# Stunning speed. Professional color. Solid security.

**HP Color LaserJet Pro M452 series** 



The world's most preferred printers.



### Product walk around

- 1 3-inch (7.6 cm) color touchscreen with gesturing tilts up for easier viewing
- 2 Convenient front on/off button
- 3 50-sheet multipurpose tray 1
- 4 250-sheet tray 2
- 5 150-sheet output bin
- 6 Easy-access USB port to print files directly<sup>8</sup>
- 7 Built-in wireless direct printing  $^{9}/\rm NFC$  touch-to-print  $^{10}$
- 8 Front door release button (access to HP JetIntelligence Toner cartridges)
- 9 Built-in automatic two-sided printing
- 10 USB port for job storage<sup>11</sup> with PIN printing
- 11 Hi-Speed USB 2.0 printing port
- 12 Ethernet network port
- 13 Built-in wireless networking<sup>12</sup>
- 14 256 MB memory and 1.2 GHz processor
- 15 Rear door (access to print path)
- 16 Power connection

HP Color LaserJet Pro M452dw shown



Front view



Rear view

### Series at a glance

Model	M452nw	M452dn	M452dw
Product number	CF388A	CF389A	CF394A
Print speed, pages per minute (ppm), letter/A4 <sup>13</sup>	Up to 28/27 ppm	Up to 28/27 ppm	Up to 28/27 ppm
50-sheet multipurpose tray, 250-sheet tray 2	$\checkmark$	$\checkmark$	$\checkmark$
550-sheet tray 3	Optional	Optional	Optional
Control panel	2-line LCD	2-line LCD	3-inch (7.6 cm) color touchscreen
HP JetAdvantage Private Print <sup>14</sup>	Not available	Not available	$\checkmark$
Easy-access USB port <sup>8</sup>	Not available	Not available	$\checkmark$
Two-sided printing	Manual	Automatic	Automatic
Networking	Gigabit Ethernet, wireless 802.11b/g/n <sup>12</sup>	Gigabit Ethernet	Gigabit Ethernet, wireless 802.11b/g/n <sup>12</sup>
Mobile printing	Wireless direct printing, <sup>9</sup> HP ePrint, <sup>15</sup> Apple AirPrint <sup>™, 16</sup> Mopria-certified, <sup>17</sup> Google Cloud Print™ 2.0	HP ePrint, <sup>15</sup> Apple AirPrint, <sup>16</sup> Mopria-certified, <sup>17</sup> Google Cloud Print 2.0	Wireless direct printing, <sup>9</sup> NFC touch- to-print, <sup>10</sup> HP ePrint, <sup>15</sup> Apple AirPrint, <sup>16</sup> Mopria-certified, <sup>17</sup> Google Cloud Print 2.0

