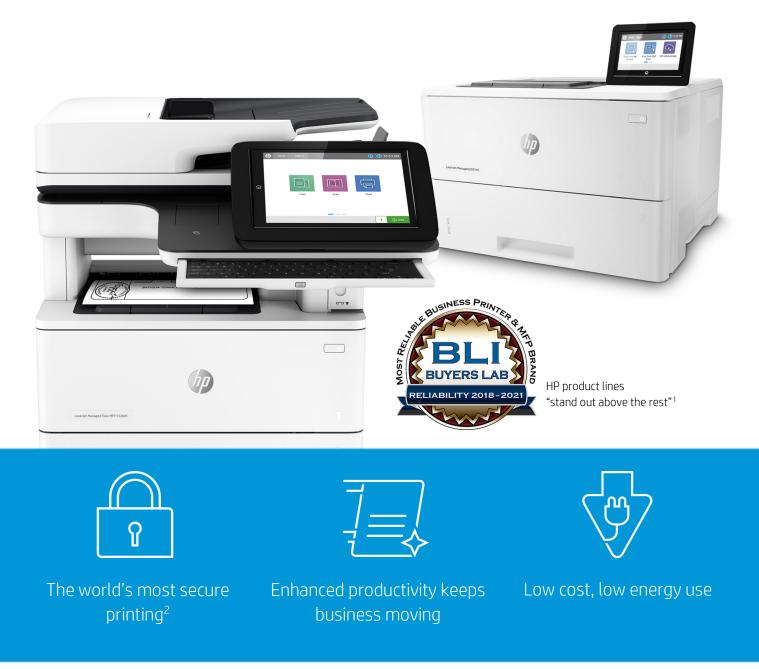


Redefine long-term expectations

HP LaserJet Managed E50145dn HP LaserJet Managed MFP E52645 series



The world's most secure printing²



HP printers have the industry's strongest security² because they're always on guard, continually detecting and stopping threats while adapting to new ones. And only HP printers automatically self-heal from attacks, so IT doesn't need to intervene.



Always on guard

Only HP Enterprise printers offer built-in security features that are always on guard.²

- With HP Sure Start, each device regularly checks its operating code and repairs itself from attempted hacks.
- Whitelisting checks firmware during startup to help ensure it's authentic, good code— digitally signed by HP.
- Run-time intrusion detection continually monitors activity to detect and stop attacks, then automatically reboots.
- HP Connection Inspector inspects outgoing network connections to stop suspicious requests like malware.

Thwart potential attacks by receiving instant notification of security issues, so immediate action can be taken. This device works with tools like Splunk, ArcSight, McAfee, and SIEMonster.



Opt for tighter security

Help protect the device with more than 200/250 (printers/MFPs) embedded security features.³ Protect information in transit over the network and stored on the device—keys, passwords, certificates, and more. Store data on the 256-bit encrypted HP High-Performance Secure Hard Disk.⁴

Easily develop, deploy, and integrate HP and third-party solutions with the HP Open Extensibility Platform. Add features such as card readers and more through the Hardware Integration Pocket.⁵ Further safeguard data stored on the device, using the HP Trusted Platform Module.⁶

Help ensure the security of confidential information with the optional proximity card reader.⁷ Enter a PIN/password at the device to retrieve your print jobs.



Your whole fleet. At your control

Centralize control of your printing environment with HP Web Jetadmin—and help build business efficiency.⁸ Optional HP JetAdvantage Security Manager offers an effective, policy-based approach to help secure HP printing and imaging devices.⁹ Easily set security configuration policies and automatically validate settings for every HP printer and MFP in your fleet.

HP JetAdvantage Secure Print¹⁰ and HP Access Control (HPAC) help secure documents by requiring authentication to release print jobs. In addition, extend capabilities and easily customize with HPAC— integrate job accounting, manage rights, and establish quotas for things such as color use.¹¹ Save IT time and make printing easy for the entire enterprise by using a single driver for all HP devices.¹²

For more information

Fleet management

HP Web Jetadmin visit: hp.com/go/webjetadmin

Solution brief: <u>http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA5-2718ENW.pdf</u> Video: <u>http://hp.brightcovegallery.com/solutions/detail/video/4271055504001/</u>

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

Solution brief: http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-4781ENW.pdf

Security

HP JetAdvantage Security Solutions visit: <u>hp.com/qo/printsecurity</u> Solution brief: <u>http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-1295ENW.pdf</u> Video: <u>http://hp.brightcovegallery.com/products/detail/video/4270905124001/</u>

