch buttons
Optional capacitive multi-touch screen (Windows only)

Expansion Card Slots **Secure Digital slot** Supports SD (Secure Digital), and MMC (MultiMedia Card)

Internal Storage

| | |
|--|---|
| Hard Drive | 160/250*/320* GB 7200 rpm SATA |
| HP 3D DriveGuard (Windows models only) | The hard drive is mounted directly to the notebook frame, reducing the transmission of shock to the hard drive. Uses three-axis digital motion detection with intelligent sensitivity to help protect the hard drive during normal use from shock and vibration. The digital accelerometer temporarily halts all data transfer and parks the hard drive when abrupt motion is detected. |
| Solid State | 80/128 GB Solid State Drive* |

* Not available with some configurations.
NOTE: Up to 15 GB is reserved for the system recovery software.

Interfaces

| | |
|------------------------------|---------------------|
| External Monitor | One - VGA |
| External Microphone | One |
| Headphone/Line out | One |
| Power Connector | One |
| RJ-45/Ethernet | One |
| USB 2.0 | Three (one powered) |
| LED Status Indicators | Seven |

Audio/Visual

- IDT 92HD75B High Definition audio
- Integrated stereo speakers
- Integrated stereo microphones
- Stereo headphone/line out
- Stereo microphone in
- Integrated 2 MP webcam



Standard Features

Software

Software with Windows Operating Systems

HP Support Assistant (Windows 7 only)
HP QuickLook 3
HP QuickWeb
HP QuickSync
HP Connection Manager
Corel Office
Microsoft Office 2010 Preloaded* (select models) (purchase of a Product Key required to activate a full Office 2010 suite)
Microsoft Office 2010 Home and Business (Japan only)
Microsoft Office 2010 Personal (Japan only)
McAfee Total Protection**
Adobe Flash Player
ArcSoft TotalMedia Theater 3***
PDF Complete
Skype
WinZip v14.5

Software with SuSE Linux Enterprise Desktop

OpenOffice Suite
Evolution Email
Evince Document Viewer
OpenOffice Draw
F-Spot Photo Brower
Gnome CD/DVD Creator
Helix Banshee Music Player
Real Player 10 Media Player
Firefox Web Browser
Gaim Instant Messenger
Gnome FTP File Transfer
Liferea Feed Reader
Mutt Mail Client

* Microsoft Office 2010 Preloaded includes reduced functionality versions of Word and Excel. Purchase of Product Key required to activate full Office 2010 suite available at participating resellers/retailers and <http://www.office.com>.

** 60 day trial period for McAfee Total Protection for Small Business software. Internet access required to receive updates. First update included. Subscription required for updates thereafter.

*** On configurations with optional Broadcom Crystal HD Enhanced Video Accelerator

Security

Standard Features

HP ProtectTools Security Manager
HP Disk Sanitizer
Setup Password
Power-On Password
Kensington Lock Slot
Support for Computrace* LoJack Pro for HP ProtectTools
Face Recognition for HP ProtectTools

* The Computrace agent is shipped turned off, and must be activated by customers when they purchase a subscription with terms ranging from one to five years.

For more information on HP security solutions refer to: <http://www.hp.com/go/security>.



Options

NOTE: Options/capabilities listed in the QuickSpecs represent those capabilities available through Base Units or Build to Order configurations. The various product features and capabilities will vary in terms of configurable vs. aftermarket options (AMOs). There may be options and capabilities available through CTO that are not available as AMOs.

| | | |
|---------------|---|---------|
| Memory | HP 2 GB (DDR3 1333 MHz) SODIMM* | AT912AA |
| | * Runs at maximum system supported speed of 667 MHz | |

| | | |
|----------------|--|---------|
| Storage | HP USB Diskette Drive | DC361B |
| | HP External USB 2.0 CD/DVD R/RW Drive | FS943AA |
| | HP 250 GB Pocket Media Drive | FE477AA |
| | HP 120 GB SATA 7200rpm Primary Hard Drive | AH920AA |
| | HP 250 GB SATA 5400 rpm Primary Hard Drive | AK072AA |

| | | |
|------------------|--------------------------------------|---------|
| Expansion | HP USB 2.0 Docking Station | FQ834AA |
| | HP Essential USB 2.0 Port Replicator | AQ731AA |

| | | |
|--------------|--|---------|
| Power | HP 65W Smart AC Adapter | ED494AA |
| | HP 65W Slim Adapter | AX727AA |
| | HP Smart 65W Travel AC Adapter | AU155AA |
| | HP 6-cell Primary Battery | AT901AA |
| | HP 90W Smart AC/Auto/Air Combo Adapter | AJ652AA |