# Technical specifications

	HP Color LaserJet Pro M452nw	HP Color LaserJet Pro M452dn	HP Color LaserJet Pro M452dw
Product number	CF388A	CF389A	CF394A
Control panel	2-line graphical backlit LCD display; 5 buttons (Cancel, Select, Reverse, Right/Left arrows); LED indicator lights (Attention, Ready)		3-inch (7.6 cm) touchscreen with gesturing; 3 Buttons (Home, Help, Back
Print speed (black and color) <sup>13</sup>	Simplex: Up to 28 ppm, letter (27 ppm, A4) Duplex: Up to 25 ipm, letter (24 ipm, A4)		
First page out <sup>18</sup>	From sleep (letter/A4): Color, 11.4/11.5 seconds; Black, 11.3/11.4 seconds From ready (letter/A4): Color, 9.5/9.9 seconds; Black, 8.9/9.0 seconds		
Print resolution	600 x 600 dpi, up to 38,400 x 600 enha	anced dpi; HP ImageREt 3600, PANTONE® ca	librated
Printer advanced features			
Print from USB drive (no computer required)			File formats: Microsoft Word, PowerPoint, PDF, JPG
Processor	1.2 GHz		
Memory	128 MB		256 MB
Durability ratings			
Recommended monthly page volume (RMPV) <sup>31</sup>	750 to 4,000 pages		
Duty cycle <sup>32</sup>	Up to 50,000 pages (letter/A4)		
Media specifications			
Input capacity	Tray 1: up to 50 sheets Tray 2: up to 250 sheets Tray 3 (optional): up to 550 sheets		
Output capacity	Up to 150 sheets		
Two-sided printing	Manual	Automatic	
Media sizes	(JIS), 16K (195 x 270 mm, 184 x 260 m double), envelopes (DL, C5, B5); Custon Tray 2: Letter, legal, executive, Oficio 8. (JIS), 16K (195 x 270 mm, 184 x 260 m	5 x 13, 3 x 5 in, 4 x 6 in, 5 x 8 in, envelopes ( m, 197 x 273 mm), 10 x 15 cm, Oficio 216 x n media sizes: 3 x 5 to 8.5 x 14 in (76 x 127 f 5 x 13, 3 x 5 in, 4 x 6 in, 5 x 8 in, envelopes ( m, 197 x 273 mm), 10 x 15 cm, Oficio 216 x n media sizes: 3.94 x 5.83 to 8.5 x 14 in (100	340 mm, postcards (JIS single, JIS to 216 x 356 mm) No 10, Monarch); A4, A5, A6, B5 (JIS), B6 340 mm, postcards (JIS single, JIS
	Optional Tray 3: Letter, legal, executive	, Oficio 8.5 x 13, 3 x 5 in, 4 x 6 in, 5 x 8 in; A4 n), 10 x 15 cm, Oficio 216 x 340 mm, postca	, A5, A6, B5 (JIS), B6 (JIS), 16K (195 x
		Automatic duplexer: Letter, legal, exec 270 mm, 184 x 260 mm, 197 x 273 m	utive, Oficio 8.5 x 13; A4, B5, 16K (195 x m), Oficio 216 x 340 mm
Media weights	Tray 1: 16 to 47 lb (60 to 176 g/m²) (up to 52 lb (200 g/m²) with HP Color laser glossy photo papers) Tray 2: 16 to 43 lb (60 to 163 g/m²) (up to 47 lb (176 g/m²) with postcards, up to 52 lb (200 g/m²) with HP Color laser glossy photo papers) Optional Tray 3: 16 to 43 lb (60 to 163 g/m²) (up to 47 lb (176 g/m²) with postcards, up to 40 lb (150 g/m²) with HP Color laser glossy photo papers)		2 lb (200 g/m²) with HP Color laser
		Automatic duplexer: 16 to 43 lb (60 to	163 g/m²)
Media types	Paper (bond, brochure, colored, glossy, letterhead, photo, plain, preprinted, prepunched, recycled, rough), postcards, labels, envelopes		
Print languages	·	el 3 emulation, PDF, URF, PCLm, Native Office	e, PWG Raster

