



# HP LaserJet Managed E50145 series

Handle business solutions securely, plus help conserve energy with HP EcoSmart toner

Choose an HP LaserJet Enterprise printer designed to handle business solutions securely and efficiently, and helps conserve energy with HP EcoSmart black toner. Keep up with the demands of growing business with a printer you can rely on.<sup>8</sup>

This printer is intended to work only with cartridges that have a new or reused HP chip, and it uses dynamic security measures to block cartridges using a non-HP chip. Periodic firmware updates will maintain the effectiveness of these measures and block cartridges that previously worked. A reused HP chip enables the use of reused, remanufactured, and refilled cartridges. More at: <http://www.hp.com/learn/ds>



HP LaserJet Managed E50145dn

## The world's most secure printing<sup>1</sup>

- Each printer in your fleet checks its operating code and repairs itself from attacks.
- Your printer's outgoing network connections are inspected to stop suspicious requests and thwart malware.
- Memory activity is monitored to continually detect and stop attacks.
- Firmware is automatically checked during startup to determine if it's authentic code—digitally signed by HP.

## Low costs, low energy use

- Stay productive with reliable cartridges, and help save energy while printing with HP EcoSmart black toner.<sup>8</sup>
- Spend less time replacing toner, and more on business. Choose optional high-yield toner cartridges.<sup>2</sup>
- Enhanced energy savings—up to 29% over prior products, plus save with Auto-on/Auto-off technology.<sup>3</sup>
- This printer fits in tight places to boost performance in almost any workspace.

## Your whole fleet. At your control.

- Centralize control of your printing environment with HP Web Jetadmin<sup>5</sup>—and help build business efficiency.
- Gain insights into print costs, behaviors, utilization to drive efficiencies with this cloud-based printer.
- Set security configuration policies and automatically validate settings for every HP printer in your fleet.<sup>4</sup>

## Enhanced productivity keeps business moving

- Submit print jobs on the go and securely release them at any HP Roam-enabled office printer, securely.<sup>7</sup>
- Easily print from a variety of smartphones and tablets—generally no setup or apps required.<sup>6</sup>
- Don't wait for documents. Print your first page in as little as 5.9 seconds from energy-efficient sleep mode.

<sup>1</sup> Based on HP review of 2018 published security features of competitive in-class printers. Only HP offers a combination of security features that can monitor to detect and automatically stop an attack then self-validate software integrity in a reboot. For a list of printers, visit <http://www.hp.com/go/PrintersThatProtect>. For more information: <http://www.hp.com/go/printersecurityclaims>

<sup>2</sup> High Yield Black Original LaserJet Toner Cartridges not included; please purchase separately

<sup>3</sup> HP Auto-On/Auto-Off Technology capabilities are subject to printer and settings.

<sup>4</sup> HP Web Jetadmin is available for download at no additional charge at <http://www.hp.com/go/webjetadmin>

<sup>5</sup> HP JetAdvantage Security Manager must be purchased separately. To learn more, please visit <http://www.hp.com/go/securitymanager>

<sup>6</sup> Wireless operations are compatible with 2.4 GHz operations only. App or software and HP ePrint account registration may also be required. Some features require purchase of an optional accessory. Learn more at <http://www.hp.com/go/mobileprinting>

<sup>7</sup> To enable HP Roam, some devices may require firmware to be upgraded and an optional accessory to add Bluetooth® Low Energy (BLE) beaconing capabilities. Subscription may be required. For more information, visit [hp.com/go/roam](http://hp.com/go/roam)

<sup>8</sup> Based on HP testing using the ENERGY STAR® program's Typical Electricity Consumption (TEC) method or as reported in energystar.gov as of May 2019. Actual results may vary. HP testing is based on using the default Sleep Timer setting for all products and using the Network port. Default Sleep Timer setting is 0 minutes. Increasing the Sleep Timer setting longer than the default value can increase TEC.