| | | |
|-----------------------|------------------------------------|---------|
| Carrying Cases | HP Ultra-portable Carrying Case | AL539AA |
| | HP Basic Carrying Case | AJ078AA |
| | HP Value Nylon Case | DL617A |
| | HP 10.1 Molded Slip Case | AY531AA |
| | HP Professional 10.1 Slip Case | AW209AA |
| | HP Professional Slim Top Load Case | AY530AA |
| | HP Professional Series Backpack | AT887AA |
| | HP Deluxe Nylon Backpack | RR317AA |
| | HP Elite 10.1 Slip Case | AX681AA |
| | HP Basic Messenger Carrying Case | AP355AA |
| HP Basic Backpack | AM863AA | |

| | | |
|-----------------|--|---------|
| Security | HP/Kensington MicroSaver Security Lock | PC766A |
| | HP Privacy Filter For 10.1 in | AU201AA |



Options

| | | |
|----------------------|--|---------|
| Input/Output Devices | HP USB Keyboard & Mouse Bundle | RC465AA |
| | HP USB/PS2 Optical 2-Button Scroll Mouse | DC369A |
| | HP USB Optical Travel Mouse | RH304AA |
| | HP Mobile USB 2.0 Speakers | FS944AA |
| | HP Bluetooth Stereo Headphones | AR084AA |
| | HP Wireless Optical Mouse | AR085AA |



Memory

Supports 1333 MHz* DDR3 SDRAM

One DIMM slot

DIMM sizes supported: 1 GB and 2 GB**

| | |
|------------------------|-------------------|
| Standard Memory | 1 GB (1 GB x 1) |
| | 2 GB (2 GB x 1)** |

| | |
|---------------------------------|--|
| Optional Memory Upgrades | Memory slot is user accessible. Please refer to the Hardware and Software Guide for installation procedures. |
|---------------------------------|--|

NOTE: Due to the non-industry standard nature of some third-party memory modules, we strongly recommend using only HP branded memory modules to ensure compatibility.

| | | |
|------------------------|---------------------------------|---------|
| Memory Upgrades | HP 2 GB (DDR3 1333 MHz*) SODIMM | AT912AA |
|------------------------|---------------------------------|---------|

* Runs at maximum system supported speed of 667 MHz

** Maximum memory is 1 GB with some configurations.



Storage

Internal Storage Device

Hard Drives (2.5-inch SMART SATA)

160 GB 7200 rpm

250 GB 7200 rpm

320 GB 7200 rpm

Solid State (2.5-inch)

80 GB Solid State Drive

128 GB Solid State Drive

Quantity Supported

One

One

One

One

One

Drive Bay

Dedicated hard drive bay

Dedicated hard drive bay

Dedicated hard drive bay

Dedicated hard drive bay

Dedicated hard drive bay



Technical Specifications

System Unit

| | Non-touch screen | Touch screen |
|---|---|---|
| Dimensions (HxWxD) | 0.91 (at front) x 10.30 x 7.09 in 23.2 (at front) x 262 x 180 mm | 0.98 (at front) x 10.30 x 7.09 in 24.8 (at front) x 262 x 180 mm |
| Weight | Starting at 2.64 lb (1.2 kg) | Starting at 2.86 lb (1.3 kg) |
| NOTE: Height varies depending upon where on the notebook the measurement is made. Weight includes 1 GB memory, 160 GB hard drive. Weight varies by configuration and components. | | |
| Stand-Alone Power Requirements | Normal Operating Voltage | 18.5 V |
| | Average Operating Power | 10.5 W |
| | Max Operating Power | < 40 W |
| Temperature | Operating | 32° to 95° F (0° to 35° C) |
| | Non-operating | -4° to 140° F (-20° to 60° C) |
| Relative Humidity | Operating | 10% to 90%, non-condensing |
| | Non-operating | 5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature |
| Shock | Operating | 125 G, 2 ms, half-sine |
| | Non-operating | 200 G, 2 ms, half-sine |
| Random Vibration | Operating | 0.75 grms |
| | Non-operating | 1.50 grms |
| Altitude (unpressurized) | Operating | -50 to 10,000 ft (-15.24 to 3,048 m) |
| | Non-operating | -50 to 40,000 ft (-15.24 to 12,192 m) |
| Industry Standard Certifications | UL | Yes |
| | CSA | Yes |
| | FCC Compliance | Yes |
| | ENERGY STAR® | Yes* |
| | EPEAT | Silver** |
| | ICES | Yes |
| | Australia / NZ C-Tick Compliance | Yes |
| | CCC | Yes |
| | Japan VCCI Compliance | Yes |
| | MIC / KCC | Yes |
| | BSMI | Yes |
| | CE Marking Compliance | Yes |
| | BNCL or BELUS | Yes |
| | CIT | Yes |
| | GOST | Yes |
| | Saudi Arabian Compliance (ICCP) | Yes |
| SABS | Yes | |
| UKRSERTCOMPUTER | Yes | |



Technical Specifications

* Configurations of the HP Mini 5102 that are ENERGY STAR qualified are identified as HP Mini 5102 ENERGY STAR on HP websites and on www.energystar.gov.

