# HP Color LaserJet Pro M452 series



A fast, capable colour printer with robust security and innovative toner for more pages.<sup>2</sup>

Ideal printing performance and robust security for how you work. This capable colour printer finishes jobs faster and delivers comprehensive security to guard against threats.<sup>1</sup> Original HP Toner cartridges with JetIntelligence produce more pages.<sup>2</sup>



**HP Color LaserJet Pro M452nw** 



**HP Color LaserJet Pro M452dn** 



**HP Color LaserJet Pro M452dw** 

#### 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.<sup>1</sup>
- Protect information and control access to confidential print jobs with HP JetAdvantage Private Print.<sup>3</sup>
- Keep printing safe from boot up to shutdown with security features that guard against complex threats.

#### More pages, performance, and protection

- Get the most prints for your money—with Original HP High Yield Colour Toner cartridges with JetIntelligence.<sup>2</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.
- Print right away with preinstalled toner cartridges. Replace them with optional high-yield cartridges.

#### Easy management. Efficient printing

- Easily manage print jobs directly at the printer—just tap and swipe the 3-inch (7.6 cm) touchscreen.<sup>5</sup>
- Easily print Microsoft® Word and PowerPoint® documents—now directly from your USB drive.<sup>4</sup>
- Easily manage devices and settings using HP Web Jetadmin with a suite of essential management features.<sup>6</sup>
- Print using less energy than competitors—enhanced by Original HP Toner cartridges with JetIntelligence.<sup>7</sup>

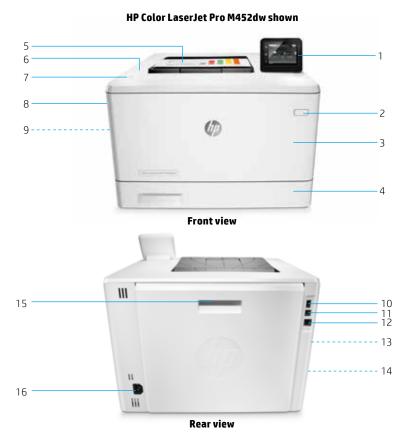
#### Stay connected with easy mobile printing options

- Easily print from a variety of smartphones and tablets—generally no setup or apps required.8
- Count on wireless direct printing in the office—from mobile devices—without accessing the company network.<sup>9</sup>
- Help workers print with just a touch of their NFC-enabled mobile device to the printer—no network needed.<sup>11</sup>
- Easily access, print, and share resources with Ethernet and wireless networking. 10

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 \*Based on cartridge yields for HP 305X compared with HP 410X Original HP Laser Jet Toner Cartridges. For more information, see hp.com/go/learnaboutsupplies \*Breature is only available for the HP Color Laser Jet Pro M452dw. HP 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 hpjetadvantage.com \*Feature is only available for the HP Color Laser Jet Pro M452dw. Microsoft and PowerPoint are U.S. registered trademarks of the Microsoft group of companies. Feature works with Microsoft Word and PowerPoint 2003 and later. Only Latin language fonts are supported. \*Feature 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 hpconnected.com \*HP Web Jetadmin is free and available for download at hp.com/go/webjetadmin \*P Based on HP testing using the ENERGY STAR\* programs\* Typical Electricity Consumption (TEC) method or as reported in energystar.gov of top three leading competitors as of 8/2015. Actual results may vary. For details see hp.com/go/Liclaims \*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 \*Peature is only supported by the HP Color LaserJet Pro M452mw 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

# **Product walkaround**

- 1 3-inch (7.6 cm) colour 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 directly1
- 7 Built-in wireless direct printing<sup>2</sup>/NFC touch-to-print<sup>3</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>4</sup> with PIN printing
- 11 Hi-Speed USB 2.0 printing port
- 12 Ethernet network port
- 13 Built-in wireless networking<sup>5</sup>
- 14 256 MB memory and 1.2 GHz processor
- 15 Rear door (access to print path)
- 16 Power connection



# Series at a glance



<sup>&</sup>lt;sup>1</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>2</sup> Wireless direct printing is only supported by the HP Color LaserJet Pro M452dw. Mobile device needs to be connected directly to the Wir-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/businessmobilepinting and its 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/fncprinting and Requires purchase of separate USB flash drive with at least 16 GB capacity. <sup>5</sup> Wireless networking is only supported by the HP Color LaserJet Pro M452dw. Wireless performance is dependent on physical environment and distance from access point, and may be limited during active VPN connections. <sup>6</sup> Printing speed measured using ISO/E2 4734 and excludes first set of test documents. For more information, see hp.com/go/printerclaims. Exact speed varies depending on the system configuration, software application, driver, and document complexity. <sup>7</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>8</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 HPS shiPrint-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. Wireless operations are compatible with 2.4 GHz routers only.