	HP Color LaserJet Pro M452nw	HP Color LaserJet Pro M452dn	HP Color LaserJet Pro M452dw	
Fonts	84 scalable TrueType fonts			
Connectivity	Hi-Speed USB 2.0 printing port, built-in G	iigabit Ethernet 10/100/1000 Base-TX netv	vork port, Host USB for job storage	
			Plus: Easy-access USB	
Mobile printing	Wireless direct printing (Wi-Fi Direct), <sup>9</sup> HP ePrint, <sup>15</sup> Apple AirPrint, <sup>16</sup> Mopria- certified, <sup>17</sup> Google Cloud Print 2.0	HP ePrint, <sup>15</sup> Apple AirPrint, <sup>16</sup> Mopria- certified, <sup>17</sup> Google Cloud Print 2.0	Wireless direct printing (Wi-Fi Direct), <sup>9</sup> NFC touch-to-print, <sup>10</sup> HP ePrint, <sup>15</sup> Apple AirPrint, <sup>16</sup> Mopria-certified, <sup>17</sup> Google Cloud Print 2.0	
Network capabilities	Built-in Gigabit 10/100/1000Base-TX Ethernet: Auto-crossover Ethernet; Authentication via 802.1x			
	Plus: Built-in Wi-Fi: Authentication via WEP, WPA/WPA2, WPA Enterprise; Encryption via AES or TKIP; WPS		Plus: Built-in Wi-Fi: Authentication via WEP, WPA/WPA2, WPA Enterprise; Encryption via AES or TKIP; WPS	
Network protocols	TCP/IP, IPv4, IPv6			
	Print: TCP-IP port 9100 Direct Mode, LPD	(raw queue support only), Web Services Pr	inting	
	Discovery: SLP, Bonjour, Web Services Di	scovery		
	IP Config: IPv4 (BootP, DHCP, AutoIP, Manual), IPv6 (Stateless Link-Local and via Router, Statefull via DHCPv6)			
	Management: SNMPv1, SNMPv2, SNMPv	3, HTTP		
Security	Embedded Web Server: password-protection, secure browsing via SSL/TLS			
	Network: enable/disable network ports and features, SNMPv1 and SNMPv2 community password change			
	HP ePrint: HTTPS with certificate validation, HTTP Basic Access Authentication, SASL authentication			
	Firewall and ACL; SNMPv3, 802.1X, Secure Boot			
	Plus: Authentication via WEP, WPA/WPA2 Personal, WPA2 Enterprise; Encryption via AES or TKIP		Plus: Authentication via WEP, WPA/WPA2 Personal, WPA2 Enterprise; Encryption via AES or TKIP	
Printer management	Printer Administrator Resource Kit (Driver Configuration Utility, Driver Deployment Utility, Managed Printing Administrator); HP Web Jetadmin Software; HP Proxy Agent Software; HP JetAdvantage Security Manager; HP Utility (Mac); HP Device Toolbox (Win 7)			
Compatible operating systems <sup>33</sup>	Windows OS compatible with In-Box Driver: Windows XP SP3 all 32-bit editions (XP Home, XP Pro, etc), Windows 32-bit editions (Home Basic, Premium, Professional, etc), Windows 7 all 32- & 64-bit editions, Windows 8/8. 64-bit editions (excluding RT OS for Tablets), Windows 10 all 32- & 64-bit editions (excluding RT OS for Table			
	Windows OS compatible with Universal Print Driver (From <u>HP.com</u> ): Windows XP SP3 32- & 64-bit editions (XP Home, XP Pro, etc), Windows Vista all 32- & 64-bit editions (Home Basic, Premium, Professional, etc), Windows 7 all 32- & 64-bit editions (excluding RT OS for Tablets), Windows 10 all 32- & 64-bit editions (excluding RT OS for Tablets), Windows 10 all 32- & 64-bit editions			
	Mac OS (HP Print Drivers available from <u>HP.com</u> and Apple Store): OS X 10.7 Lion, OS X 10.8 Mountain Lion, OS X 10.9 Mavericks, OS X 10.10 Yosemite			
	Mobile OS (In-OS drivers): iOS, Android, Windows 8/8.1/10 RT			
	Linux OS (In-OS HPLIP): SUSE Linux (12.2, 12.3, 13.1), Fedora (17, 18, 19, 20), Linux Mint (13, 14, 15, 16, 17), Boss (3.0, 5.0), Ubuntu (10.04, 11.10, 12.04, 12.10, 13.04, 13.10, 14.04, 14.10), Debian (6.0.x, 7.x)			
	Other OS: UNIX			
System requirements, PC	Windows XP (SP2) (32-bit) or newer, 233 MHz processer or higher, 512 MB RAM, 400 MB available hard disk space, CD-ROM or Internet, USB or Network connection			
System requirements, Mac	Mac OS X v 10.7 or newer, Internet, USB or Network connection, 1 GB available hard disk space			
Dimensions (width x depth x height)	Minimum (all trays closed): 16.2 x 17.8 x 16.7 in (412 x 453 x 295 mm)	Minimum (all trays closed): 16.2 x 18.5 x 11.6 in (412 x 469 x 295 mm)	Minimum (all trays closed): 16.2 x 18.5 x 16.7 in (412 x 469 x 295 mm)	
	Maximum (with optional tray 3): 16.2 x 24.9 x 11.6 in (412 x 633 x 295 mm)	Maximum (with optional tray 3): 16.2 x 25.6 x 13.4 in (412 x 649 x 340 mm)	Maximum (with optional tray 3): 16.2 x 25.6 x 13.4 in (412 x 649 x 340 mm)	
Weight (with cartridges)	38.6 lb (17.5 kg)	41.7 lb (18.9 kg)	1	

