



# HP Color LaserJet Pro M454 series

**HP Color LaserJet Pro M454 printer. Designed to let you focus on growing business, staying ahead.**

Winning in business means working smarter. The HP Color LaserJet Pro M454 printer is designed to let you focus your time where it's most effective—helping to grow your business and staying ahead of the competition.



HP Color LaserJet Pro M454nw



HP Color LaserJet Pro M454dn



HP Color LaserJet Pro M454dw

## Built to keep you—and your business—moving forward.

- Help decrease the amount of paper used in the office by printing on both sides of the page.
- Grab pages and go—without waiting. This device wakes up and prints first page out fast.<sup>1</sup>
- Print wirelessly with or without accessing the network with dual band Wi-Fi and Wi-Fi direct.<sup>2,3,4</sup>
- ROAM compatible for easy printing from virtually anywhere<sup>5</sup>

## Best -in-class security<sup>6</sup>

- A suite of embedded security features help protect your printer from being an entry point for attacks.<sup>6</sup>
- Help secure confidential information with optional PIN/Pull printing to retrieve print jobs.<sup>7</sup>
- Optional HP JetAdvantage Security Manager lets you set configuration policies and validate settings.<sup>8</sup>
- Thwart potential attacks and take immediate action with instant notification of security issues.<sup>11</sup>

## Simply designed to uncomplicate your day

- Set up this printer fast and easily manage device settings to help increase overall printing efficiency.
- Make the most of your office space with a printer that conveniently fits into your work style.
- Work without delays or messes, with cartridges featuring auto seal removal.
- Tackle tasks quickly and easily—with the simple 2.7" (6.8cm) color touchscreen.

## Sustainability is smart business

- Avoid frustrating reprints, wasted supplies, and service calls using Original HP toner cartridges.
- Help save paper right out of the box. The duplex print setting is set at default paper savings mode.<sup>9</sup>
- Saves up to 11% energy over prior products.<sup>10</sup>
- Help save energy with HP Auto-on/Auto-off technology.<sup>12</sup>

## Product walkaround



HP Color LaserJet Pro M454dw

## Series at a glance



Model (product number)	M454nw (W1Y43A)	M454dn (W1Y44A)	M454dw (W1Y45A)
Functions	Print	Print	Print
Print speed (black and colour) <sup>6</sup>	Up to 27 pages per minute (A4) ( <i>all models</i> )		
Two-sided printing <sup>5</sup>	Manual	Automatic	Automatic
50-sheet multipurpose tray 1, 250-sheet tray 2	✓	✓	✓
Optional input accessory: 550-sheet paper tray	✓	✓	✓
Easy-access USB port <sup>1</sup>	Not available	Not available	✓
Control panel <sup>3</sup>	2-line LCD	2-line LCD	6.9 cm (2.7-inch) colour touchscreen
Input capacity (standard/maximum <sup>7</sup> )	Up to 300/850 sheets ( <i>all models</i> )		
Recommended monthly page volume <sup>8</sup>	Up to 4,000 pages ( <i>all models</i> )		
Cartridge yields <sup>9</sup> (A/X)	Black: ~2,400/7,500 pages; Colour: ~2,100/6,000 pages ( <i>all models</i> )		
Dual-band Wi-Fi with Bluetooth <sup>®</sup> Low Energy <sup>4</sup>	✓	Not available	✓

<sup>1</sup> An administrator must enable the easy-access USB port before use.

<sup>2</sup> Requires purchase of separate USB flash drive with at least 16 GB capacity.

<sup>3</sup> The colour touchscreen is only available on the HP Color LaserJet Pro M454dw model. The nw and dn models have a 2-line LCD display.

<sup>4</sup> Wireless operations are compatible with 2.4 GHz and 5 GHz operations only. Wi-Fi is a registered trademark of Wi-Fi Alliance<sup>®</sup>. Bluetooth is a trademark owned by its proprietor and used by Hewlett-Packard Company under license. Learn more at [hp.com/go/mobileprinting](http://hp.com/go/mobileprinting).