** EPEAT registration varies by country. See www.epeat.net for registration status by country. EPEAT status listed above applies to U.S.

HP 40W Smart AC Adapter

| | |
|--------------------------------------|--|
| Dimensions | 3.66 x 1.57 x 1.14 in (9.3 x 4.0 x 2.9 cm) |
| Weight | 0.44 lb (200 g) |
| Input | 100 to 240 VAC |
| | Minimum Average Efficiency in Active Mode* 85.3% min at 115 and 230 VAC |
| | Input frequency range 47 to 63 Hz |
| | Input AC current 1.1 A at 90 VAC, 0.55 A at 180 VAC |
| Output | Output power 40W |
| | DC output 19.5V |
| | Hold-up time 5 msec at 115 VAC input and maximum load |
| | Output current limit <5.0A, Over voltage protection- 29V max automatic shutdown |
| Connector | 3 pin/grounded, mates with interchangeable cords |
| Environmental Design | Operating temperature 41° to 95° F (5° to 35° C) |
| | Non-operating (storage) temperature -4° to 149° F (-20° to 65° C) |
| | Altitude 0 to 10,000 ft (0 to 3,048 m) |
| | Humidity 20% to 80% |
| | Storage Humidity 10% to 90% |
| EMI and Safety Certifications | CE Mark – full compliance with LVD and EMC directives; Worldwide safety standards – EN60950-1 2nd Edition, UL60950-1, IEC60950-1, Class I, SELV; Agency approvals – UL, CSA, NORDICS, DENAN, EN55022 Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF – over 200,000 hours at 25°C ambient condition. |

* Average Efficiency in Active Mode is the arithmetic average of the calculated efficiency values of the adapter based upon measurements taken when operating at 100%, 75%, 50%, and 25% of rated nameplate output power.

NOTE: Unless otherwise noted, temperature limits listed in the following component specifications relate to the internal temperatures of these components and not to the environment in which the PC is operating.



Technical Specifications

| | | | | |
|-------------------------------------|-------------------------------|--|-------------------------------|--|
| 6-Cell (66 WHr) Lithium-Ion battery | Dimensions (HxWxL) | 1.61 x 1.65 x 8.27 in (4.1 x 4.2 x 21 cm) | | |
| | Weight | 0.77 lb (0.35 kg) | | |
| | Cells/Type | 6-cell Lithium-Ion | | |
| | Energy | Watt-hour Capacity | 66Wh | |
| | Temperature | Operating (Charging) | 32° to 113° F (0° to 45° C) | |
| | | Operating (Discharging) | 14° to 140° F (-10° to 60° C) | |
| | | Non-operating | -4° to 140° F (-20° to 60° C) | |
| Battery Re-Charge Time | System in OFF Mode or Standby | 2.5 hours | | |
| | System ON | 3 to 5 hours (depending on system power consumption) | | |

| | | | | |
|-------------------------------------|-------------------------------|--|-------------------------------|--|
| 4-Cell (29 WHr) Lithium-Ion battery | Dimensions (HxWxL) | 0.6 x 2.1 x 8.1 in (1.4 x 5.2 x 20.6 cm) | | |
| | Weight | 0.44 lb (0.199 kg) | | |
| | Cells/Type | 4-cell Lithium-Ion | | |
| | Energy | Watt-hour Capacity | 29 WHr | |
| | Temperature | Operating (Charging) | 32° to 113° F (0° to 45° C) | |
| | | Operating (Discharging) | 14° to 140° F (-10° to 60° C) | |
| | | Non-operating | -4° to 140° F (-20° to 60° C) | |
| Battery Re-Charge Time | System in OFF Mode or Standby | 2.5 hours | | |
| | System ON | 3 to 5 hours (depending on system power consumption) | | |
| | HP Fast Charge Technology | Charges the battery up to 90% within 90 minutes when system is OFF | | |

Display

| | | | | |
|----------------------------------|--|-----------------------------------|------------------------|--|
| 10.1-inch LED WSVGA (1024 x 600) | Dimensions (W x H) | 8.77 x 4.93 in (22.27 x 12.52 cm) | | |
| | Diagonal Size | 10.06 in (25.55 cm) | | |
| | Surface Treatment | Anti-glare | | |
| | Contrast Ratio | 400:1 (typical) | | |
| | Refresh Rate | 60 Hz | | |
| | Brightness | 200 nit (typical) | | |
| | Pixel Resolution | Pitch | 0.2715(H)/0.2088(V) mm | |
| | | Format | 1024 x 600 | |
| | | Configuration | RGB Vertical Stripe | |
| | Backlight | LED | | |
| | PPI | 117(H)/122(V) | | |
| Viewing Angle | ±30° Horizontal, ±10° Vertical (typical) | | | |