## Product walkaround

1. 2nd generation Hardware Integration Pocket<sup>1</sup>
2. Easy-access USB port<sup>2</sup>
3. Top cover release button
4. 100-sheet multipurpose tray 1 supports media sizes up to 8.5 x 14 inches (216 x 356 mm)
5. 4.3-inch (10.9 cm) color touchscreen
6. 250-sheet output bin
7. Top cover (access to JetIntelligence toner cartridge)
8. Automatic two-sided printing
9. 550-sheet input tray 2 supports media sizes up to 8.5 x 14 inches (216 x 356 mm)
10. Slot for cable-type security lock
11. Gigabit Ethernet, Host USB port
12. Hi-Speed USB 2.0 printing port
13. USB port for connecting external USB devices



## Series at a glance



Model	HP LaserJet Managed E50145dn
Product number	1PU51A
Print speed (black) <sup>3</sup>	Up to 45/43 pages per minute (ppm) (letter/A4)
First page out (from ready) <sup>4</sup>	As fast as 5.9/5.9 seconds (letter/A4)
Automatic two-sided printing	√
100-sheet multipurpose tray 1, 550-sheet input tray 2	√
Optional 550-sheet paper tray	Add up to three
Optional printer cabinet	Add up to one
Input capacity (standard/maximum <sup>5</sup> )	Up to 650/2,300 sheets
Recommended monthly page volume <sup>6</sup>	2,000 to 15,000 pages
Managed Cartridge yield	Black: ~23,000 pages
Optional wireless direct printing/NFC touch-to-print <sup>9</sup>	√

<sup>1</sup> Solutions deployed through the Hardware Integration Pocket (HIP) may require additional purchase. The HP LaserJet Managed E50145dn printer comes with a second-generation HIP.

<sup>2</sup> An administrator must enable the easy-access USB port before use.

<sup>3</sup> Measured using ISO/IEC 24734, excludes first set of test documents. For more information, see [hp.com/go/printerclaims](http://hp.com/go/printerclaims). Exact speed varies depending on the system configuration, software application, driver, and document complexity.

<sup>4</sup> Measured using ISO/IEC 17629. For more information, see [hp.com/go/printerclaims](http://hp.com/go/printerclaims). Exact speed varies depending on the system configuration, software application, driver, and document complexity.

<sup>5</sup> Purchase of optional paper trays required to reach maximum input capacity.

<sup>6</sup> Recommended Monthly Page Volume: HP recommends that the number of printed pages per month be within the stated range for optimum device performance, based on factors including supplies replacement intervals and device life over an extended warranty period.

<sup>7</sup> Average black declared yields based on ISO/IEC 19752 and continuous printing. Actual yields vary considerably based on images printed and other factors. For details see [hp.com/go/learnaboutsupplies](http://hp.com/go/learnaboutsupplies). HP Managed Cartridges are not included in printer purchase; purchase separately.

<sup>8</sup> Wireless networking requires purchase of the HP Jetdirect 2900nw Print Server. Wireless performance is dependent on physical environment and distance from access point and may be limited during active VPN connections.

<sup>9</sup> Touch-to-print capability requires purchase of the optional HP Jetdirect 3100w BLE/NFC/Wireless Accessory. Mobile device must support Near Field Communication (NFC)-enabled printing. For more information, see [hp.com/go/businessmobileprinting](http://hp.com/go/businessmobileprinting).

## HP Services

Downtime can have serious consequences, so HP provides support beyond the standard warranty. You benefit from reduced risk, maximized uptime, predictable service delivery and no unbudgeted repair costs. HP Care Pack Services provide a comprehensive suite of protection services designed to keep HP hardware and software up and running so employees can stay productive.

For carepack availability visit: [hp.com/go/cpc](http://hp.com/go/cpc)

## Top features

HP printers have the industry's strongest security<sup>1</sup> because they're always on guard, continually detecting and stopping threats while adapting to new ones. And only HP printers automatically self-heal from attacks, so IT doesn't need to intervene.

Good resource management is good business. Help reduce costs and energy use with an HP LaserJet designed to be more efficient than its predecessors, using HP JetIntelligence toner cartridges. HP, like you, is committed to keeping business moving.

Every business values a problem solver. Help get more control with a robust management system and solutions that keep up with modern business.

Easy-to-use features, fast print speeds, and simple mobile printing options help you keep up with the speed of business.