<sup>5</sup> Automatic two-sided printing is not available on the HP Color LaserJet Pro M454nw model.

<sup>6</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>7</sup> Purchase of optional paper-handling accessories required to reach maximum input capacity.

<sup>8</sup> Recommended Monthly Page Volume (RMPV): 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>9</sup> Actual yields and costs vary considerably depending on images printed, number of colour pages printed, and other factors. Optional high-yield cartridges are not included in printer purchase and must be purchased separately.

## 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.

Choose from:

### Optimized Care (optimum performance and stability):

4 hour Onsite Support, Maintenance Kit Replacement Service, Installation with Network Configuration Service

### Standard Care (high level of uptime):

Next Business Day Onsite Support, Maintenance Kit Replacement Service, Installation with Network Configuration Service

### Basic Care (minimum recommended support):

Next Business Day Onsite Support

### 4 hour Onsite Support:

Onsite support within four hours after a service call received within the coverage window

### Next Business Day Onsite Support:

Onsite service the next business day after the service call is received

### Maintenance Kit Replacement Service:

Onsite replacement of your printer's maintenance kit including parts, materials, and labor

### Installation with Network Configuration Service:

Assembly, network configuration, and basic administrator familiarization. For more information about HP Care Pack, HP Contractual, or HP Managed Print Services, visit [hp.com/go/printservices](http://hp.com/go/printservices)



Windows 10



HP Care Pack

## Top features

Today's businesses are always on, and always connected. Choose a printer that can keep up with how you actually work, collaborate, and get things done.

HP Print Security isn't just about securing printers. It's about helping to secure your network with real-time threat detection, automated monitoring, and software validation—designed to detect and stop an attack as it happens.<sup>6</sup>

You have enough to worry about each day. It's easy to accomplish what you need—and exceed your own expectations—with a streamlined printer that's simple to use.

Business is all about resource management, and finding efficiencies is everyone's responsibility. HP LaserJet printers are designed with the environment in mind, so you can handle what you need while conserving energy wherever possible.

### Product

<b>W1Y43A</b>	HP Color LaserJet Pro M454nw
<b>W1Y44A</b>	HP Color LaserJet Pro M454dn
<b>W1Y45A</b>	HP Color LaserJet Pro M454dw

### Accessories

<b>CF404A</b>	HP LaserJet 550-sheet Feeder Tray
<b>POR81AA</b>	HP v222w 16GB Mini USB Drive

### Supplies

<b>W2040A</b>	HP 416A Black Original LaserJet Toner Cartridge (2,400 pages)
<b>W2040X</b>	HP 416X High Yield Black Original LaserJet Toner Cartridge (7,500 pages)
<b>W2041A</b>	HP 416A Cyan Original LaserJet Toner Cartridge (2,100 pages)
<b>W2041X</b>	HP 416X High Yield Cyan Original LaserJet Toner Cartridge (6,000 pages)
<b>W2042A</b>	HP 416A Yellow Original LaserJet Toner Cartridge (2,100 pages)
<b>W2042X</b>	HP 416X High Yield Yellow Original LaserJet Toner Cartridge (6,000 pages)
<b>W2043A</b>	HP 416A Magenta Original LaserJet Toner Cartridge (2,100 pages)
<b>W2043X</b>	HP 416X High Yield Magenta Original LaserJet Toner Cartridge (6,000 pages)