	HP Color LaserJet Pro M452nw	HP Color LaserJet Pro M452dn	HP Color LaserJet Pro M452dw	
What's in the box	Printer, four preinstalled introductory Original HP 410A Toner cartridges with JetIntelligence (yield ~1,200 pages, black and color <sup>19</sup> ), in-box documentation, software CD, power cord			
	Plus: Built-in duplexer			
Software included	Windows: HP Software Installer/Uninstaller, HP PCL 6 Printer Driver, HP Device Experience (DXP), HP Update, Product Registration Assist, HP Web Services Assist (HP Connected), HP Device Toolbox, HP Product Improvement Study, Online user manuals. (Software varies by OS: Win XP/Vista = driver only; Windows 7: Full solution; Windows 8+ and newer: drivers only with more apps available in MS App store.)			
	Mac: Welcome Screen (directs users to <u>hp.com</u> or OS App Store for LaserJet Software)			
Downloadable software	From <u>123.hp.com</u> : HP Easy Start (guided software install for Windows and Mac)			
	From <u>hp.com</u> (Windows): Full-solution software and drivers (same solution as "Software Included"), HP PLC6 print driver only (no installer; for "Add Printer" installs), HP PCL 6 print driver with installer, Product Documentation and Support			
	From hp.com (Mac): Full-solution software and drivers			
	For Mobile OS: See "HP Mobile Printing" at <u>hp.com/us/en/ads/mobility/overview.html</u>			
	From In-OS app stores: HP recommended printer drivers and software			
	Utility, Managed Printing Administrator	s): Printer Administrator Resource Kit (Driv ), HP Universal Print Drivers (PCL 6, PCL 5 a Jx/Unix Print Drivers, SAP (PCL 5 and PS Pri tage Security Manager <sup>21</sup>	ind PS for Windows), HP ePrint Software	
Warranty	One-year, next-business day, onsite warranty. Warranty and support options vary by product, country and local legal requirements. Go to <u>hp.com/support</u> to learn about HP award winning service and support options in your region.			
HP Sure Supply supported	HP SureSupply alerts you when your print cartridge is running low and helps you purchase online or locally through HP or participating retailer. Only available with Original HP supplies; Internet access required. To learn more, visit <u>hp.com/qo/SureSupply</u> .			

