

Product guide

# Stunning speed. Professional color. Solid security.

HP Color LaserJet Pro M452 series



The world's most preferred printers.



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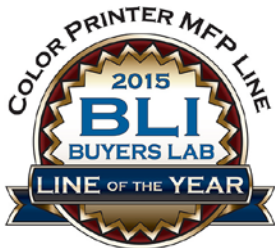
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# Performance and security that you can count on

In today's business world, users need both ideal printing performance and robust security. This speedy color printer works faster<sup>1</sup> and delivers comprehensive security to guard against threats and fraud. Original HP Toner cartridges with JetIntelligence and this device combine to give you more professional-quality color pages.<sup>2</sup>

## Who can benefit?

Work teams of 3-10 people printing 750-4,000 pages per month can share this printer, which swiftly provides professional-quality color documents when you need them. Accelerate productivity with automatic two-sided printing,<sup>3</sup> an intuitive control panel,<sup>4</sup> and easy mobile printing options.<sup>5</sup> Minimize interruptions with an input capacity of up to 850 sheets<sup>6</sup> and high-capacity black and color cartridges.<sup>7</sup>



### Business-Class Printers

For the fifth year in a row and the sixth time since 2008, HP has captured BLI's Color Printer/MFP Line of the Year award



# Product walk around

HP Color LaserJet Pro M452dw shown

- 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<sup>9</sup>/NFC touch-to-print<sup>10</sup>
- 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



Front view



Rear view

## Series at a glance



Model	M452nw	M452dn	M452dw
<b>Product number</b>	CF388A	CF389A	CF394A
<b>Print speed, pages per minute (ppm), letter/A4<sup>13</sup></b>	Up to 28/27 ppm	Up to 28/27 ppm	Up to 28/27 ppm
<b>50-sheet multipurpose tray, 250-sheet tray 2</b>	✓	✓	✓
<b>550-sheet tray 3</b>	Optional	Optional	Optional
<b>Control panel</b>	2-line LCD	2-line LCD	3-inch (7.6 cm) color touchscreen
<b>HP JetAdvantage Private Print<sup>14</sup></b>	Not available	Not available	✓
<b>Easy-access USB port<sup>8</sup></b>	Not available	Not available	✓
<b>Two-sided printing</b>	Manual	Automatic	Automatic
<b>Networking</b>	Gigabit Ethernet, wireless 802.11b/g/n <sup>12</sup>	Gigabit Ethernet	Gigabit Ethernet, wireless 802.11b/g/n <sup>12</sup>
<b>Mobile printing</b>	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

# Product comparison

The following table compares the new HP Color LaserJet Pro M452dw with the HP LaserJet Pro 400 color M451 dw.



HP Color LaserJet Pro M452dw	HP LaserJet Pro 400 color M451 dw	Benefits
First page out (FPO) from sleep as fast as 11.3 seconds <sup>18</sup>	FPO of 18 seconds from sleep <sup>18</sup>	Get energy efficiency without sacrificing productivity, with up to 37% faster FPO from sleep
FPO from ready of only 8.9/9.0 seconds black and 9.5/9.9 seconds color (letter/A4) <sup>18</sup>	FPO of 17 seconds from ready (black/color, letter/A4) <sup>18</sup>	Minimize time at the printer, with a 48% faster FPO from ready for black and 44% faster FPO for color, letter
Print speed: Up to 28 ppm, letter (27 ppm, A4) <sup>13</sup>	Up to 21 ppm, letter (20 ppm, A4) <sup>13</sup>	Save time with 33% faster output, letter
Duplex print speed: up to 25/24 images per minute ipm, letter/A4 <sup>3,13</sup>	Duplex: Up to 10 ipm, letter/A4 <sup>13</sup>	Save time and use less paper with up to 150% faster two-sided printing
High-yield cartridge options available for black toner (~6,500 pages) and color toner (~5,000 pages each for CMY) <sup>7,19</sup>	High-yield cartridge available for black toner (~4,000 pages) Standard color cartridges (~2,600 pages each for CMY)	High-capacity toner cartridges allow users to print more pages with less intervention
Easy-access USB: print Microsoft® Word and PowerPoint® documents, as well as PDF and JPG <sup>8</sup>	Not available	Increased productivity and flexibility
Wireless direct printing <sup>9</sup> /NFC touch-to-print <sup>10</sup> standard on the M452dw model	NFC touch-to-print requires purchase of optional accessory	Improved efficiency and convenient mobile printing
Intuitive 3-inch (7.6 cm) color touchscreen <sup>4</sup>	2-line LCD	Improved control panel results in easier operation
Original HP Toner cartridges with JetIntelligence	Original HP toner cartridges	48% more pages, <sup>2</sup> peak printing performance, and the added protection of anti-fraud technology
850-sheet maximum input capacity <sup>6</sup>	550-sheet maximum input capacity <sup>6</sup>	55% higher input capacity minimizes interruptions; with the optional 550-sheet tray, you can add a whole ream before the paper runs completely out
Quick, accurate online help for HP LaserJet Pro devices	Not available	Easy access to up-to-date troubleshooting guides