### HP Care Packs

<b>UB9U7E</b>	HP 3 year Next Business Day Service for Color LaserJet Pro M454
<b>UB9U8E</b>	HP 4 year Next Business Day Service for Color LaserJet Pro M454
<b>UB9U9E</b>	HP 5 year Next Business Day Service for Color LaserJet Pro M454
<b>UCOQ8E</b>	HP 3 year 4 hour 9x5 Service for Color LaserJet Pro M454
<b>UCOQ9E</b>	HP 4 year 4 hour 9x5 Service for Color LaserJet Pro M454
<b>UCOR0E</b>	HP 5 year 4 hour 9x5 Service for Color LaserJet Pro M454
<b>UB9V0E</b>	HP 3 year Next Business Day Exchange Service for Color LaserJet Pro M454
<b>UB9V1E</b>	HP 3 year Onsite Exchange Service for Color LaserJet Pro M454
<b>UB9V2E</b>	HP 3 year Return to Depot Service for Color LaserJet Pro M454
<b>UB9V3PE</b>	HP 1 year Post Warranty Next Business Day Service for Color LaserJet Pro M454
<b>UCOR1PE</b>	HP 1 year Post Warranty 4 hour 9x5 Service for Color LaserJet Pro M454
<b>UB9V4PE</b>	HP 1 year Post Warranty Next Business Day Exchange Service for Color LaserJet Pro M454
<b>UB9V5PE</b>	HP 1 year Post Warranty Onsite Exchange Service for Color LaserJet Pro M454
<b>UB9V6PE</b>	HP 1 year Post Warranty Return to Depot Service for Color LaserJet Pro M454

Protect your investment with HP Care Pack. Let HP certified engineers resolve your technical issues. For more details on HP Care Pack, go to [hp.com/go/cpc](http://hp.com/go/cpc)

### Paper

Contact HP via phone: Asia: 65 6253 8500

### Solutions

HP Web Jetadmin: [hp.com/go/wja](http://hp.com/go/wja)  
 HP Universal Print Driver: [hp.com/go/upd](http://hp.com/go/upd)  
 HP Imaging and Printing Security Center: [hp.com/go/ipsc](http://hp.com/go/ipsc)