### Accessories

<b>2MU47A</b>	HP Accessibility Assistant
<b>2NR12A</b>	HP Removable Hard Drive Enclosure
<b>3JN69A</b>	HP Jetdirect 3100w BLE/NFC/Wireless Accessory
<b>4QL32A</b>	HP Legic Secure USB Reader
<b>5EL03A</b>	HP TAA Version Secure Hard Disk Drive
<b>B5L28A</b>	HP Internal USB Ports
<b>B5L29A</b>	HP High-Performance Secure Hard Disk
<b>F2A72A</b>	HP LaserJet 550-sheet Paper Tray
<b>F2A73A</b>	HP LaserJet Printer Cabinet
<b>G6W84A</b>	HP 1 GB 90-pin DDR3 DIMM
<b>J8030A</b>	HP Jetdirect 3000w NFC/Wireless Accessory
<b>X3D03A</b>	HP Universal USB Proximity Card Reader
<b>Y7C05A</b>	HP HIP2 Keystroke Reader

### Services

<b>UB7E7E</b>	- HP 3 years Next Business Day w/DMR LaserJet Enterprise E50145 MNGD SVC
<b>UB7E8E</b>	- HP 4 years Next Business Day w/DMR LaserJet Enterprise E50145 MNGD SVC
<b>UB7E9E</b>	- HP 5y Next Business Day w/DMR LaserJet Enterprise E50145 MNGD SVC
<b>UB7F0E</b>	- HP3 years 4 hours 9x5 w/DMR LaserJet Enterprise E50145 MNGD SVC
<b>UB7F1E</b>	- HP 4 years 4 hours 9x5 w/DMR LaserJet Enterprise E50145 MNGD SVC
<b>UB7F2E</b>	- HP 5 years 4 hours 9x5 w/DMR LaserJet Enterprise E50145 MNGD SVC
<b>UB7F3E</b>	- HP3 years Chnl Parts Only LaserJet Enterprise E50145 MNGD SVC
<b>UB7F4E</b>	- HP 4 years Chnl Parts Only LaserJet Enterprise E50145 MNGD SVC
<b>UB7F5E</b>	- HP 5 years Chnl Parts Only LaserJet Enterprise E50145 MNGD SVC



<sup>1</sup> Based on HP review of 2018 published security features of competitive in-class printers. Only HP offers a combination of security features that can monitor to detect and automatically stop an attack then self-validate software integrity in a reboot. For a list of printers, visit <http://www.hp.com/go/PrintersThatProtect>. For more information: <http://www.hp.com/go/printersecurityclaims>

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<sup>7</sup> To enable HP Roam, some devices may require firmware to be upgraded and an optional accessory to add Bluetooth® Low Energy (BLE) beaconing capabilities. Subscription may be required. For more information, visit [hp.com/go/roam](http://hp.com/go/roam)

<sup>8</sup> Based on HP testing using the ENERGY STAR® program's Typical Electricity Consumption (TEC) method or as reported in [energystar.gov](http://energystar.gov) as of May 2019. Actual results may vary. HP testing is based on using the default Sleep Timer setting for all products and using the Network port. Default Sleep Timer setting is 0 minutes. Increasing the Sleep Timer setting longer than the default value can increase TEC.