Technical Specifications

| | | | | |
|---------------------------------------|--|-----------------------------------|---------------------|--|
| 10.1-inch 16:9 LED HD (1366 x 768) | Dimensions (W x H) | 8.77 x 4.93 in (22.27 x 12.52 cm) | | |
| | Diagonal Size | 10.06 in (25.55 cm) | | |
| | Surface Treatment | Anti-glare | | |
| | Contrast Ratio | 400:1 (typical) | | |
| | Refresh Rate | 60 Hz | | |
| | Brightness | 200 nit (typical) | | |
| | Pixel Resolution | Pitch | 0.1630 mm | |
| | | Format | 1366 x 768 | |
| | | Configuration | RGB Vertical Stripe | |
| | Backlight | LED | | |
| PPI | 156 | | | |
| Viewing Angle | ±30° Horizontal, ±10° Vertical (typical) | | | |

Internal Storage

| | | | | |
|------------------------------------|---|---|-----------------------------|--|
| 320 GB 7200 rpm SATA Hard Drive | Drive Weight | 0.25 lbs (115 g) | | |
| | Capacity | 320 GB | | |
| | Height | 0.37 in (9.5 mm) or on some models 0.28 in (7 mm) | | |
| | Width | 2.75 in (70 mm) | | |
| | Interface | ATA-8, SATA 2.6, 3.0 Gb/s, NCQ | | |
| | Transfer Rate | Synchronous (maximum) | 100 MB/s (Drive Capability) | |
| | Seek Time (typical reads, including settling) | Single Track | 1.5 ms | |
| | | Average | 11 ms | |
| | | Maximum | 22 ms | |
| | Rotational Speed | 7200 rpm | | |
| | Logical Blocks | 625,142,448 | | |
| | Operating Temperature | 32° to 140° F (0° to 60° C) [case temp] | | |
| Features | ATA Security | | | |



Technical Specifications

| | | | |
|---------------------------------|--|---|-----------------------------|
| 250 GB 7200 rpm SATA Hard Drive | Drive Weight | 0.25 lbs (115g) | |
| | Capacity | 250 GB | |
| | Height | 0.37 in (9.5 mm) or on some models 0.28 in (7 mm) | |
| | Width | 2.75 in (70 mm) | |
| | Interface | ATA-8, SATA 2.6, 3.0 Gb/s, NCQ | |
| | Transfer Rate | Synchronous (maximum) | 100 MB/s (Drive Capability) |
| | Seek Time (typical reads, including settling) | Single Track | 1.5 ms |
| | | Average | 11 ms |
| | | Maximum | 22 ms |
| | Rotational Speed | 7200 rpm | |
| | Logical Blocks | 488,397,168 | |
| Operating Temperature | 32° to 140° F (0° to 60° C) [case temp] | | |
| Features | ATA Security | | |

| | | | |
|---------------------------------|--|--------------------------------|-----------------------------|
| 160 GB 7200 rpm SATA Hard Drive | Drive Weight | 0.25 lb (115 g) | |
| | Capacity | 160 GB | |
| | Height | 0.37 in (9.5 mm) | |
| | Width | 2.75 in (70 mm) | |
| | Interface | ATA-8, SATA 2.6, 3.0 Gb/s, NCQ | |
| | Transfer Rate | Synchronous (maximum) | 100 MB/s (Drive Capability) |
| | Seek Time (typical reads, including settling) | Single Track | 1.5 ms |
| | | Average | 11 ms |
| | | Maximum | 22 ms |
| | Rotational Speed | 7200 rpm | |
| | Logical Blocks | 312,581,808 | |
| Operating Temperature | 32° to 140° F (0° to 60° C) [case temp] | | |
| Features | ATA Security | | |

| | | | | |
|---------------------------------------|---------------------------------------|--------------------------------|----------|---------------------------------|
| 80 GB 2.5-inch SATA Solid State Drive | Weight | 0.19 lbs (86 g) | | |
| | Capacity | 80 GB | | |
| | Height | 0.37 in (9.5 mm) | | |
| | Width | 2.75 in (70 mm) | | |
| | Interface | SATA | | |
| | Performance | Maximum Sequential Read | 250 MB/s | Maximum Sequential Write |
| | | | | 70 MB/s |
| | Logical Blocks | 156,301,488 | | |
| Operating Temperature | 32° to 158°F (0° to 70°C) [case temp] | | | |
| Features | ATA Security; ATA-7 ;SATA 2.6; DIPM | | | |