## HP Color LaserJet Pro M454 series

Model	HP Color LaserJet Pro M454nw	HP Color LaserJet Pro M454dn	HP Color LaserJet Pro M454dw
Product number	W1Y43A	W1Y44A	W1Y45A
Functions	Print		
<b>Print</b>			
Duplex print options	Manual (driver support provided)	Automatic (default)	
Print speed <sup>12</sup>	<b>Black (A4, normal):</b> Up to 27 ppm; <b>Black (letter, normal):</b> Up to 28 ppm; <b>Black (A4, duplex):</b> Up to 24 ipm; <b>Black (letter, duplex):</b> Up to 25 ipm <b>Color (A4, normal):</b> Up to 27 ppm; <b>Color (letter, normal):</b> Up to 28 ppm; <b>Color (A4, duplex):</b> Up to 24 ipm; <b>Color (letter, duplex):</b> Up to 25 ipm		
First page out <sup>8</sup>	<b>Black (A4, ready):</b> As fast as 9.7 sec; <b>Colour (A4, ready):</b> As fast as 11.3 sec; <b>Black (A4, sleep):</b> As fast as 13.8 sec; <b>Colour (A4, sleep):</b> As fast as 15.3 sec		
Print technology	Laser		
Print resolution	<b>Black (best)</b> 600 x 600 dpi, Up to 38,400 x 600 enhanced dpi; <b>Black (normal)</b> 600 x 600 dpi, Up to 38,400 x 600 enhanced dpi <b>Colour (best):</b> 600 x 600 dpi, Up to 38,400 x 600 enhanced dpi; <b>Colour (normal):</b> 600 x 600 dpi, Up to 38,400 x 600 enhanced dpi		
Print resolution technology	HP ImageREt 3600, PANTONE® calibrated		
Print cartridges number	4 (1 each black, cyan, magenta, yellow)		
Standard print languages	HP PCL 6, HP PCL 5c, HP postscript level 3 emulation, PDF, URF, PWG Raster		HP PCL 6, HP PCL 5c, HP postscript level 3 emulation, PDF, URF, Native Office, PWG Raster
Printer management	HP Printer Assistant; HP Utility (Mac); 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)		
<b>Connectivity</b>			
Standard connectivity	1 Hi-Speed USB 2.0 port; 1 host USB at rear side; built-in Gigabit Ethernet 10/100/1000 Base-TX network port; 1 Wireless 802.11b/g/n/2.4/5 GHz Wi-Fi radio	1 Hi-Speed USB 2.0 port; 1 host USB at rear side; built-in Gigabit Ethernet 10/100/1000 Base-TX network port	1 Hi-Speed USB 2.0 port; 1 host USB at rear side; built-in Gigabit Ethernet 10/100/1000 Base-TX network port; 1 Wireless 802.11b/g/n/2.4/5 GHz Wi-Fi radio
Mobile printing capability <sup>6</sup>	Apple AirPrint™; Google Cloud Print™; HP ePrint; HP Smart App and other mobile Apps; Mopria™ Certified; ROAM capable for easy printing; Wi-Fi® Direct printing		
Wireless capability	Yes, built-in dual-band Wi-Fi; Authentication via WEP, WPA/WPA2, WPA Enterprise; Encryption via AES or TKIP; WPS; Wi-Fi Direct; Bluetooth Low-Energy	No	Yes, built-in dual-band Wi-Fi; Authentication via WEP, WPA/WPA2, WPA Enterprise; Encryption via AES or TKIP; WPS; Wi-Fi Direct; Bluetooth Low-Energy
Network capabilities	Yes, via built-in 10/100/1000Base-Tx Ethernet, Gigabit; Auto-crossover Ethernet; Authentication via 802.1x		
Memory	<b>Standard:</b> 256 MB NAND Flash, 512 MB DRAM; <b>Maximum:</b> 256 MB NAND Flash, 512 MB DRAM		<b>Standard:</b> 512 MB NAND Flash, 512 MB DRAM; <b>Maximum:</b> 512 MB NAND Flash, 512 MB DRAM
Processor speed	1200 MHz		
Duty cycle (monthly) <sup>9</sup>	Up to 50,000 pages; <b>Recommended monthly page volume<sup>10</sup>:</b> 750 to 4000		
<b>Paper handling</b>			
Input	50-sheet multipurpose tray, 250-sheet input tray		
Output	150-sheet output bin		
Media types	Paper (bond, brochure, colored, glossy, letterhead, photo, plain, preprinted, prepunched, recycled, rough), postcards, labels, envelopes		
Media weight	Tray 1: 60 to 176 g/m <sup>2</sup> (up to 200 g/m <sup>2</sup> with postcards and HP Color laser glossy photo papers); Tray 2: 60 to 163 g/m <sup>2</sup> (up to 176 g/m <sup>2</sup> with postcards, up to 200 g/m <sup>2</sup> HP Color laser glossy photo papers); optional Tray 3: 60 to 163 g/m <sup>2</sup> (up to 176 g/m <sup>2</sup> with postcards, up to 150 g/m <sup>2</sup> Glossy media)	Tray 1: 60 to 176 g/m <sup>2</sup> (up to 200 g/m <sup>2</sup> with postcards and HP Color laser glossy photo papers); Tray 2: 60 to 163 g/m <sup>2</sup> (up to 176 g/m <sup>2</sup> with postcards, up to 200 g/m <sup>2</sup> HP Color laser glossy photo papers); optional Tray 3: 60 to 163 g/m <sup>2</sup> (up to 176 g/m <sup>2</sup> with postcards, up to 150 g/m <sup>2</sup> Glossy media); Automatic duplex: 60 to 163 g/m <sup>2</sup>	