# HP LaserJet Managed E50145 series

<b>Model</b>	HP LaserJet Managed E50145dn
<b>Product number</b>	1PU51A
<b>Print</b>	
<b>Print speed<sup>9,9</sup></b>	<b>First page out Letter:</b> As fast as 5.9 sec Black; <b>First page out A4:</b> As fast as 5.9 sec Black; <b>Letter:</b> Up to 45 ppm (default) ; Up to 52 ppm (HP High Speed) Black; <b>A4:</b> Up to 43 ppm (default) ; Up to 50 ppm (HP High Speed) Black; <b>Print speed (Landscape, A5):</b> Up to 65 ppm Black
<b>Print resolution</b>	<b>Black (best)</b> Up to 1200 x 1200 dpi; <b>Black (normal)</b> Up to 600 x 600 dpi; <b>Black (fine lines)</b> Up to 1200 x 1200 dpi
<b>Print technology</b>	Laser; <b>Print resolution technology:</b> 300 dpi, 600 dpi, HP FastRes 1200, HP ProRes 1200
<b>Print cartridges number</b>	1 (black)
<b>Standard print languages</b>	HP PCL 6, HP postscript level 3 emulation, native PDF printing (v 1.7), Apple AirPrint™
<b>Printer smart software features</b>	Print preview, duplex printing, print multiple pages per sheet (2, 4, 6, 9, 16), collation, watermarks, store print jobs, easy-access USB
<b>Printer management / HP SureSupply</b>	HP Printer Assistant; HP Device Toolbox; HP Web JetAdmin Software; HP JetAdvantage Security Manager; HP SNMP Proxy Agent; HP WS Pro Proxy Agent; Printer Administrator Resource Kit for HP Universal Print Driver (Driver Configuration Utility - Driver Deployment Utility - Managed Printing Administrator) No
<b>Connectivity</b>	
<b>Standard connectivity</b>	2 Hi-Speed USB 2.0 Host; 1 Hi-Speed USB 2.0 Device; 1 Gigabit Ethernet 10/100/1000T network
<b>Network capabilities</b>	HP Jetdirect 2900nw Print Server J8031A, HP Jetdirect 3000w NFC/Wireless Accessory J8030A, HP Jetdirect 3100w BLE/NFC/Wireless
<b>Wireless capability</b>	Optional, enabled with purchase of a wireless hardware accessory. Single band Wireless Station and Wi-Fi Direct functionality available with HP Jetdirect 3000w NFC/Wireless Accessory J8030A, Dual band Wireless Station and Wi-Fi Direct functionality available with HP Jetdirect 3100w BLE/NFC/Wireless Accessory 3JN69A, Dual band Wireless Station functionality available with HP Jetdirect 2900nw Print Server J8031A
<b>Mobile printing capability<sup>4</sup></b>	Apple AirPrint™; Google Cloud Print™; HP ePrint; Mopria™ Certified; ROAM capable for easy printing
<b>Memory</b>	<b>Standard:</b> 512 MB; <b>Maximum:</b> 1.5 GB, MAX memory, when 1 GB Accessory DIMM is installed
<b>Processor speed</b>	1.2 GHz / <b>Storage:</b> 8 GB eMMC / <b>Hard disk:</b> Optional, 500 GB minimum encrypted hard disk drive
<b>Duty cycle (monthly)<sup>5</sup></b>	<b>Letter:</b> Up to 150,000 pages; <b>A4:</b> Up to 150,000 pages; <b>Recommended monthly page volume<sup>6</sup>:</b> 2000 to 15,000
<b>Paper handling</b>	
<b>Input</b>	100-sheet multipurpose Tray 1, 550-sheet input Tray 2, automatic duplex printing; Up to 650 sheets Standard
<b>Output</b>	<b>Standard:</b> 250-sheet output bin; Up to 250 sheets Standard; <b>Transparencies:</b> Up to 75 sheets
<b>Duplex Options</b>	Automatic (standard)
<b>Envelope feeder</b>	No
<b>Standard paper trays</b>	2
<b>Media types</b>	Paper (bond, color, letterhead, plain, preprinted, prepunched, recycled, rough); envelopes; labels; cardstock; transparencies; user-defined
<b>Media weight</b>	Tray 1: 16 to 53 lb; tray 2+: 16 to 32 lb
<b>Media sizes</b>	Tray 1: letter, legal, executive, statement; 3 x 5 in, 4 x 6 in, 5 x 7 in, 5 x 8 in, 8.5 x 13 in, envelopes (No. 9, No. 10, Monarch); Tray 2: letter, legal, executive, statement, 5 x 7 in, 5 x 8 in, 8.5 x 13 in; Optional 550-sheet tray: letter, legal, executive, statement, 5 x 7 in, 5 x 8 in, 8.5 x 13 in; Optional Automatic Duplexer: letter, legal, 8.5 x 13 in
<b>Media Sizes Custom</b>	Tray 1: 3 x 5 to 8.5 x 14 in; Tray 2: 4.14 x 5.83 to 8.5 x 14 in; Optional 550-sheet Tray: 4.14 x 5.83 to 8.5 x 14 in
<b>Dimensions (w x d x h)</b>	16.46 x 14.80 x 12.83 in; 418 x 376 x 326 mm; <b>Maximum:</b> 16.46 x 25.16 x 12.83 in; 418 x 639 x 326 mm
<b>Weight<sup>2</sup></b>	25.5 lb; 11.48 kg
<b>What's in the box<sup>1</sup></b>	HP LaserJet Managed E50145dn Printer; Regulatory flyer; Unpack flyer; Installation Guide; Power cord; Warranty Cards; Support flyers/ phone number list
<b>Replacement cartridges</b>	HP Black Managed LaserJet Toner Cartridge (~23,000 pages) W9008MC
<b>Warranty features</b>	One-year, next-business day, onsite warranty. Warranty and support options vary by product, country and local legal requirements. Contact your Contractual Vendor or go to hp.com/support to learn about HP award winning service and support options in your region. (wty code 4G; wty ID A001)
<b>Energy star certified</b>	Yes
<b>Energy efficiency compliance<sup>10</sup></b>	Blue Angel; EPEAT® Silver; CECP; ENERGY STAR® qualified
<b>Control panel</b>	4.3-in (10.92 cm) Color Graphics Display (CGD) with touchscreen; rotating (adjustable angle) display; Home button
<b>Display</b>	4.3-in (10.92 cm) Color Graphics Display (CGD) with touchscreen; rotating (adjustable angle)