### **Environmental and power specifications**

	HP Color LaserJet Pro M452nw	HP Color LaserJet Pro M452dn	HP Color LaserJet Pro M452dw
Environmental ranges		1	
Temperatures	Operating: 59 to 86° F (15 to 30° C); Storage: -4 to 104° F (-20 to 40° C); Recommended: 59 to 80.6° F (15 to 27° C)		
Relative humidity range	Operating: 10 to 80% RH; Non-operating: 10 to 95% RH; Recommended: 20 to 70% RH		
Acoustic power emissions <sup>34</sup>	Ready mode: 4.8 B(A); Active printing: 6.3 B(A)		
Acoustic pressure emissions (bystander)	Ready mode: 34 dB(A); Active printing: 49 dB(A)		
Power specifications <sup>35</sup>	ENERGY STAR <sup>®</sup> certified; Blue Angel; EPEAT <sup>®</sup> Silver registered models available <sup>36</sup>		EPEAT® Silver registered models
Power supply required	110-volt input voltage: 110 to 127 VAC (+/- 10%), 60 Hz (+/- 3 Hz); 220-volt input voltage: 220 to 240 VAC (+/- 10%), 50 Hz (+/- 3 Hz) (Not dual voltage, power supply varies by part number with # Option code identifier)		
Power consumption	570 watts (Active Printing), 17.6 watts (Ready), 2.4 watts (Sleep), 0.06 watts (Auto-Off), 0.05 watts (Off)		
Typical Electricity Consumption (TEC)	1.520 kWh/Week (Energy Star), 1.407 kWh/Week (Blue Angel)	1.294 kWh/Week (Energy Star), 1.175 kWh/Week (Blue Angel)	1.520 kWh/Week (Energy Star), 1.407 kWh/Week (Blue Angel)
Energy-saving features	HP Auto-On/Auto-Off Technology, <sup>27</sup> Instant-on Technology		
Environmental specifications	Mercury free		
Safety and regulatory compliance	EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011; IEC 60950-1:2005 +A1:2009; EN 62479:2010/IEC 62479:2010; CAN/CSA C22.2 No. 60950-1-07 2nd Ed. 2011-12; Compliance of IEC 60950-1 standard considers all country deviations according to the most recent IECEE CB Bulletin; UL/cUL Listed and UC CoC (US/Canada); GS Certificate (Germany, Europe); Low Voltage Directive 2006/95/EC with CE Mark (Europe); Compliance with Laser safety standards: EN 60825-1:2007/IEC 60825-1:2007 (Class 1 Laser Product); Compliance with Laser safety standards 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser notice No. 50, Dated June 24, 2007 FDA 21 CFR subchapter J part 1010 and 1040 (FDA Accession Number via test/ reporting to CDRH Factory ID, location and inspections are part of the certification process and record)		
Electromagnetic emission standard	CISPR 22:2008 (Class B), EN 55022:201 61000-3-2:2006 +A1:2009 +A2:2009, I individual countries		

## Ordering information

Use accessories and supplies specifically designed for the printer to help provide efficient performance. To order the accessories and supplies listed here, go to <u>hp.com</u>. To contact HP by country, please visit <u>hp.com/country/us/en/cs/contact-hp/contact.html</u>.

If you don't have access to the Internet, contact your qualified HP dealer, or call HP (U.S.) at (800) 282-6672.

Product	HP Color LaserJet Pro M452nw HP Color LaserJet Pro M452dn HP Color LaserJet Pro M452dw	CF388A CF389A CF394A	
Supplies <sup>19</sup>	HP 410A Black Original LaserJet Toner Cartridge (~2,300 pages) HP 410A Cyan Original LaserJet Toner Cartridge (~2,300 pages) HP 410A Yellow Original LaserJet Toner Cartridge (~2,300 pages) HP 410A Magenta Original LaserJet Toner Cartridge (~2,300 pages) HP 410X High Yield Black Original LaserJet Toner Cartridge (~6,500 pages) HP 410X High Yield Cyan Original LaserJet Toner Cartridge (~5,000 pages) HP 410X High Yield Cyan Original LaserJet Toner Cartridge (~5,000 pages) HP 410X High Yield Magenta Original LaserJet Toner Cartridge (~5,000 pages) HP 410X High Yield Magenta Original LaserJet Toner Cartridge (~5,000 pages)	CF410A CF411A CF412A CF413A CF410X CF411X CF412X CF412X CF413X	
Accessories	HP LaserJet 550-sheet Paper Feeder HP v222w 16GB Mini USB Drive	CF404A POR81AA	
HP Services Boost performance—it's your choice. HP Care for printers provides options to help you manage printing—from Care Pack services to customizable and advisory services. With HP Managed Print Services, we oversee everything for you.	Make sure your imaging and printing investments are protected with Care Pack, part of HP Care. Pick your package of services to keep your printer running and your business moving. Now your office can spend less time trouble-shooting and more time getting things done.HP 3 year Next Business Day Color LaserJet M452 Hardware SupportU8TN1E U8TN2E U8TN2EHP 4 year Next Business Day Color LaserJet M452 Hardware SupportU8TN2E U8TN2EHP 5 year Next Business Day Color LaserJet M452 Hardware SupportU8TN3E U8TN3EHP 3 year Next Business Day Color LaserJet M452 Hardware SupportU8TN3E U8TN3EHP 3 year Next Business Day Color LaserJet M452 ServiceU8TN3E U8TN3EHP 3 year Next Business Day Exchange Color LaserJet M452 ServiceU8TN4E U8TN4EHP Network Install Inkjet/Personal LaserJet ServiceH3110E		
Solutions	HP Web Jetadmin: <u>hp.com/qo/wja</u> HP Universal Print Driver: <u>hp.com/qo/upd</u>		