# Key benefits at a glance



Ideal printing performance and robust security built for the way you work.

## Fast printing. Strong protection.

- Grab pages and go—without waiting around. This printer wakes up and prints faster than the competition.<sup>1</sup>
- Breeze through multipage documents with two-sided printing that's faster than leading competitors (M452dn/M452dw models).<sup>1</sup>
- Protect information and control access to confidential print jobs, using cloud-based HP JetAdvantage Private Print (M452dw model)<sup>14</sup> or built-in job storage<sup>11</sup> with PIN printing (all models).
- Keep printing safe—from boot up to shut down—with security features that guard against complex threats.



## More. Pages, Performance, and Protection.

- Get the most prints for your money and spend less time replacing toner—using Original HP High Yield Color Toner cartridges with JetIntelligence.<sup>2,7</sup>
- Count on professional quality at high speeds with HP ColorSphere 3 toner.
- Help ensure you're getting the authentic HP quality you paid for with innovative anti-fraud technology.
- Speed through print jobs right out of the box, using preinstalled Original HP Toner cartridges with JetIntelligence—ready to print.
- No delays or mess—quickly replace your cartridges using auto seal removal and easy-open packaging.



## Easy management. Efficient printing.

- Manage tasks directly at the device with an easy-to-use control panel.
- Easily print Microsoft Word and PowerPoint documents—now directly from your USB drive (M452dw model).<sup>8</sup>
- Set up this printer fast and easily manage device settings to help increase overall printing efficiency. Device maintenance is easy, with no consumables beyond toner cartridges.
- Print using less energy than competitors—without slowing down.<sup>20</sup>



## Stay connected with easy mobile printing options.

- Easily print from a variety of smartphones and tablets—generally no setup or apps required.<sup>5</sup>
- Count on wireless direct printing in the office—from mobile devices—without accessing the company network (M452nw/dw models).<sup>9</sup>
- Empower workgroups to print with just a touch of their NFC-enabled mobile device to the printer—no network needed (M452dw model).<sup>10</sup>
- Easily access, print, and share resources with built-in Gigabit Ethernet networking. Expand your networking options with the wireless capabilities of the M452nw and M452dw models.

# Fast printing. Strong protection.



Shift your office into high gear. Print your first page and produce two-sided prints<sup>3</sup> faster than the competition,<sup>1</sup> and help secure your device, data, and documents from boot up to shut down.



## Start printing fast, directly from sleep mode

Don't wait around for documents. This printer wakes up and prints faster than the competition<sup>1</sup>—as fast as 11.3 seconds from energy-efficient sleep mode—and works even faster from ready mode. Receive your first page in as quickly as 8.9 seconds.<sup>18</sup> This speedy printer then produces 28 pages per minute, letter (27 ppm, A4)<sup>13</sup> for both black and color documents.



## Achieve a high level of security and control

Available on all models, enable encrypted job storage at the printer by plugging a flash drive into the USB port located on the back of this printer.<sup>11</sup> Release jobs by entering a PIN at the printer.

HP JetAdvantage Private Print<sup>14</sup> helps prevent unauthorized access to confidential print jobs stored in the cloud. Users get the flexibility to pick up jobs at any compatible device.



## Fast, two-sided printing

Speed through tasks and save paper. Choose the M452dn or M452dw model for automatic two-sided printing that's faster than the competition<sup>1</sup>—up to 25 ipm, letter (24 ipm, A4).<sup>13</sup>



## Embedded security features for greater protection

Keep printing safe, from boot up to shut down. This printer uses embedded security features to guard against complex threats—so you can be confident your device, data, and documents are protected.