Technical Specifications

Audio

| | | |
|-----------------|--------------------------------------|-----------------------------------|
| Hardware | Implementation | IDT 92HD75B High Definition audio |
| | Function Key Volume Controls | Volume up, volume down, and mute |
| | Full Duplex | Yes |
| | Microphone In | Stereo |
| | Headphone/Line Out | Stereo |
| | Integrated Stereo Microphones | Yes |

| | | |
|-----------------------------|-------------------------------------|------------------|
| Audio Output Quality | Frequency Response | 20 Hz - 20 kHz |
| | Signal to Noise Ratio | >85 dB |
| | Total Harmonic Distortion | 0.01% |
| | Noise Floor | -110 dB |
| | Play/Record Sampling Rate(s) | 8 kHz - 48kHz |
| | DAC | 16, 20 or 24-bit |
| | ADC | 16 or 20-bit |

| | | |
|--------------------------|---------------------|-----------|
| Internal Speakers | Power Rating | 2.0 Watts |
| | Impedance | 4 Ohms |

Communications

| | | |
|---|-----------------------------|--|
| Integrated Marvell 10/100/1000 NIC | Ethernet Features | 10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mbit/s operation (1000BASE-T; IEEE 802.3z and 802.3ab; IEEE 802.3 clauses 34-42) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s IEEE 802.1p QoS (Quality of Service) Support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) |
| | Power Management | ACPI compliant - multiple power modes Situation-sensitive features reduce power consumption |
| | Performance Features | TCP/IP/UDP Checksum Offload (configurable) |



Technical Specifications

| | |
|-------------------------------|--|
| Manageability | Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite |
| Interface | PCI Express x1 |
| NIC Device Driver Name | Marvell 8059 PCI-E Gigabit Ethernet Controller |

HP un2420 EV-DO/HSPA Mobile Broadband Module

| | |
|--|--|
| Technology/Operating Bands | GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS), 1900MHz (PCS) UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900MHz (UTRA FDD Band II), 900MHz (UTRA FDD Band VIII), 850MHz (UTRA FDD Band V) 1xEVDO/1xRTT with receive diversity: 850MHz (Band Class0-Cell), 1900MHz (Band Class1-PCS) |
| Wireless Protocol Standards | GSM/GPRS/EDGE: Class B, Multi-slot operation, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 6 CDMA: 1xEVDO Release 0 and Release A, IS-95A, IS-95B, IS-2000 |
| Wireless Parametric Standards | Meets or exceeds TIA/EIA IS-98-D |
| Maximum Data Rates | UMTS (HSPA) - 7.2 Mbps (Download), 2.0 Mbps (Upload) CDMA (EVDO Release A) - 3.1 Mbps (Download), 1.8 Mbps (Upload) |
| GPS | Standalone GPS enabled |
| GPS Bands | L1 - 1575.42 MHz |
| Maximum Output Power | GSM/GPRS/EDGE: 32dBm (+/-1) WCDMA: 24dBm (+/-1) CDMA: 24dBm (+/-1) |
| Maximum Power Consumption | 2500mA (peak); 1000mA (average) |
| Power Consumption, Sleep Mode | 5 mA |
| Power Management | USB selective suspend Integrated notebook wireless button |
| Antenna Type | Dual high efficiency 5 band antennae with spatial diversity, mounted in the display enclosure |
| Form Factor | PCI-Express MiniCard, USB 2.0 interface |
| Weight | 11.5 g |
| Dimensions (Length x Width x Thickness) | 2.01 x 1.18 x 0.18 in (51 x 30 x 5 mm) |
| Voltage, Operating | 3.3v +/- 10% |
| Temperature, Operating (from TIA/EIA/IS-98-D) | -22° to 140° F (-30° to 60° C) (full RF performance) -22° to 167° F (-30° to 75° C) (reduced RF performance) |



Technical Specifications

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| Temperature, Non-operating, 96 hours (from MIL-STD 202 Method 108) | -40° to 185° F (-40° to 85° C) |
| Humidity, Non-operating | 85% relative humidity for 48 hours @ 185° F (85° C) (non-condensing) |
| Configuration Utilities | HP Connection Manager |
| LED Activity | LED Off - Radio Off; Solid LED On - Radio On |