Media Sizes Custom	Tray 1: 76 x 127 to 216 x 356 mm; Tray 2, optional Tray 3: 100 x 148 to 216 x 356 mm		
Dimensions (w x d x h)	412 x 453 x 295 mm	412 x 469 x 295 mm	
Weight	17.5 kg	18.9 kg	
What's in the box <sup>1</sup>	HP Color LaserJet Pro M454nw; 4 preinstalled Introductory HP LaserJet Toner cartridges (Black, Cyan, Magenta, Yellow: ~1200 pages); In-box documentation (Getting Started Guide, Install Poster), regulatory flyer; Internet connection is required to set up the printer. HP printer software is available at <a href="http://www.hp.com/support">http://www.hp.com/support</a> ; Power cord; USB cable	HP Color LaserJet Pro M454dn; 4 preinstalled Introductory HP LaserJet Toner cartridges (Black, Cyan, Magenta, Yellow: ~1200 pages); In-box documentation (Getting Started Guide, Install Poster), regulatory flyer; Internet connection is required to set up the printer. HP printer software is available at <a href="http://www.hp.com/support">http://www.hp.com/support</a> ; Power cord; USB cable (AP only)	HP Color LaserJet Pro M454dw; 4 preinstalled Introductory HP LaserJet Toner cartridges (Black, Cyan, Magenta, Yellow: ~1200 pages); In-box documentation (Getting Started Guide, Install Poster), regulatory flyer, warranty card (China, Mexico); Internet connection is required to set up the printer. HP printer software is available at <a href="http://www.hp.com/support">http://www.hp.com/support</a> ; Power cord; USB cable.
Software included	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> /laserjet		
Warranty features	One-year Bench/Depot Repair warranty. Warranty and support options vary by product, country and local legal requirements. Contact your Contractual Vendor or go to <a href="http://hp.com/support">hp.com/support</a> to learn about HP award winning service and support options in your region. (wty code 4E; wty ID A033)		
<b>Systems</b>			
Compatible operating systems	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>		
Minimum system requirements	<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 drive space, Internet connection or USB port, OS hardware requirements see apple.com		
Security management	Secure Boot; Secure Firmware Integrity; Runtime Code Integrity; password protected EWS; secure browsing via SSL/TLS 1.0; TLS 1.1; TLS 1.2; IPP over TLS; Network: enable/disable network ports and features; unused protocol and service disablement; SNMPv1; SNMPv2; and SNMPv3; community password change; HP ePrint: HTTPS with certificate validation; HTTP Basic Access Authentication; SASL authentication; Firewall and ACL; control panel lock; certificates configuration; UPD PIN printing; Syslog; signed firmware; administrator settings; 802.1x authentication (EAP-TLS, and PEAP); authentication via WEP; WPA/WPA2 Personal; WPA2-enterprise; encryption via AES or TKIP; Encrypted data storage; Secure data erase; Automatic firmware updates; Secure Encrypted Print via optional job storage; Compatible with optional HP JetAdvantage Security Manager; IPPS	Secure Boot; Secure Firmware Integrity; Runtime Code Integrity; password protected EWS; secure browsing via SSL/TLS 1.0, TLS 1.1, TLS 1.2; IPP over TLS; Network: enable/disable network ports and features; unused protocol and service disablement, SNMPv1, SNMPv2, and SNMPv3, community password change; HP ePrint: HTTPS with certificate validation, HTTP Basic Access Authentication, SASL