With Pro series security, you can define which clients/devices are allowed on the network, manage the industry-standard of SNMP configuration, and decide which ports/IP addresses have access to printer features. Utilize data encryption and optional password settings for wireless direct printing for improved security.



## Loaded for productivity

This printer supports a wide variety of media weights and sizes. Increase input capacity to 850 sheets with the optional 550-sheet paper tray—with room to add a whole ream before the paper in the tray runs completely out.<sup>6</sup>



## Streamline fleet security

HP JetAdvantage Security Manager delivers the most comprehensive printing security in the market, with policy-based protection for printing and imaging devices.<sup>21</sup>



### HP JetAdvantage Security Manager

Secure your HP printing fleet with the solution Buyers Laboratory calls trailblazing.<sup>21</sup>

# More. Pages, Performance, and Protection.

Bring out the best in your printer. Print more professional-quality color pages than ever before,<sup>2</sup> using specially designed Original HP Toner cartridges with JetIntelligence. Count on better performance, higher energy efficiency, and the authentic HP quality you paid for—something the competition simply can't match.<sup>2</sup>



Original HP Toner cartridge with JetIntelligence

### More pages than ever before<sup>2</sup>

Be confident you're getting the most out of every cartridge you buy. HP JetIntelligence Toner cartridges deliver over 48% more pages<sup>2</sup> than ever before with page maximizer technology. Consistently predict toner levels with print gauge technology.<sup>22</sup>

### HP quality—print after print

HP ColorSphere 3 toner is engineered for a low melt point for consistent, professional-quality results at high speeds. It is precisely tuned to match the powerful performance of the M452 printer series.

### Protect your investment

Don't be fooled by cartridges that attempt to mimic Original HP. Innovative anti-fraud technology helps identify whether a cartridge is Original HP, used, or counterfeit—to help ensure you're getting the authentic HP quality you paid for.

### High yield, low intervention

Don't waste important business time replacing toner cartridges. Optional high-yield cartridges—both black and color—enable uninterrupted printing for longer periods of time.<sup>7</sup>

### Ready to work, right away

Speed through print jobs right out of the box—without even opening the cartridge door. The M452 series is shipped with preinstalled, specially designed Original HP Toner cartridges with JetIntelligence—ready to print.

### Start printing quickly and easily

Get right to printing without delays or mess—quickly replace your cartridges using auto seal removal and easy-open packaging.

## More pages

Original HP Toner cartridges with JetIntelligence are re-engineered for higher ISO yields<sup>2</sup> and more dependable toner level status.<sup>22</sup>



Page maximizer technology

- More pages per cartridge than previous generations of HP toner cartridges<sup>2</sup>
- Smaller, more robust parts<sup>24</sup>
- Less cartridge wear<sup>24</sup>



Print gauge technology

- More dependable gauges<sup>22</sup> to ensure you get the most prints possible from your cartridges

## More performance

Reformulated toner for a low melt point and hard shell that supports more pages<sup>2</sup> in a smaller, faster device and uses less energy to print a page.<sup>23</sup>



ColorSphere 3 toner

- Low melt core = faster print speed and HP legendary quality
- Hard shell = durable toner for higher yields

## More protection

Get the authentic HP quality you paid for and avoid potential problems. Help manage business costs and maintain quality standards across your fleet.



Anti-fraud technology

- Helps you identify the difference between Original HP and used or counterfeit cartridges
- Supports policies you set for your printing fleet



Auto seal removal

- Skip a step—the toner seal is automatically removed for you
- Get right to printing without delays



# Easy management. Efficient printing.



Easily produce the documents you need to move work forward, while conserving energy. This power-saving printer is easy to set up and manage, and is built for even the most demanding office environments.



### Simple task management

Easily manage print jobs directly at the printer, without having to access a PC. On the M452dw model, just tap and swipe the intuitive 3-inch (7.6 cm) touchscreen<sup>4</sup> to make workflow easier. On the M452dn and nw models, the 2-line LCD display is simple to read and operate.



### Print Microsoft Office documents—right from your USB drive

On the M452dw model, you can easily print the Microsoft Word and PowerPoint documents you work with every day, now directly from your USB drive.<sup>8</sup>



### Manage your business printing with ease

IT can easily manage the essential features of the M452 series using fleet management solutions such as HP Web Jetadmin<sup>25</sup> and HP Universal Print Driver.<sup>26</sup> Get standard monitoring and reporting (such as page counts and supply status), core fleet configuration and security settings, and basic management and policy tools. IT can quickly and easily apply printing rules across your fleet—to help meet environmental goals, improve security, and help reduce operating costs.