<b>Software included</b>	No software solutions are included in the Box, only on <a href="http://hp.com">http://hp.com</a> , <a href="http://123.hp.com">http://123.hp.com</a>
<b>Fonts and typefaces</b>	105 internal TrueType fonts scalable in HP PCL, 92 internal scalable fonts in HP Postscript Level 3 emulation (Euro symbol built-in); 1 internal Unicode Fonts (Andale Mono World Type); 2 Internal Windows Vista 8 Fonts (Calibri, Cambria); additional font solutions available via third-party flash memory cards; HP LaserJet Fonts and IPDS Emulation available at <a href="http://www.hp.com/go/laserjetfonts">http://www.hp.com/go/laserjetfonts</a>
<b>Compatible operating systems</b>	Windows Client OS (32/64 bit), Win10, Win8.1, Win 8 Basic, Win8 Pro, Win8 Enterprise, Win8 Enterprise N, Win7 Starter Edition SP1, UPD Win7 Ultimate, Mobile OS, iOS, Android, Mac, Apple® macOS Sierra v10.12, Apple® macOS High Sierra v10.13, Apple® macOS Mojave v10.14, Discrete PCL6 Printer Driver. For more information on the supported operating systems go to <a href="http://support.hp.com">http://support.hp.com</a> , Enter your product name and search, Click on User Guides and enter your product name and search for User Guide, Search for your (Product Name) - User Guide, Search for the Supported Operating Systems section, UPD PCL6 / PS Printer Drivers, Supported Operating systems, For more information on the supported operating systems see <a href="http://www.hp.com/go/upd">http://www.hp.com/go/upd</a>
<b>Compatible network operating systems</b>	Windows Server 2008 R2 64-bit, Windows Server 2008 R2 64-bit (SP1), Windows Server 2012 64-bit, Windows Server 2012 R2 64-bit, Windows Server 2016 64-bit, Failover Cluster 2008 R2, Failover Cluster 2012 R2, Terminal server 2008 R2, Remote Desktop server 2012 R2, Citrix Server 6.5, Citrix XenApp & XenDesktop 7.6, Novell iPrint server, Citrix Ready Kit Certification - Up to Citrix Server 7.18 for more information see <a href="http://citrixready.citrix.com">http://citrixready.citrix.com</a> , Linux- For more information see <a href="http://developers.hp.com/hp-linux-imaging-and-printing">http://developers.hp.com/hp-linux-imaging-and-printing</a> , Unix- For more information see <a href="http://hp.com/go/unixmodelscripts">http://hp.com/go/unixmodelscripts</a> , UPD PCL6 / PS Printer Drivers, Supported for Compatible Network Operating systems please see <a href="http://hp.com/go/upd">http://hp.com/go/upd</a>
<b>Minimum system requirements</b>	<b>PC:</b> 2 GB available hard disk space, Internet connection, USB port, Internet browser. (For Additional OS hardware requirements see microsoft.com); <b>Mac:</b> 2 GB available hard disk Space, Internet connection or USB port, OS hardware requirements see apple.com
<b>Power<sup>12 13</sup></b>	<b>Power supply type:</b> Built-in 115V or 220V Power Supply; <b>Power supply required:</b> Input voltage: 100 V to 127 V nominal (+/-10%), 50 - 60 Hz nominal (+/- 3 Hz), 7.5 A; Input voltage: 220 V to 240 V nominal (+/-10%), 50 - 60 Hz nominal (+/- 3 Hz), 4 A. Not dual voltage, power supply varies by part number with # Option code identifier.; <b>Power consumption<sup>11</sup>:</b> 601 watts (Active Printing), 7.60 watts (Ready), 2.61 watts (Sleep), 0.06 watts (Auto-Off), 0.06 watts (Off), Auto Off/Wake on LAN 0.73 Watt; <b>Typical electricity consumption (TEC number):</b> 1.257 kWh/Week (Blue Angel); 0.420 kWh/Week (Energy Star 3.0); <b>Best technical electricity consumption (TEC):</b> 1.257 kWh/week
<b>Acoustics<sup>14</sup></b>	<b>Acoustic power emissions:</b> 6.8 B(A)
<b>Operating environment</b>	<b>Operating temperature range:</b> 59 to 86°F ; <b>Recommended operating temperature:</b> 63.5 to 77°F ; <b>Storage temperature range:</b> -4 to 104°F ; <b>Operating humidity range:</b> 10 to 80% RH ; <b>Recommended operating humidity range:</b> 30 to 70% RH
<b>Security management</b>	Identity management: Kerberos authentication; LDAP authentication; 1000 user PIN codes; optional HP and 3rd party advanced authentication solutions (e.g., badge readers); Network: IPsec/firewall with Certificate: Pre-Shared Key; and Kerberos authentication; Supports WJA-10 IPsec configuration Plug-in; 802.1X authentication (EAP-PEAP; EAP-TLS); SNMPv3; HTTPS; Certificates; Access Control List; Data: Storage Encryption; Encrypted PDF & Email (uses FIPS 140 validated cryptographic libraries from Microsoft); Secure Erase; SSL/TLS (HTTPS); Encrypted Credentials; Device: Security lock slot; USB port disablement; hardware integration pocket for security solutions; Intrusion Detection with Red Balloon Security Technology - Constant in-device monitoring for attacks; SureStart Secure Boot - BIOS Integrity Checking with self-healing capability; Whitelisting - loads only known good code (DLLs, EXEs,...); Connection Inspector - helps ensure network connections to device are safe. Security management: Compatible with HP JetAdvantage Security Manager, HP Printer Security Plugin for Microsoft SCCM, Device Security Syslog Messages processed and accessible in ArcSight, Splunk, and McAfeeESM SIEMs