## **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 hr 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



















# **Top Features**

Shift your office into high gear with a powerful colour printer that doesn't keep you waiting. Print your first page and two-sided prints faster than the competition, and help keep your device, data, and documents safe—from boot up to shutdown.

Print more professional-quality colour pages than ever before.<sup>2</sup> Specially designed Original HP Toner cartridges with JetIntelligence deliver better performance, higher energy efficiency, and authentic HP quality—which the competition can't match.<sup>2</sup>

Easily produce the documents you need to move work forward, while conserving energy. This power-saving printer is easy to set up and manage. Print Microsoft® Word and PowerPoint® documents from the USB port,<sup>3</sup> using the intuitive touchscreen.<sup>4</sup>

Keep 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, 6.7 and stay connected with Ethernet capabilities. Print with a touch from mobile devices. 5,8

Product				
CF388A	HP Color LaserJet Pro M452nw			
CF389A	HP Color LaserJet Pro M452dn			
CF394A	HP Color LaserJet Pro M452dw			
Accessories				
CF404A	HP LaserJet 550-sheet Paper Feeder			
POR81AA	HP v222w 16GB Mini USB Drive			
Supplies <sup>4</sup>				
CF410A	HP 410A Black LaserJet Toner Cartridge (~2,300 pages)			
CF410X	HP 410X Black LaserJet Toner Cartridge (~6,500 pages)			
CF411A	HP 410A Cyan LaserJet Toner Cartridge (~2,300 pages)			
CF411X	HP 410X Cyan LaserJet Toner Cartridge (~5,000 pages)			
CF412A	HP 410A Yellow LaserJet Toner Cartridge (~2,300 pages)			
CF412X	HP 410X Yellow LaserJet Toner Cartridge (~5,000 pages)			
CF413A	HP 410A Magenta LaserJet Toner Cartridge (~2,300 pages)			
CF413X	HP 410X Magenta LaserJet Toner Cartridge (~5,000 pages)			

U8TN1E	HP 3-year Next Business Day Color Laser Jet M452 Hardware Support
U8TN2E	HP 4-year Next Business Day Color Laser Jet M452 Hardware Support
U8TN3E	HP 5-year Next Business Day Color Laser Jet M452 Hardware Support
U8TN6PE	HP 1-year Post Warranty Next Business Day Color LaserJet M452 Hardware Support

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

Contact HP via phone: Asia: 65 6253 8500

### Solutions

HP Web Jetadmin: hp.com/go/wja

HP Universal Print Driver: hp.com/go/upd

HP Imaging and Printing Security Center: hp.com/go/ipsc

HP LaserJet Fonts, Barcodes, and IPDS Emulation available at hp.com/go/laserjetfonts

To learn more about available infrastructure, management, and workflow solutions, visit hp.com/qo/qsc

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/Ljclaims Based on cartridge yields for HP 305X compared with HP 410X Original HP Laser Jet Toner Cartridges. For more information, see hp.com/go/learnaboutsupplies 3 Feature is only available for the HP Color Laser Jet Pro M452dw. Microsoft and PowerPoint are U.S. registered trademarks of the Microsoft group of companies. Feature works with Microsoft Word and PowerPoint 2003 and later. Only Latin language fonts are supported. <sup>4</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 <u>hpconnected.com</u> "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> "Feature is only supported by the HP Color Laser Jet 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. Learn more at <u>hp.com/go/businessmobileprinting</u> "Feature 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. Feature is only supported by the HP Color LaserJet Pro M452dw. Requires a compatible NFC-printing-enabled mobile device. For a list of compatible NFC-printing-enabled mobile devices, see hp.com/go/nfcprinting