For simple one-on-one management, connect via the network or USB to the product's HP Embedded Web Server. Here you can easily view supplies status, adjust device settings, access up-to-date troubleshooting guides, and more.

Device maintenance is easy, with no consumables beyond toner cartridges.



### Designed to conserve

Keep productivity up and energy use down. This efficient printer uses less energy than competitors without slowing down—enhanced by Original HP Toner cartridges with JetIntelligence.<sup>20</sup>

- HP Auto-On/Auto-Off Technology turns your printer on when you need it and off when you don't.<sup>27</sup>
- With Instant-on Technology, the fuser warms rapidly and cools quickly, helping you conserve energy.<sup>28</sup>
- Support for thin media allows users to print on papers as light as 16 lb (60 g/m<sup>2</sup>). Help save your business time and money with lightweight HP EcoFFICIENT paper. Refill trays less often, minimize waste, and save energy.
- Automatic two-sided printing<sup>3</sup> can result in up to 50% paper savings.

In addition to this printer's energy-saving features, the HP Color LaserJet Enterprise M452dn and M452dw models are ENERGY STAR certified.<sup>29</sup>



### Reduce your impact—recycle HP cartridges

HP helps you recycle your Original HP cartridges—it's easy and convenient with the HP Planet Partners program, available in more than 50 countries and territories around the world.<sup>30</sup>

No Original HP cartridges returned through HP Planet Partners are ever sent to a landfill. For more information, visit [hp.com/recycle](http://hp.com/recycle).

## Stay connected with easy mobile printing options



Keep your business nimble when needs shift or opportunity strikes—in the office or on the go.<sup>5</sup> Print wirelessly with or without accessing the network,<sup>9,12</sup> and stay connected with Ethernet networking. Print with just a touch from mobile devices.<sup>10</sup>



Hewlett-Packard Company  
**NFC/WiFi Direct**

Outstanding Achievement in Innovation

Buyers Laboratory, LLC said HP's use of NFC/Wi-Fi Direct to bring security and simplicity to mobile printing was an Outstanding Achievement in Innovation.

### Extend your printing reach

Built-in 10/100/1000 Ethernet lets you share printing resources on a network. The M452nw and M452dw models let you print virtually anywhere in the office with built-in 802.11b/g/n wireless networking.<sup>12</sup>



### Print wirelessly from mobile devices—no network needed

Enable wireless direct printing to the M452nw and M452dw models from anywhere in the office from smartphones, tablets, and notebook PCs.<sup>9</sup> Or, walk up and print with just a touch of your NFC-enabled smartphone or tablet to the M452dw model.<sup>10</sup> (On Android™ devices, NFC touch-to-print is enabled via the HP ePrint app.)

There's no need to search through a long list of devices—automatically discover the nearest printer without accessing your corporate network. Security and user access settings—like 128-bit encryption and a configurable passphrase—can be easily set up with HP Web Jetadmin<sup>25</sup> or the HP Embedded Web Server.



### Print from a wide range of mobile devices

Easily print documents, emails, PDFs, and more from iPhones® and iPads® as well as smartphones and tablets running iOS, Android™ version 4.4 or later, Windows® 8/10, or Google™ Chrome™ operating systems—generally no setup or apps required.<sup>5</sup> Simply open and preview the content you want to print, select your printer, and hit Print. For mobile devices without built-in print support, users will first need to download the HP ePrint app or HP ePrint software.



### Managed mobile print solutions

If you're looking to deploy mobile printing across a printer fleet, HP offers server-based solutions that provide secure pull-printing, as well as advanced management and reporting capabilities. HP also provides options to integrate with third-party mobile device management solutions. For more information, see [hp.com/go/businessmobileprinting](http://hp.com/go/businessmobileprinting).

For non-server based pull printing, HP JetAdvantage Private Print<sup>14</sup> helps provide access to confidential print jobs stored in the cloud. Users can view and delete jobs, virtually anywhere, using their mobile device. Learn more at: [hpietadvantage.com/ondemand](http://hpietadvantage.com/ondemand).