HP JetAdvantage Security Manager visit: <u>hp.com/go/securitymanager</u> Brochure: <u>http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-9275ENW.pdf</u> Video: http://hp.brightcovegallery.com/products/detail/video/4270837770001/

Enhanced productivity keeps business moving

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

Take waiting out of your work day

Don't wait for documents. With the E50145dn, receive your first page in as few as 5.9 seconds from ready mode¹³ and 10 seconds from energy-efficient sleep mode.¹⁴ Print documents quickly—up to 45 pages per minute (ppm), letter.¹⁵



Accelerate workflow with single-pass, two-sided scanning up to 68/60 images per minute (ipm), letter (black/color) (Flow MFP E52645c only).¹⁶

Scan files directly to Microsoft® Office 365 and SharePoint®, plus email, USB, and network folders.¹⁷

Maximize uptime

HP Smart Device Services (SDS) help keep business moving by avoiding lapses in productivity. Reduce time spent calling and waiting, with technology that allows your service provider to quickly pinpoint issues before they become a problem. Remote diagnostic tools help provide faster, more efficient fixes. Simple issues can be resolved remotely, and service calls go faster when techs know exactly what they need for the right fix.





HP devices communicate their health and call your service provider for help when they need it. Empower advanced analytics with smart sensors, event logs, device telemetry, and access for remote configurations and adjustments that let your service provider know how devices are working.

Loaded for productivity

Let high-volume jobs handle themselves. This device has a substantial 2,300-sheet capacity, so you can spend less time loading and reloading paper.¹⁸ For details, see paper-handling accessories on page 11.

On the Flow MFP E52645c model, the built-in convenience stapler helps you save time and look professional. Staple and collate multiple sets of documents of up to 50 pages each.¹⁹



Make everyday work more efficient. Equip employees to breeze through tasks using the 9.0-inch (22.8 cm) functional touchscreen with 8.0-inch (20.3 cm) Color Graphics Display on the MFP E52645 series or the 4.3-inch (10.9 cm) touchscreen on the E50145dn printer.

Place your device where it suits your work team best—you almost won't notice it. This device fits in tight places to improve performance in almost any workspace.

Low cost, low energy use



Choose an HP LaserJet Enterprise printer designed to handle business solutions securely and efficiently, and that helps conserve energy with HP EcoSmart black toner.²⁰ Keep up with the demands of growing business with a printer you can rely on.



The toner cartridge you can trust

Stay productive with reliable HP EcoSmart black toner—engineered for high-speed printing and low energy consumption.²⁰

Help reduce your impact—EcoSmart black toner cartridges are a smart, environmentally responsible purchase.

Count on easy recycling through HP Planet Partners at no additional charge.²¹



More quality pages than ever before

Get the most prints for your money—up to 23,000 pages with Managed Cartridges.²² Specially redesigned Original HP Toner cartridges with JetIntelligence delivers professional-quality pages and peak printing performance.



Help protect your investment

Don't put your device—and print quality—at risk. Help ensure the consistent Original HP quality you paid for with innovative, anti-fraud technology. Enable office-wide adherence to printing policies with cartridge authentication technology.



(W9008MC: ~23,000 pages²²)

Give workgroups the speed they need



Accelerate workflow, improve accuracy, and easily connect people throughout your organization with the MFP E52645 series. Complete two-sided scan jobs super-fast—up to 68 ipm with the Flow model¹⁶—and avoid extra steps with a device designed for maximum productivity.



Easily scan and edit text

Capture text from documents with high accuracy. Easily scan documents, edit text, and save as a Microsoft Word or searchable PDF file with HP Scan and I.R.I.S. Readiris[™] Pro OCR Software.



Fast scanning and input

Turn stacks of paper documents into digital files. Load up to 100 sheets into the automatic document feeder (ADF) for fast, unattended scanning.^{23,24}

Enter data more quickly and accurately using the pull-out keyboard, one of the features available on the Flow MFP E52645c model.²⁵

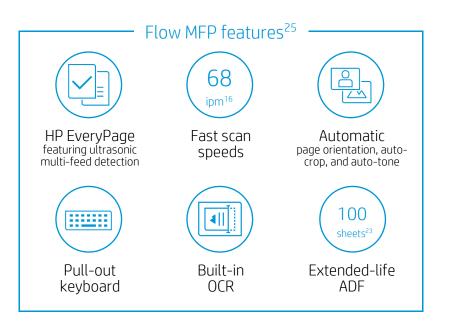
Walk up and print from or scan to a memory device using the easy-access USB port.²⁶



Every page, every time

Capture every page easily—with confidence. HP EveryPage gives employees smooth paper-handling capabilities to detect potential errors or missed pages on the spot—for scan jobs of all kinds.²⁵

Help ensure every scanned document is properly oriented, cropped to size, and grayscale-optimized.