authentication; Firewall and ACL; control panel lock, certificates configuration, UPD PIN printing, Syslog, signed firmware, administrator settings, 802.1x authentication (EAP-TLS, and PEAP); Encrypted data storage; Secure data erase; Automatic firmware updates; Secure Encrypted Print via optional job storage, Compatible with optional HP JetAdvantage Security Manager	Secure Boot; Secure Firmware Integrity; Runtime Code Integrity; password protected EWS; secure browsing via SSL/TLS 1.0; TLS 1.1; TLS 1.2; IPP over TLS; Network: enable/disable network ports and features; unused protocol and service disablement; SNMPv1; SNMPv2; and SNMPv3; community password change; HP ePrint: HTTPS with certificate validation; HTTP Basic Access Authentication; SASL authentication; Firewall and ACL; control panel lock; certificates configuration; UPD PIN printing; Syslog; signed firmware; administrator settings; 802.1x authentication (EAP-TLS, and PEAP); authentication via WEP; WPA/WPA2 Personal; WPA2-enterprise; encryption via AES or TKIP; Encrypted data storage; Secure data erase; Automatic firmware updates; Secure Encrypted Print via optional job storage; Compatible with optional HP JetAdvantage Security Manager; IPPS
Fonts and typefaces	84 scalable TrueType fonts		
Control panel	2-line backlit LCD graphic display; 5 buttons (Cancel, Select, Reverse, Right/Left arrows); LED indicator lights (Attention, Ready)	2.7 inch intuitive color touchscreen; 3 Buttons (Home, Help, Back)	
Display	2-line backlit LCD graphic display		2.7-in intuitive color touchscreen
Energy efficiency compliance	CECP	EPEAT® Silver; CECP; ENERGY STAR® qualified; Blue Angel RAL-UZ 205 <sup>13</sup>	
ENERGY STAR Qualified	No	Yes	
Power	<b>Power supply type:</b> Internal (built-in) Power Supply; <b>Power supply required:</b> 110-volt input voltage: 110 to 127 VAC (+/- 10%), 60 Hz (+/- 3 Hz); 220-volt input voltage: 220 to 240 VAC (+/- 10%), 50/60Hz (+/- 3 Hz) (Not dual voltage, power supply varies by part number with # Option code identifier); <b>Power consumption<sup>2</sup>:</b> 550 watts (active printing), 17 watts (ready), 0.9 watts (sleep), 0.9 watts (HP auto-off/auto-on), 0.07 watts (auto-off/manual-on), 0.07 watts (off); <b>Typical Electricity Consumption number<sup>2</sup>:</b> 1.144 kWh/Week (Energy Star), 1.046 kWh/week (Blue Angel)		
Acoustics	<b>Acoustic power emissions<sup>14</sup>:</b> 6.2 B(A); <b>Acoustic power emissions (ready):</b> 3.4 B(A); <b>Acoustic pressure emissions bystander (active, printing):</b> 48 dB(A); <b>Acoustic pressure emissions bystander (ready):</b> 14 dB(A)	<b>Acoustic power emissions<sup>14</sup>:</b> 6.2 B(A); <b>Acoustic power emissions (ready):</b> 3.4B(A); <b>Acoustic pressure emissions bystander (active, printing):</b> 48 dB(A); <b>Acoustic pressure emissions bystander (ready):</b> 14 dB(A)	
Environmental ranges	<b>Operating temperature range:</b> 15 to 30°C; <b>Recommended operating temperature:</b> 15 to 27°C; <b>Operating humidity range:</b> 10 to 80% RH (non-condensing); <b>Recommended operating humidity range:</b> 20 to 70% RH (non-condensing)		
Safety approvals and requirements	IEC 60950-1:2005 +A1:2009+A2:2013/EN 60950-1:2006 +A11:2009+A1:2010+A12:2011+A2:2013; IEC 60825-1:2014/EN 60825-1:2014 (Class 1 Laser/LED Product); IEC 62479: 2010/EN 62479: 2010		
Supported network protocols	TCP/IP, IPv4, IPv6; Print: TCP-IP port 9100 Direct Mode, LPD (raw queue support only), Web Services Printing, HP ePrint, Apple AirPrint™, Google Cloud Print 2.0, Mopria, IPP Print; Discovery: SLP, Bonjour, Web Services Discovery; IP Config: IPv4 (BootP, DHCP, AutoIP, Manual), IPv6 (Stateless Link-Local and via Router, Statefull via DHCPv6), SSL Security and Certificate management; Management: SNMPv1, SNMPv2, SNMPv3, HTTP/HTTPS, Syslog, FTP FW Download		