# Technical specifications

	HP Color LaserJet Pro M452nw	HP Color LaserJet Pro M452dn	HP Color LaserJet Pro M452dw
<b>Product number</b>	CF388A	CF389A	CF394A
<b>Control panel</b>	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)
<b>Print speed (black and color)<sup>13</sup></b>	Simplex: Up to 28 ppm, letter (27 ppm, A4) Duplex: Up to 25 ipm, letter (24 ipm, A4)		
<b>First page out<sup>18</sup></b>	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		
<b>Print resolution</b>	600 x 600 dpi, up to 38,400 x 600 enhanced dpi; HP ImageREt 3600, PANTONE® calibrated		
<b>Printer advanced features</b>			
Print from USB drive (no computer required)			File formats: Microsoft Word, PowerPoint, PDF, JPG
<b>Processor</b>	1.2 GHz		
<b>Memory</b>	128 MB	256 MB	
<b>Durability ratings</b>			
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)		
<b>Media specifications</b>			
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	Tray 1: Letter, legal, executive, Oficio 8.5 x 13, 3 x 5 in, 4 x 6 in, 5 x 8 in, envelopes (No 10, Monarch); A4, A5, A6, B5 (JIS), B6 (JIS), 16K (195 x 270 mm, 184 x 260 mm, 197 x 273 mm), 10 x 15 cm, Oficio 216 x 340 mm, postcards (JIS single, JIS double), envelopes (DL, C5, B5); Custom media sizes: 3 x 5 to 8.5 x 14 in (76 x 127 to 216 x 356 mm) Tray 2: Letter, legal, executive, Oficio 8.5 x 13, 3 x 5 in, 4 x 6 in, 5 x 8 in, envelopes (No 10, Monarch); A4, A5, A6, B5 (JIS), B6 (JIS), 16K (195 x 270 mm, 184 x 260 mm, 197 x 273 mm), 10 x 15 cm, Oficio 216 x 340 mm, postcards (JIS single, JIS double), envelopes (DL, C5, B5); Custom media sizes: 3.94 x 5.83 to 8.5 x 14 in (100 x 148 to 216 x 356 mm) Optional Tray 3: Letter, legal, executive, Oficio 8.5 x 13, 3 x 5 in, 4 x 6 in, 5 x 8 in; A4, A5, A6, B5 (JIS), B6 (JIS), 16K (195 x 270 mm, 184 x 260 mm, 197 x 273 mm), 10 x 15 cm, Oficio 216 x 340 mm, postcards (JIS single, JIS double); Custom media sizes: 3.94 x 5.83 to 8.5 x 14 in (100 x 148 to 216 x 356 mm)		
	Automatic duplexer: Letter, legal, executive, Oficio 8.5 x 13; A4, B5, 16K (195 x 270 mm, 184 x 260 mm, 197 x 273 mm), Oficio 216 x 340 mm		
Media weights	Tray 1: 16 to 47 lb (60 to 176 g/m <sup>2</sup> ) (up to 52 lb (200 g/m <sup>2</sup> ) with HP Color laser glossy photo papers) Tray 2: 16 to 43 lb (60 to 163 g/m <sup>2</sup> ) (up to 47 lb (176 g/m <sup>2</sup> ) with postcards, up to 52 lb (200 g/m <sup>2</sup> ) with HP Color laser glossy photo papers) Optional Tray 3: 16 to 43 lb (60 to 163 g/m <sup>2</sup> ) (up to 47 lb (176 g/m <sup>2</sup> ) with postcards, up to 40 lb (150 g/m <sup>2</sup> ) with HP Color laser glossy photo papers)		
	Automatic duplexer: 16 to 43 lb (60 to 163 g/m <sup>2</sup> )		
Media types	Paper (bond, brochure, colored, glossy, letterhead, photo, plain, preprinted, prepunched, recycled, rough), postcards, labels, envelopes		
<b>Print languages</b>	HP PCL 6, HP PCL 5c, HP postscript level 3 emulation, PDF, URF, PCLm, Native Office, PWG Raster		