<sup>1</sup> In box cartridge yields 5,000 black pages based on ISO/IEC 19752 and continuous printing. Actual pages may vary considerably based on images printed and other factors. For more information, visit: <http://www.hp.com/go/learnaboutsupplies>.

<sup>2</sup> With print cartridges

<sup>3</sup> Declared yield value in accordance with ISO/IEC 19752. Actual yields vary considerably based on images printed and other factors. For more information, visit: <http://www.hp.com/go/learnaboutsupplies>

<sup>4</sup> To enable HP Roam, some devices may require firmware to be upgraded and an optional accessory to add Bluetooth® Low Energy (BLE) beaconing capabilities. Customer can purchase the HP Jetdirect 3100w BLE/NFC/Wireless accessory or the RadBeacon USB.

<sup>5</sup> Duty cycle is defined as the maximum number of pages per month of imaged output. This value provides a comparison of product robustness in relation to other HP LaserJet or HP Color LaserJet devices, and enables appropriate deployment of printers and MFPs to satisfy the demands of connected individuals or groups.

<sup>6</sup> HP recommends that the number of pages per month of imaged output be within the stated range for optimum device performance, based on factors including supplies replacement intervals and device life over an extended warranty period.

<sup>7</sup> Measured using ISO 24734 Feature Test, A5 Landscape Feed. Speed may vary based on content, PC, media orientation, and media type.

<sup>8</sup> Measured using ISO/IEC 24734, excludes first set of test documents. For more information see <http://www.hp.com/go/printerclaims>. Exact speed varies depending on the system configuration, software application, driver, and document complexity.

<sup>9</sup> Measured using ISO/IEC 17629. For more information see <http://www.hp.com/go/printerclaims>. Exact speed varies depending on the system configuration, software application, driver, and document complexity.

<sup>10</sup> EPEAT® registered where applicable. EPEAT registration varies by country. See <http://www.epeat.org> for registration status by country

<sup>11</sup> Power requirements are based on the country/region where the printer is sold. Do not convert operating voltages. This will damage the printer and void the product warranty. Power consumption values typically based on measurement of 115 V device.

<sup>12</sup> Power requirements are based on the country/region where the printer is sold. Do not convert operating voltages. This will damage the printer and void the product warranty. Energy Star value typically based on measurement of 115 V device.

<sup>13</sup> Best TEC is not applicable to the ES 2.0 TEC. This measurement was made with the printer configuration optimized for energy efficiency. Minimum Sleep Delay was used, Wi-Fi Direct was disabled, and Active I/O - Energy Efficient Ethernet was used.

<sup>14</sup> Acoustic values are subject to change. For current information see <http://www.hp.com/support>. Configuration tested: base model, simplex printing, A4 paper at an average of 43 ppm.

## To learn more, visit [hp.com](http://hp.com)

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