HP JetAdvantage Security Manager: <u>hp.com/go/securitymanager</u>

#### Notes

The world's most preferred printers (cover page): Worldwide printer marketshare, and HP printer brand awareness, consideration and preference study in 9 markets 2014.

<sup>1</sup> Based on HP internal testing of top three leading competitors' first page out from sleep mode and duplex print speed completed 8/2015. Subject to device settings. Actual results may vary. For details see <u>hp.com/qo/Liclaims</u>.

<sup>2</sup> Based on ISO/IEC 19798 cartridge yields for HP 305X High Yield Black Original LaserJet Toner cartridge and 305A Cyan/Magenta/Yellow Original LaserJet Toner cartridges compared with HP 410X High Yield Black/Cyan/Magenta/Yellow Original LaserJet Toner cartridges. Learn more at <u>hp.com/go/learnaboutsupplies</u>.

<sup>3</sup> Automatic duplexing is available on the HP Color LaserJet Pro M452dn and M452dw models only.

<sup>4</sup> Touchscreen is only available for the HP Color Laser Jet 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 <u>hpconnected.com</u>.

<sup>5</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 <u>hp.com/go/mobileprinting</u>.

<sup>6</sup> Purchase of optional paper tray required to reach maximum input capacity.

<sup>7</sup> HP 410X High Yield Black/Cyan/Magenta/Yellow Original Laser Jet Toner cartridges are not included in printer purchase; purchase separately.

<sup>8</sup> Easy-access USB drive is only available for the HP Color LaserJet Pro M452dw. Feature works with PDF, JPG, and Microsoft Word and PowerPoint 2003 and later. Only Latin language fonts are supported. <sup>9</sup> Wireless direct printing is only supported by the HP Color LaserJet Pro M452nw and M452dw. 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. Wireless performance is dependent on physical environment and distance from the access point in the MFP or printer. Learn more at <u>hp.com/ao/businessmobileprinting</u>.

<sup>10</sup> Touch-to-print capability is supported by the HP Color LaserJet Pro M452dw only. Mobile device must support near-field communications (NFC)-enabled printing. For more information, see <u>hp.com/qo/nfcprinting</u>.

<sup>11</sup> Requires purchase of separate USB flash drive with at least 16 GB capacity.

<sup>12</sup> Wireless networking is only supported by the HP Color Laser Jet Pro M452nw and M452dw. Wireless performance is dependent on physical environment and distance from access point, and may be limited during active VPN connections.

<sup>13</sup> Printing speed measured using ISO/IEC 24734 and excludes first set of test documents. For more information, see <u>hp.com/go/printerclaims</u>. Exact speed varies depending on the system configuration, software application, driver, and document complexity.