	HP Color LaserJet Pro M452nw	HP Color LaserJet Pro M452dn	HP Color LaserJet Pro M452dw
<b>Fonts</b>	84 scalable TrueType fonts		
<b>Connectivity</b>	Hi-Speed USB 2.0 printing port, built-in Gigabit Ethernet 10/100/1000 Base-TX network port, Host USB for job storage		
			Plus: Easy-access USB
<b>Mobile printing</b>	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
<b>Network capabilities</b>	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
<b>Network protocols</b>	TCP/IP, IPv4, IPv6 Print: TCP-IP port 9100 Direct Mode, LPD (raw queue support only), Web Services Printing Discovery: SLP, Bonjour, Web Services Discovery IP Config: IPv4 (BootP, DHCP, AutoIP, Manual), IPv6 (Stateless Link-Local and via Router, Statefull via DHCPv6) Management: SNMPv1, SNMPv2, SNMPv3, HTTP		
<b>Security</b>	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
<b>Printer management</b>	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)		
<b>Compatible operating systems<sup>33</sup></b>	Windows OS compatible with In-Box Driver: Windows XP SP3 all 32-bit editions (XP Home, XP Pro, etc), Windows Vista® all 32-bit editions (Home Basic, Premium, Professional, etc), Windows 7 all 32- & 64-bit editions, Windows 8/8.1 all 32- & 64-bit editions (excluding RT OS for Tablets), Windows 10 all 32- & 64-bit editions (excluding RT OS for Tablets) Windows OS compatible with Universal Print Driver (From <a href="http://HP.com">HP.com</a> ): 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, Windows 8/8.1 all 32- & 64-bit editions (excluding RT OS for Tablets), Windows 10 all 32- & 64-bit editions (excluding RT OS for Tablets) Mac OS (HP Print Drivers available from <a href="http://HP.com">HP.com</a> 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		
<b>System requirements, PC</b>	Windows XP (SP2) (32-bit) or newer, 233 MHz processor or higher, 512 MB RAM, 400 MB available hard disk space, CD-ROM or Internet, USB or Network connection		
<b>System requirements, Mac</b>	Mac OS X v 10.7 or newer, Internet, USB or Network connection, 1 GB available hard disk space		
<b>Dimensions (width x depth x height)</b>	Minimum (all trays closed): 16.2 x 17.8 x 16.7 in (412 x 453 x 295 mm) Maximum (with optional tray 3): 16.2 x 24.9 x 11.6 in (412 x 633 x 295 mm)	Minimum (all trays closed): 16.2 x 18.5 x 11.6 in (412 x 469 x 295 mm) Maximum (with optional tray 3): 16.2 x 25.6 x 13.4 in (412 x 649 x 340 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 25.6 x 13.4 in (412 x 649 x 340 mm)
<b>Weight (with cartridges)</b>	38.6 lb (17.5 kg)	41.7 lb (18.9 kg)	

	HP Color LaserJet Pro M452nw	HP Color LaserJet Pro M452dn	HP Color LaserJet Pro M452dw
<b>What's in the box</b>	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	
<b>Software included</b>	<p>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.)</p> <p>Mac: Welcome Screen (directs users to <a href="http://hp.com">hp.com</a> or OS App Store for LaserJet Software)</p>		
<b>Downloadable software</b>	<p>From <a href="http://123.hp.com">123.hp.com</a>: HP Easy Start (guided software install for Windows and Mac)</p> <p>From <a href="http://hp.com">hp.com</a> (Windows): Full-solution software and drivers (same solution as "Software Included"), HP PCL6 print driver only (no installer; for "Add Printer" installs), HP PCL 6 print driver with installer, Product Documentation and Support</p> <p>From <a href="http://hp.com">hp.com</a> (Mac): Full-solution software and drivers</p> <p>For Mobile OS: See "HP Mobile Printing" at <a href="http://hp.com/us/en/ads/mobility/overview.html">hp.com/us/en/ads/mobility/overview.html</a></p> <p>From In-OS app stores: HP recommended printer drivers and software</p> <p>From <a href="http://hp.com">hp.com</a> (for printer administrators): Printer Administrator Resource Kit (Driver Configuration Utility, Driver Deployment Utility, Managed Printing Administrator), HP Universal Print Drivers (PCL 6, PCL 5 and PS for Windows), HP ePrint Software (ePrint Mobile Driver for Windows), Linux/Unix Print Drivers, SAP (PCL 5 and PS Print Drivers), HP Web Jetadmin Software, HP Proxy Agent Software, HP JetAdvantage Security Manager<sup>21</sup></p>		
<b>Warranty</b>	One-year, next-business day, onsite warranty. Warranty and support options vary by product, country and local legal requirements. 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.		
<b>HP Sure Supply supported</b>	HP SureSupply alerts you when your print cartridge is running low and helps you purchase online or locally through HP or a participating retailer. Only available with Original HP supplies; Internet access required. To learn more, visit <a href="http://hp.com/go/SureSupply">hp.com/go/SureSupply</a> .		