| | | |
|--|--|---|
| Broadcom 43224AGN 802.11a/b/g/n WiFi Adapter | Wireless LAN Standards | IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n* |
| | Interoperability | Wi-Fi certified (802.11abg only) Cisco Compatible Extensions Program compliant (802.11abg only) with Microsoft Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN) |
| | Frequency Band | 2.4 GHz and 5 GHz |
| | Data Rates | 802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6, 6.5, 9, 12, 13, 13.5, 18, 19.5, 24, 26, 27, 36, 39, 40.5, 48, 52, 54, 58.5, 65, 78, 81, 104, 108, 117, 121.5, 130, 135, 162, 216, 243, 270, 300 Mbps |
| | Frequency Support | 20 MHz: 2.4 GHz and 5 GHz bands 40 MHz: 2.4 GHz and 5 GHz bands |
| | Modulation | Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM |
| | Security¹ | Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST. Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only. |
| | Sub-channels | Multinational support with frequency bands and channels compliant to local regulations. |
| | Media Access Protocol | CSMA/CA (Collision Avoidance) with ACK |
| | Network Architecture Models | Ad-hoc (Peer to Peer) Infrastructure (Access Point Required) |
| | Roaming | IEEE 802.11 compliant roaming between access points |
| | Output Power (for CCK) ² | 17 dBm , nominal |
| | Output Power (for OFDM; power varies by data rate) ² | 15 dBm , nominal |



Technical Specifications

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| Power Consumption | Idle associated: 250 mW Idle unassociated: 150 mW Transmit/Receive 20 MHz channel: 2.0 W (max) Transmit/Receive 40 MHz channel: 2.0 W (max) |
| Power Management | ACPI compliant power management 802.11 compliant power saving mode |
| Receiver Sensitivity³ | 270 Mbps: -61dBm, , 54 Mbps: -72 dBm, 11 Mbps: -85 dBm , 1 Mbps: -92 dBm |
| Antenna type | High efficiency dual band antenna with spatial diversity, mounted in the display enclosure |
| Form Factor | PCI-Express Half-MiniCard |
| Weight | 0.013 lb (6 g) |
| Dimensions | 0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm) |
| Operating Voltage | 3.3v +/- 10% |
| Temperature | Operating 14° to 149° F (-10° to 65° C) Non-operating -40° to 176° F (-40° to 80° C) |
| Humidity | Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing) |
| Altitude | Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m) |
| LED Activity | LED Off - Radio OFF; Solid LED On - Radio ON |

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

**Broadcom 4313GN
802.11b/g/n
WiFi Adapter**

| | |
|-------------------------------|---|
| Wireless LAN Standards | IEEE 802.11b IEEE 802.11g IEEE 802.11n |
| Interoperability | Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Win7, Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN) |
| Frequency Band | 2.4 GHz |
| Data Rates | 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6.5, 7.2, 13, 14.4, 19.5, 21.7, 26, 28.9, 39, 43.3, 52, 57.8, 58.5, 65, 72.2Mbps |
| Frequency Support | 20 MHz: 2.4 GHz bands |
| Modulation | Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM |
| Security¹ | Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP- |



Technical Specifications

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| | MSCHAPv2, LEAP, EAP-FAST. |
| | Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only. |
| Sub-channels | Multinational support with frequency bands and channels compliant to local regulations. |
| Media Access Protocol | CSMA/CA (Collision Avoidance) with ACK |
| Network Architecture | Ad-hoc (Peer to Peer) |
| Models | Infrastructure (Access Point Required) |
| Roaming | IEEE 802.11 compliant roaming between access points |
| Output Power (for CCK)² | 17 dBm , nominal |
| Output Power (for OFDM; 15 dBm , nominal power varies by data rate)² | |
| Power Consumption | Idle associated: 250 mW avg (CLKREQ enabled) Idle unassociated: 425 mW avg Transmit/Receive 20 MHz channel: 5.5 W (max) |
| Power Management | ACPI compliant power management 802.11 compliant power saving mode |
| Receiver Sensitivity³ | 72.2 Mbps: -71 dBm |
| Antenna type | High efficiency dual band antenna with spatial diversity, usually mounted in the display enclosure |
| Form Factor | PCI-Express Half-MiniCard |
| Weight | 0.013 lb (6 g) |
| Dimensions | 0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm) |
| Operating Voltage | 3.3v +/- 10% |
| Temperature | Operating 14° to 149° F (-10° to 65° C) Non-operating -40° to 176° F (-40° to 80° C) |
| Humidity | Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing) |
| Altitude | Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m) |
| LED Activity | LED Off - Radio OFF; Solid LED On - Radio ON |

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista and Win7.

| | | |
|--------------------------|------------------------|--------------|
| Broadcom 4313GN | Wireless LAN Standards | IEEE 802.11b |
| 802.11b/g/n 1x1 WiFi | | IEEE 802.11g |
| and Bluetooth 3.0 + High | | IEEE 802.11n |