# **HP Color LaserJet Pro M452 series**

Technical specifications	HP Color LaserJet Pro M452nw (CF388A)	HP Color LaserJet Pro M452dn (CF389A)	HP Color LaserJet Pro M452dw (CF394A)		
Functions		Print only			
Print		T			
Duplex print options	Manual (driver support provided)		(standard)		
Print speed <sup>1</sup>	Colour (Landscape, A5): Up to 49 ppm; Black Duplex (A4	p to 28 ppm; <b>Colour (normal, A4):</b> Up to 27 ppm; <b>Colour (normal</b> <b>):</b> Up to 24 ipm; <b>Black Duplex (letter):</b> Up to 25 ipm; <b>Colour Dupl</b> o	ex (A4): Up to 24 ipm; Colour Duplex (letter): Up to 25 ipm		
First page out <sup>2</sup>	Black (A4, ready): As fast as 9.0 sec; Colour (A4, ready): As fast as 9.9 sec; Black (A4, sleep): As fast as 11.4 sec; Colour (A4, sleep): As fast as 11.5 sec				
Print technology	Laser				
Print resolution	Black (best/normal): 600 x 600 dpi, U	Jp to 38,400 x 600 enhanced dpi: <b>Colour (best/normal):</b> 600 x 60	0 dpi, Up to 38,400 x 600 enhanced dpi		
Print resolution technologies Print cartridges number	HP ImageREt 3600, PANTONE® calibrated				
Standard print languages	HDDCLE HDC	4 (1 each black, cyan, magenta, yellow)	ico DWG Pactor		
Printer management	HP PCL 6, HP PCL 5c, HP postscript level 3 emulation, PDF, URF, PCL m, Native Office, PWG Raster  Printer Administrator Resource Kit (Driver Configuration Utility, Driver Deployment Utility, Managed Printing Administrator); HP Web JetAdmin Software; HP Proxy Agent Software;  HP Imaging and Printing Security Center; HP Utility (Mac); HP Device Toolbox (Win 7)				
Printer smart software features	N-up printing, collation, HP ePrint, Apple AirPrint™, Mopria certified, Google Cloud Print, NFC touch-to-print, wireless direct printing, HP Auto-On/Auto-Off Technology, Intiutive 3" touchscreer control panel, Print from Cloud using business apps on the control panel, HP JetAdvantage Private Print, Job Storage with PIN printing, Print from USB				
Connectivity	control pariet, i the front cloud during bush	mess apps on the control panet, in sectional tage in trace in the soci	s storage with a prairie ag, that home obs		
Standard connectivity	Hi-Speed USB 2.0 port; built-in Gigabit Ethernet 10/100/1000 Base-TX network port; Easy-access USB  Hi-Speed USB 2.0 port; built-in Gigabit Ethernet 10/100/1000 Base-TX network port; Easy-access USB  Hi-Speed USB 2.0 port; built-in Gigabit Ethernet 10/100/1000 Base-TX network port; Easy-access USB				
Mobile printing capability <sup>3</sup>	HP ePrint, Apple AirPrint™, Wireless Direct Printing, Mopria-certified, Google Cloud Print 2.0, Mobile Apps	HP ePrint, Apple AirPrint™, Mopria-certified, Google Cloud Print 2.0, Mobile Apps	HP ePrint, Apple AirPrint™, Wireless Direct Printing, NFC touch-to-print, Mopria-certified, Google Cloud Print 2.0, Mobile App		
Network ready	Standard (built-in Gigabit Ethernet, Wi-Fi) [Operates as both an	Standard (built-in Gigabit Ethernet)	Standard (built-in Gigabit Ethernet, Wi-Fi) [Operates as both		
	AP (with Wi-Fi Direct) and STA]	-	an AP (with Wi-Fi Direct) and STA]		
Network capabilities		0/1000Base-TX Ethernet, Gigabit; Auto-crossover Ethernet; Auther			
Wireless capability	Yes, Built-in Wi-Fi; Authentication via WEP, WPA/WPA2, WPA Enterprise; Encryption via AES or TKIP; WPS; Wi-Fi Direct Printing	No	Yes, Built-in Wi-Fi; Authentication via WEP, WPA/WPA2, WPA Enterprise; Encryption via AES or TKIP; WPS; Wi-Fi Direct Printing; NFC touch-to-Print		
HP ePrint capability		Yes	<u>.                                      </u>		
Memory	Standard/Maxim	um: 128 MB DRAM	Standard/Maximum: 256 MB DRAM		
Duty cycle <sup>4</sup>	Up to 50	0,000 pages; <b>Recommended monthly page volume:</b> 750 to 4,00	00 pages		
Processor speed		1200 MHz			
Paper handling					
Input	50-s	heet multipurpose tray, 250-sheet input tray; Optional: 550-sheet	et tray		
Output		150-sheet output bin			
Media type	Paper (bond, brochure, coloured, o	glossy, letterhead, photo, plain, preprinted, prepunched, recycled, re	ough), postcards, labels, envelopes		