## Environmental and power specifications

	HP Color LaserJet Pro M452nw	HP Color LaserJet Pro M452dn	HP Color LaserJet Pro M452dw
<b>Environmental ranges</b>			
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		
<b>Acoustic power emissions<sup>34</sup></b>			
	Ready mode: 4.8 B(A); Active printing: 6.3 B(A)		
<b>Acoustic pressure emissions (bystander)</b>			
	Ready mode: 34 dB(A); Active printing: 49 dB(A)		
<b>Power specifications<sup>35</sup></b>			
	ENERGY STAR® certified; Blue Angel; EPEAT® Silver registered models available <sup>36</sup>		
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		
<b>Environmental specifications</b>			
	Mercury free		
<b>Safety and regulatory compliance</b>			
	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 IECCEB 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)		
<b>Electromagnetic emission standard</b>			
	CISPR 22:2008 (Class B), EN 55022:2010 (Class B), FCC CFR 47, Part 15 (Class B), ICES-003, Issue 5 (Class B), EN 61000-3-2:2006 +A1:2009 +A2:2009, EN 61000-3-3:2008, EN 55024:2010, Other EMC approvals as required by 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 [hp.com](http://hp.com). To contact HP by country, please visit [hp.com/country/us/en/cs/contact-hp/contact.html](http://hp.com/country/us/en/cs/contact-hp/contact.html).

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

<b>Product</b>	HP Color LaserJet Pro M452nw HP Color LaserJet Pro M452dn HP Color LaserJet Pro M452dw	CF388A CF389A CF394A
<b>Supplies<sup>19</sup></b>	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 Yellow 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 CF413X
<b>Accessories</b>	HP LaserJet 550-sheet Paper Feeder HP v222w 16GB Mini USB Drive	CF404A POR81AA
<b>HP Services</b>	<p>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.</p> <p>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.<sup>37</sup></p>	<p>HP 3 year Next Business Day Color LaserJet M452 Hardware Support U8TN1E HP 4 year Next Business Day Color LaserJet M452 Hardware Support U8TN2E HP 5 year Next Business Day Color LaserJet M452 Hardware Support U8TN3E HP 3 year Next Business Day Exchange Color LaserJet M452 Service U8TN4E HP Network Install Inkjet/Personal LaserJet Service H3110E</p>
<b>Solutions</b>	<p>HP Web Jetadmin: <a href="http://hp.com/go/wja">hp.com/go/wja</a> HP Universal Print Driver: <a href="http://hp.com/go/upd">hp.com/go/upd</a> HP JetAdvantage Security Manager: <a href="http://hp.com/go/securitymanager">hp.com/go/securitymanager</a></p>	

## 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 [hp.com/go/Liclaims](http://hp.com/go/Liclaims).

<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 [hp.com/go/learnaboutsups](http://hp.com/go/learnaboutsups).

<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 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>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 [hp.com/go/mobileprinting](http://hp.com/go/mobileprinting).

<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 LaserJet 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 [hp.com/go/businessmobileprinting](http://hp.com/go/businessmobileprinting).

<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 [hp.com/go/nfcprinting](http://hp.com/go/nfcprinting).

<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 LaserJet 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 [hp.com/go/printerclaims](http://hp.com/go/printerclaims). 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 LaserJet 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 [hpetadvantage.com/ondemand](http://hpetadvantage.com/ondemand).

<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](http://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](http://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 [hp.com/go/learnaboutsups](http://hp.com/go/learnaboutsups). 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® program's Typical Electricity Consumption (TEC) method or as reported in [energystar.gov](http://energystar.gov) of top three leading competitors as of 8/2015. Actual results may vary. For details see [hp.com/go/Liclaims](http://hp.com/go/Liclaims).

<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 [hp.com/go/securitymanager](http://hp.com/go/securitymanager).

<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 [hp.com/go/wia](http://hp.com/go/wia).

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

<sup>29</sup> 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 [hp.com/recycle](http://hp.com/recycle).

<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 [HP.com](http://HP.com) (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 [hp.com/support](http://hp.com/support). 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/go/cpc](http://hp.com/go/cpc).

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