<sup>14</sup> HP JetAdvantage Private Print is only available for the HP Color Laser Jet Pro M452dw. JetAdvantage Private Print is available at no charge and requires that the printer be connected to the Internet with web services enabled. Not available in all countries. For more information, see <u>hpietadvantage.com/ondemand</u>.

<sup>15</sup> Printer requires ePrint account registration. App or software may be required. Wireless operations are compatible with 2.4 GHz operations only. Learn more at hp.com/go/mobileprinting.

<sup>16</sup> Supports the following devices running iOS 4.2 or later: iPad, iPad 2, iPhone (3GS or later), iPod touch (3rd generation or later). Works with HP's AirPrint-enabled printers and requires the printer be connected to the same network as your iOS device. Wireless performance is dependent on physical environment and distance from the access point.

<sup>17</sup> Mopria-certified HP printer and mobile device must be connected to the same wireless network or have a direct wireless connection. Performance is dependent on physical environment and distance from the wireless access point. Wireless operations are compatible with 2.4 GHz routers only.

<sup>18</sup> Measured using ISO/IEC 17629. For more information, see hp.com/go/printerclaims. Exact speed varies depending on system configuration, software applications, driver, and document complexity.

<sup>19</sup> Declared cartridge yield value in accordance with ISO/IEC 19752. Actual yields vary considerably based on images printed and other factors. For more information, visit <u>hp.com/go/learnaboutsupplies</u>. HP Color LaserJet Pro M452 in-box cartridge may have higher yield than stated for printer units manufactured before 2017.

<sup>20</sup> Based on HP testing using the ENERGY STAR<sup>®</sup> program's Typical Electricity Consumption (TEC) method or as reported in <u>energystar.gov</u> of top three leading competitors as of 8/2015. Actual results may vary. For details see <u>hp.com/go/Liclaims</u>.

<sup>21</sup> Based on HP internal research on competitor offerings (Device Security Comparison, January 2015) and Solutions Report on HP JetAdvantage Security Manager 2.1 from Buyers Laboratory LLC, February 2015. HP JetAdvantage Security Manager must be purchased separately. To learn more, please visit <u>hp.com/go/securitymanager</u>.

<sup>22</sup> As compared with cartridge gauges for predecessor products.

<sup>23</sup> As compared with previous generation of HP LaserJet printers.

<sup>24</sup> As compared with previous generation of HP LaserJet toner cartridges.

<sup>25</sup> HP Web Jetadmin is free and available for download at <u>hp.com/go/wja</u>.

<sup>26</sup> The HP Universal Print Driver is free and available for download at hp.com/go/upd.

<sup>27</sup> HP Auto-On/Auto-Off Technology capabilities are subject to printer and settings.

<sup>28</sup> Compared with products that use traditional fusing.

 $^{\rm 29}$  Environmental certifications do not apply to the HP Color LaserJet Pro M452nw printer.

<sup>30</sup> Program availability varies. Original HP cartridge return and recycling is currently available in more than 50 countries, territories, and regions in Asia, Europe, and North and South America through the

HP Planet Partners program. For more information, visit <u>hp.com/recycle</u>.

<sup>31</sup> 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>32</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>33</sup> Not all "Compatible Operating Systems" are supported with inbox software; Full solution software available only for Windows 7; Legacy Windows Operation Systems (XP, Vista, and equivalent servers) get print and Scan drivers only; Windows 8 and 10 have apps available in MS App Store; Windows RT OS for Tablets (32- & 64-bit) uses a simplified HP print driver built into the RT OS; UNIX modelscripts are available on <u>HP com</u> (Modelscripts are printer drivers for UNIX operating systems); Linux systems use in-OS HPLIP software.

<sup>34</sup> Acoustic values are subject to change. For current information see <u>hp.com/support</u>, Configuration tested: base model, simplex printing, A4 paper at an average of 27 ppm.

<sup>35</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.

<sup>36</sup> EPEAT Silver registered models of this product are available where HP registers imaging and equipment products.

<sup>37</sup> Service levels and response times may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit hp.com/qo/cpc.

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