Media weight	Tray 1: 60 to 176 g/m² (up to 200 g/m² with postcards and HP Colour laser glossy photo papers); Tray 2: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 200 g/m² HP Colour laser glossy photo papers); Tray 3: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 150 g/m² Glossy media); Automatic duplexer: 60 to 163 g/m² (up to 176 g/m² with postcards, up to 160 g/m² with postcards,				
Media sizes custom	Tray 1: 76	x 127 to 216 x 356 mm; <b>Tray 2, optional Tray 3:</b> 100 x 148 to 21	6 x 356 mm		
Dimensions (W x D x H)	412 x 453 x 295 mm (16.2 x 17.8 x 11.6 in)	412 x 469 x 295 mm	(16.2 x 18.5 x 11.6 in)		
Weight	17.5 kg (38.6 lb)	18.9 kg (41.7 lb)			
What's in the box <sup>6</sup>	HP Color Laser Jet Pro M452nw; 4 preinstalled Introductory HP 410A Laser Jet Toner cartridges (Black, Cyan, Magenta, Yellow: ~1,200 pages); In-box documentation (Getting Started Guide, Install Poster); Software drivers and documentation on CD-ROM; Power cord; USB cable	HP Color LaserJet Pro M452dn; 4 preinstalled Introductory HP 410A LaserJet Toner cartridges (Black, Cyan, Magenta, Yellow: ~1,200 pages); In-box documentation (Getting Started Guide, Install Poster); Software drivers and documentation on CD-ROM; Power cord; USB cable	HP Color Laser Jet Pro M452dw; 4 preinstalled Introductory HF 410A Laser Jet Toner cartridges (Black, Cyan, Magenta, Yellow ~1,200 pages); In-box documentation (Getting Started Guide Install Poster), warranty card (China, Mexico); Software drivers and documentation on CD-ROM; Power cord; USB cable		
Warranty features		One-year, Bench Repair limited warranty			
Systems					
Compatible operating systems	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 32-8 64-bit editions (sexcluding RT OS for Tablets), Windows 10 all 32-8 64-bit editions (excluding RT OS for Tablets), Windows 10 all 32-8 64-bit editions (Sexcluding RT OS for Tablets), Windows 8/8.1 all 32-8 (4-bit editions (Prom HP_Com); Prof. editions (Sexcluding RT OS for Tablets), Windows 8/8.1 all 32-8 (4-bit editions), Windows 8/8.1 all 32-8 64-bit editions (Sexcluding RT OS for Tablets), Windows 10 all 32-8 (4-bit editions (excluding RT OS for Tablets); Wac OS (HP Print Drivers available from HP_com an Apple Store); OS X 10.7 Lion, OS X 10.8 Mountain Lion, OS X 10.9 Mavericks, OS X 10.1 OS (9S HDLP); SUSE Linux (12.2, 3.13.1); Fedora (17.18, 19, 20); Linux Mint (13.14, 15, 16, 17); Boss (3.0, 5.0); Uburlo (10.04, 1.1.10); Ed. 20, 4.1.2.10, 3.1.3, 4.1.3.10, 4.1.4.10, 4.1.4.10); Editain (6.05, 3.0); Other OS characteristics (10.04, 1.1.4.10); Editain (6.05, 3.0); Other OS characteristics (10.04, 3.0); Other OS characteristics (10.04, 3.04, 3.04, 3.				
Minimum 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;  Mac: Mac OS X v 10.7 or newer; Internet; USB or Network connection; 1 GB available hard disk space				
Fonts and typefaces	84 scalable TrueType fonts				
Control panel Power	2-line backlit LCD graphic display; 5 buttons (Cancel, Select, Reverse, Right/Left arrows); LED indicator lights (Attention, Ready) 3.0-in intuitive colour touchscreen; 3 Buttons (Home, Help, Ba Power supply type: Internal (Built-in) power supply; 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); Voltage; 20 volts (Active Printing), 17.6 watts (Ready), 2.4 watter (Ready), 2.4 watter (Ready), 2.5 watter (Ready), 2.				
Software included	(Sleep), 0.6 watts (Auto-On/Auto-Off, via USB connectivity), 0.05 watts (Shutdown or Off)  For Windows 05: 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 Devic Toolbox, HP Product Improvement Study, Online user manuals. (Software varies by 05: WinXP/Vista a driver only); Windows 7: Full solution; Windows 8+ and newer: drivers only with more apps available in MS App store; For Mac 05: Welcome Screen, (Directs users to HP.com or 05 App Source for LaserJet Software)				