## Footnotes

- <sup>1</sup> Measured using ISO/IEC 24734 and 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. Letter: Black/Color-9.8/12.1, A4: Black/Color 9.9/12.4 sec.
- <sup>2</sup> Wireless operations are compatible with 2.4 GHz and 5 GHz operations. 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>3</sup> Features is only supported by the HP LaserJet Pro M454nw and M454dw printers. Wireless performance is dependent on physical environment and distance from access point, and may be limited during active VPN connections.
- <sup>4</sup> Feature is supported on the HP LaserJet Pro M454nw and M454dw printers only. Mobile device needs to be connected directly to the Wi-Fi network of a wireless direct-capable MFP or printer prior to printing. Depending on mobile device, an app or driver may also be required. Learn more at <http://www.hp.com/go/businessmobileprinting>
- <sup>5</sup> Feature is only available for the HP Color LaserJet Pro M452dw. Requires a wireless access point and an Internet connection to the printer. Services require registration. App availability varies by country, language, and agreements and requires a firmware upgrade. For details, visit [hpconnected.com](http://hpconnected.com)
- <sup>6</sup> Based on HP review of 2019 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 [hp.com/go/PrintersThatProtect](http://hp.com/go/PrintersThatProtect). For more information: <http://www.hp.com/go/printersecurityclaims>
- <sup>7</sup> Pin printing enabled via USB installed in rear of device.
- <sup>8</sup> HP JetAdvantage Security Manager must be purchased separately. To learn more, please visit <http://www.hp.com/go/securitymanager>
- <sup>9</sup> All new product introductions beginning in Fall 2019 will include consistent worldwide default duplex settings (across bundles/drivers); Spring 2019 will include consistent worldwide default duplex settings for most products across the most common drivers.
- <sup>10</sup> Based on HP Internal testing using normalized TEC Value, 2019.
- <sup>11</sup> Instant threat notifications can appear on the device control panel when a potential threat occurs from malicious intent or there is a bug or vulnerability in the firmware code of the device. If this error raises concern, please contact your company IT representative or, if unavailable, HP Support, who can investigate the cause through analysis of device syslog data using a standard SIEM tool from McAfee, Splunk, Arcsight or SIEMonster. The control panel error message may show an error code on a blue screen during code signature checks or memory write intrusions.
- <sup>12</sup> HP Auto-On/Auto-Off Technology capabilities subject to printer and settings; may require a firmware upgrade.

## Technical specifications disclaimers

- <sup>1</sup> In box cartridges yield ~1,200 color composite (C/Y/M) and ~1,200 black pages based on ISO/IEC 19798 and continuous printing. Actual yields vary considerably based on images printed and other factors. For details see: <http://www.hp.com/go/learnaboutesupplies>. Pages may vary based on customer printing conditions.
- <sup>2</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 115V device.
- <sup>3</sup> BA TEC is equal to Best TEC. 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>4</sup> Toner cartridges designed for distribution and use within a designated region only; will not work outside of designated region.
- <sup>5</sup> Declared yield value in accordance with ISO/IEC 19798. Actual yields vary considerably based on images printed and other factors. For more information, visit <http://www.hp.com/go/learnaboutesupplies>
- <sup>6</sup> Local printing requires mobile device and printer to be on the same network (usually Wi-Fi access points bridge wireless to wired connections) or have a direct wireless connection. Wireless performance is dependent on physical environment and distance from access point. Remote printing requires an Internet connection to an HP web-connected printer. Wireless broadband use requires separately purchased service contract for mobile devices. Check with service provider for coverage and availability in your area. For more information visit [hp.com/go/mobileprinting](http://hp.com/go/mobileprinting). 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>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 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>9</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>10</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>11</sup> HP SureSupply alerts you when your print cartridge is running low and helps you purchase online or locally through HP or a participating retailer. For more information, visit <http://www.hp.com/go/SureSupply>; only available with Original HP supplies; Internet access required.
- <sup>12</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.

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