Technical Specifications

| | | |
|---------------------------------|---|---|
| Speed (HS) Combo Adapter | Interoperability | Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN) |
| | Frequency Band | 2.4 GHz |
| | Data Rates | 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 72.2 Mbps |
| | Modulation | Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, 64 QAM |
| | Security¹ | Supports 64- and 128-bit WEP, TKIP, WPA, WPA2, WAPI, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST. Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only. |
| | Sub-channels | Multinational support with frequency bands and channels compliant to local regulations. |
| | Media Access Protocol | CSMA/CA (Collision Avoidance) with ACK |
| | Network Architecture Models | Ad-hoc (Peer to Peer) Infrastructure (Access Point Required) |
| | Roaming | IEEE 802.11 compliant roaming between access points |
| | Output Power (for CCK)² | 20.5 dBm, nominal |
| | Output Power (for OFDM; power varies by data rate)² | 15.5 dBm, nominal |
| | Power Consumption | Idle associated: 175 mW Idle unassociated: 53 mW Transmit: 1.462 W (max) Receive: 1.056 W (max) |
| | Power Management | ACPI compliant power management 802.11 compliant power saving mode |
| | Receiver Sensitivity³ | 54 Mbps: -76 dBm, 11 Mbps: -90 dBm , 1 Mbps: -98 dBm |
| | Antenna type | High efficiency single band antenna with spatial diversity, mounted in the display enclosure |
| | Form Factor | PCI-Express Half-MiniCard |
| | Weight | 0.013 lb (6 g) |
| | Dimensions | 0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm) |
| | Operating Voltage | 3.3v +/- 10% |
| | Temperature | Operating 14° to 149° F (-10° to 65° C) Non-operating -40° to 176° F (-40° to 80° C) |
| | Humidity | Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing) |
| | Altitude | Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m) |
| | LED Activity | LED Off – Radio OFF; Solid LED On – Radio ON |



Technical Specifications

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

Bluetooth 3.0 + High Speed (HS) Wireless Technology

| | |
|-------------------------------------|--|
| Bluetooth Specification | 2.1 Compliant 3.0 + High Speed (HS) |
| Dimensions | 1.18 x 0.26 x 0.13 in (30 x 6.5 x 3.25 mm) |
| Frequency Band | 2402 to 2480 MHz |
| Number of Available Channels | 79 (1 MHz) available channels |
| Data Rates and Throughput | BT 2.1 + EDR 3 Mbps data rate; throughput up to 2.17 Mbps |
| Transmit Power | BT 3.0 + HS 24Mbps data rate; throughput up to 12~15Mbps -6 dBm to 4 dBm (Bluetooth Class II) |
| Receiver Sensitivity | Better than -80 dBm at 0.1 % raw bit error rate |
| Power Consumption | Peak (Tx) 214.5 mW Peak (Rx) 105.6 mW Sleep 1.452 mW |
| Antenna | Internally integrated within module |
| Range | Up 33 ft (10 m) |
| Electrical Interface | USB 2.0 compliant Microsoft Windows Plug and Play compliant |
| Bluetooth Software Supported | Broadcom Bluetooth for Microsoft Windows Bluetooth Software |
| Link Topology | Point to Point, Multipoint Pico Nets up to 7 slaves |
| Security | Full support of Bluetooth Security Provisions |
| Power Management | Microsoft Windows ACPI, and USB Bus Support Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff |
| Certifications | All necessary regulatory approvals for supported countries, including: FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark |
| Temperature | Operating -4° to 158° F (-20° to 70° C) Non-operating -40° to 176° F (-40° to 80° C) |
| Humidity | Operating 10% to 90% Non-operating 5% to 95% |
| Altitude | Operating 15,000 ft (4,572 m) Non-operating 40,000 ft (12,192 m) |
| Bluetooth Profiles | Serial Port Profile (SPP) ¹ |



Technical Specifications

| | |
|------------------|---|
| Supported | Service Discovery Application Profile (SDAP) Dial-Up Networking (DUN) ^{1,2} Generic Object Exchange Profile (GOEP) ^{1,2} Object Push Profile (OPP) ^{1,2} File Transfer Profile (FTP) Synchronization Profile (SYNC) Hard Copy Cable Replacement (HCRP) ^{1,2} Personal Area Networking Profile (PAN) ^{1,2} Human Interface Device Profile (HID) ^{1,2} FAX Profile (FAX) Basic Imaging Profile (BIP) ² Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP) ³ |
|------------------|---|