Acoustic	Acoustic power emissions: 4 6.3 B(A); Acoustic power emissions (ready): 4.8 B(A); Acoustic pressure emissions bystander (ready): 34 dB(A)  bystander (ready): 34 dB(A)  bystander (ready): 34 dB(A)				
Environmental ranges	Operating temperature range: 15 to 30° C (59 to 86° F); Recommended operating temperature: 15 to 27° C (59 to 80.6° F); Non-operating humidity range: 10 to 95% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Recommended operating humidity range: 20 to 70% RH (non-condensing); Re				
Security management	Uperating numidity range: 10 to 8 Embedded Web Server: password-protection, secure browsing via SSL/TLS; Network: enable/disable network ports and features, SNMPv1 & SNMPv2 community password change; HP ePrint: HTTPS with certificate validation, HTTP Basic Access Authentication, SASL authentication; Firewall and ACL; SNMPv3, 802.1X, Secure Boot, authentication via WEP, WPA/WPA2 Personal, WPA2 Enterprise; Encryption via AES or TKIP	USK H.H. (non-condensing); Recommended operating numidity in Embedded Web Server: password-protection, secure browsing via SSL/TLS; Network: enable/disable network ports and features, SNMPv1 & SNMPv2 community password change; HP ePrint: HTTPS with certificate validation, HTTP Basic Access Authentication, SASL authentication; Firewall and ACL; SNMPv3, 802.1X, Secure Boot	nge: 20 to 7 U% RH (non-condensing)  Embedded Web Server: password-protection, secure browsir via SSL/TLS; Network: enable/disable network ports and features, SNMPv1 & SNMPv2 community password change; HP ePrint: HTTPS with certificate validation, HTTP Basic Acce Authentication, SASL authentication; Firewall and ACL; SNMPv 802.1X, Secure Boot, authentication via WEP, WPA/WPA2 Personal, WPA2 Enterprise; Encryption via AES or TKIP		
Safety approvals and requirements	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/tUL 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 (IGSs 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 CDR Factory ID, location and inspections are part of the certification process and record)				
Supported network protocols	TCP/IP, IPv4, IPv6; Print: TCP-IP port 9100 Direct Mode, LPD Discovery: SLP, Bonjour, Web Services Discovery; IP Config: I	(raw queue support only), Web Services Printing, HP ePrint, Apple / IPv4 (BootP, DHCP, AutolP, Manual), IPv6 (Stateless Link-Local and v Management: SNMPv1, SNMPv2, SNMPv3, HTTP/HTTPS, Syslog, FI	AirPrint™, Google Cloud Print 2.0, Mopria, FTP Print, IPP Print; via Router, Statefull via DHCPv6), SSL Security and Certificate		

management; Nanagement: SNMPv1, SNMPv2, SNMPv3, HTTP/HTTPS, Syslog, FTP FW Download

Measured using ISO/IEC 24734, excludes first set of test documents. For more information see <a href="https://px.com/go/printerclaims">https://px.com/go/printerclaims</a>. Exact speed varies depending on the system configuration, software application, driver, and document complexity.

Measured using ISO/IEC 17629. For more information see <a href="https://px.com/go/printerclaims">https://px.com/go/printerclaims</a>. Exact speed varies depending on the input voltage, system configuration, software application, driver, and document complexity.

May require a firmware upgrade to be compatible, download at <a href="https://px.com/go/support">https://px.com/go/support</a> 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 Laser/let or HP Color Laser/let devices, and enables appropriate deployment of printers and MFPs to satisfy the demands of connected individuals or groups. 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. 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 <a href="https://px.com/go/learnaboutsupplies">https://px.com/go/learnaboutsupplies</a>. HP color Laser/let Pro M452 in-box cartridge may have higher yield than stated for printer units manufactured before 2017. 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.

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