¹ indicates the profile is supported by Microsoft Windows XP SP2

² indicates the profile is part of Windows Vista

| | | |
|--|--|---|
| HP Integrated Module with Bluetooth 2.1 Wireless Technology | Bluetooth Specification | 2.1 Compliant |
| | Dimensions | 1.18 x 0.26 x 0.13 in (30 x 6.5 x 3.25 mm) |
| | Frequency Band | 2402 to 2480 MHz |
| | Number of Available Channels | 79 (1 MHz) available channels |
| | Data Rates and Throughput | 3 Mbps data rate; throughput up to 2.17 Mbps Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric |
| | Transmit Power | -6 dBm to 4 dBm (Bluetooth Class II) |
| | Receiver Sensitivity | Better than -80 dBm at 0.1 % raw bit error rate |
| | Power Consumption | Peak (Tx) 264 mW Peak (Rx) 231 mW Sleep <1 mW |
| | Antenna | Internally integrated within module |
| | Range | Up 33 ft (10 m) |
| | Electrical Interface | USB 2.0 compliant Microsoft Windows Plug and Play compliant |
| | Bluetooth Software Supported | Broadcom Bluetooth for Microsoft Windows Bluetooth Software |
| | Link Topology | Point to Point, Multipoint Pico Nets up to 7 slaves |
| | Security | Full support of Bluetooth Security Provisions |
| Power Management | Microsoft Windows ACPI, and USB Bus Support Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff | |



Technical Specifications

| | | |
|-------------------------------------|---|--------------------------------|
| Certifications | All necessary regulatory approvals for supported countries, including: FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark | |
| Temperature | Operating | -4° to 158° F (-20° to 70° C) |
| | Non-operating | -40° to 176° F (-40° to 80° C) |
| Humidity | Operating | 10% to 90% |
| | Non-operating | 5% to 95% |
| Altitude | Operating | 15,000 ft (4,572 m) |
| | Non-operating | 40,000 ft (12,192 m) |
| Bluetooth Profiles Supported | Serial Port Profile (SPP) ¹ Service Discovery Application Profile (SDAP) Dial-Up Networking (DUN) ^{1,2,3} Generic Object Exchange Profile (GOEP) ^{1,2,3} Object Push Profile (OPP) ^{1,2,3} File Transfer Profile (FTP) Synchronization Profile (SYNC) Hard Copy Cable Replacement (HCRP) ^{1,2,3} Personal Area Networking Profile (PAN) ^{1,2,3} Human Interface Device Profile (HID) ^{1,2,3} FAX Profile (FAX) Basic Imaging Profile (BIP) ^{2,3} Headset Profile (HSP) ³ Hands Free Profile (HFP) ³ Advanced Audio Distribution Profile (A2DP) ³ | |

¹ indicates the profile is supported by Microsoft Windows XP SP2

² indicates the profile is part of Windows Vista

³ indicates the profile is part of Windows 7



Technical Specifications

Environmental Data

Eco-Label Certifications

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:

- US Energy Star
- I T ECO declaration
- EPEAT - Silver where HP registers commercial notebook products. See <http://www.epeat.net> for registration status in your country.

System Configuration

The configuration used for the Energy Consumption and Declared Noise Emissions data for the Convertible Mini tower Desktop model is based on a "Typically Configured Notebook"

Energy Consumption

| | 115 VAC | 230 VAC | 100 VAC |
|------------------------------------|---------|---------|---------|
| Normal Operation | 9.25 W | 9.34 W | 9.20 W |
| Sleep (Energy Star low power mode) | 1.08 W | 1.00 W | 1.13 W |
| Off | 0.56 W | 0.53 W | 0.60 W |

Heat Dissipation*

| | 115 VAC | 230 VAC | 100 VAC |
|------------------|-----------|-----------|-----------|
| Normal Operation | 32 BTU/hr | 32 BTU/hr | 31 BTU/hr |
| Sleep | 4 BTU/hr | 3 BTU/hr | 4 BTU/hr |
| Off | 2 BTU/hr | 2 BTU/hr | 2 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 | 3.3 | 27.5 |
| Fixed Disk (random writes) | 3.3 | 27.5 |

System fan is usually off except when charging the battery

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

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

The battery type and chemistry used in the product is:
CR2032 (coin cell), Li-ion
6-cell high capacity Lithium-Ion battery (optional 8 cell available)

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.



Technical Specifications

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

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 greater than 96.4% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
 - Corrugated 470 g
 - CANON bags - several layers 5 g
- Internal:
 - Polyethylene 15 g
 - Molded Pulp 105 g
- The Corrugated packaging material is made from 80% recycled content.
- The CANON bags - several layers packaging material is made from 80% recycled content.
- The Polyethylene packaging material is made from 80% recycled content.
- The Molded Pulp packaging material is made from 80% recycled content.

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.

Material Usage

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

http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html):



Technical Specifications

- 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
- 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)

End-of-life Management and Recycling

Nickel finishes that release greater than 0.5 μ grams/cm²/week, measured according to EN 1811:1998, are not used on any product surface designed to be frequently handled or touched by users.

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.

Hewlett-Packard Corporate Environmental Information

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.

For more information about HP's commitment to the environment: Global Citizenship Report
<http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html>
Environment website
<http://www.hp.com/environment>
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>



Technical Specifications

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