Stay connected with secure mobile printing



Improve work team agility while also protecting the company network. Ethernet and optional wireless networking help users stay connected and work securely—throughout the office.²⁷ Add wireless direct²⁸ and NFC-touch-to print²⁹ to print directly from your mobile device.



Print from a variety of mobile devices

Easily print documents, emails, PDFs, and more from smartphones and tablets running iOS, Android[™], Windows[®] 8/10, and Google Chrome[™] operating systems—generally no setup or apps required.³⁰

Add the option to print with just a touch of your NFC-enabled smartphone or tablet to the print device.²⁹



Print from virtually anywhere

Submit print jobs while on the go from any device, and release at any of HP Roamenabled office printer—simply and securely.³¹

Print jobs are submitted to the cloud and can then be securely retrieved from any enabled device in the office or home office. There's no need to worry about device-to-printer compatibility or connectivity.

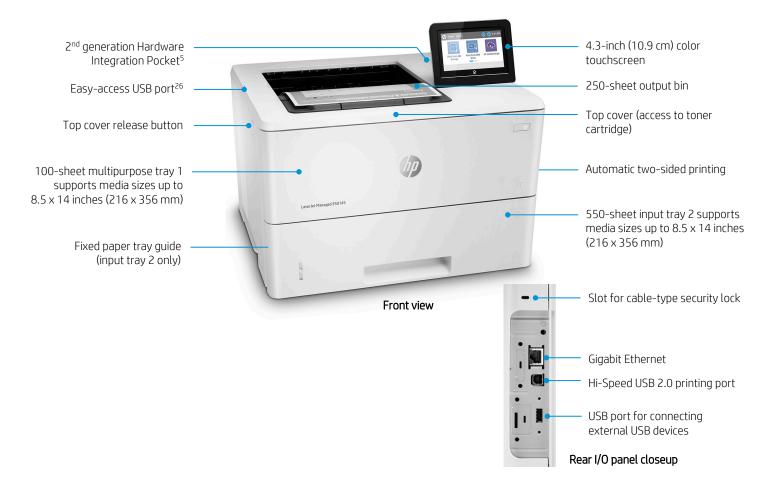


Extend your printing reach

Keep your office connected. Easily access, print, and share printing resources with built-in Ethernet and optional wireless networking.²⁷

Use optional, 128-bit encrypted wireless direct printing to help keep data secure in transit and at rest—without accessing the company network—using smartphones, tablets, and notebook PCs.²⁸

Get to know the HP LaserJet Managed E50145dn printer

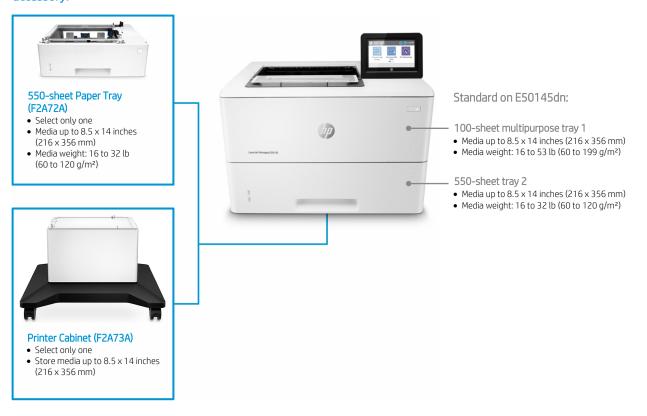


At a glance

Model (product number)	E50145dn (1PU51A)
Functions	Print
Print speed ¹⁵	Up to 45/43 ppm (letter/A4)
Automatic two-sided printing	\checkmark
100-sheet multipurpose tray 1 and 550-sheet input tray 2	\checkmark
Input capacity (standard/maximum ¹⁸)	Up to 650/2,300 sheets
Output capacity	Up to 250 sheets
Wireless direct printing ²⁸	Optional
NFC touch-to-print ²⁹	Optional

HP LaserJet Managed E50145dn printer – Configuration

Select one category of input accessory:



Get to know the HP LaserJet Managed MFP E52645 series

HP LaserJet Managed Flow MFP E52645c shown



Model (product number)	MFP E52645dn (1PS54A)	Flow MFP E52645c (1PS55A)
Functions	Print, scan, copy, and optional fax	Print, scan, copy, and optional fax
Print speed ¹⁵	Up to 45/43 ppm (letter/A4) <i>(both models)</i>	
100-page ADF with single-pass, two-sided scanning ²³	\checkmark	\checkmark
100-sheet multipurpose tray 1, 550-sheet input tray 2	✓	✓
Input capacity (standard/maximum ¹⁸)	Up to 650/2,300 sheets (both models)	
Advanced workflow features, including pull-out keyboard and HP EveryPage ²⁵	Not available	\checkmark
Convenience stapler ¹⁹	Not available	\checkmark
HP High-Performance Secure Hard Disk ⁴	Optional	\checkmark
Wireless direct printing ²⁷	Optional	Optional
NFC touch-to-print ²⁹	Optional	Optional

Series at a glance

HP LaserJet Managed MFP E52645 series – Configuration

Select one category of input accessory:



Paper-handling accessories

The HP LaserJet Managed E50145dn printer and MFP E52645 series may be configured with optional input accessories described in the table below. Other optional accessories are included in the Ordering information section on page 16.

The E50145dn printer and MFP E52645 series come standard with a 100-sheet multipurpose tray and one 550-sheet tray that both support media up to 8.5 x 14 inches (216 x 356 mm). In addition, all models can add up to three additional 550-sheet input trays and a cabinet. All optional accessories support media up to 8.5 x 14 inches (216 x 356 mm).

The fixed paper tray guide (input tray 2 only) ensures proper placement of correct media size by preventing the user from adjusting paper trays incorrectly—helping to prevent paper jams and avoid waste.



550-sheet Paper Tray (F2A72A)

Supports up to 8.5 x 14 inches (216 x 356 mm)

Maximum device input with accessory:¹⁸

1,200 sheets (with one tray) 1,750 sheets (with two trays)

2,300 sheets (with three trays)



Optional: Add up to one, <i>all models</i>
Storage for paper and supplies
Printer Cabinet (F2A73A)

Not applicable

Technical specifications

	HP LaserJet Managed E50145dn printer	HP LaserJet Managed MFP E52645dn	HP LaserJet Managed Flow MFP E52645c
Product number	1PU51A	1PS54A	1PS55A
Functions	Print	Print, scan, copy, and optional fax	
Control panel/data entry	4.3-inch (10.9 cm) color touchscreen; rotating (adjustable angle) display	9.0-inch (22.8 cm) functional touchscre Display; illuminated Home button (for c	een with 8.0-inch (20.3 cm) Color Graphics quick return to the Home menu)
			Plus: Pull-out keyboard
Print speed (letter/A4) ¹⁵			
Single-sided	Up to 45/43 ppm (all models)		
Two-sided	Up to 36/34 ipm (all models)		
Print speed (A5, landscape) ³²	Up to 65 ppm <i>(all models)</i>		
First page out (letter and A4) ^{14,13}	From ready: ¹³ as fast as 5.9 seconds From sleep: ¹⁴ as fast as 10 seconds	From ready: ¹³ as fast as 6.0 seconds From sleep: ¹⁴ as fast as 13.0 seconds	
Print resolution	Up to 1200 x 1200 optimized dpi from	600 x 600 input dpi <i>(all models)</i>	
Scanning resolution		Up to 600 x 600 dpi	
ADF scan speed (letter/A4) ¹⁶			
Single-sided		Up to 45/43 ppm (black); Up to 40/38 ppm (color)	Up to 48/45 ppm (black and color)
Two-sided		Up to 45/43 ipm (black); Up to 40/38 ipm (color)	Up to 68/64 ipm (black); Up to 60/58 ipm (color)
Features			
Printing	Print preview, duplex printing, print mu easy-access USB ²⁶	ltiple pages per sheet (2, 4, 6, 9, 16), colla	tion, watermarks, store print jobs,
Scanning		Flatbed scanner, up to 8.5 x 14 inches (two-sided, single-pass scanning; Advar image adjustments, job build, output q 75 to 600 dpi, auto-detect color, edge suppression; HP Quick Sets	nced features: optimize text/picture, uality setting, selectable scan resolution
			Plus: HP EveryPage, embedded Optical Character Recognition (OCR), auto-orientation, auto-crop-to-page; auto-tone
Digital sending		Scan to email, save to network folder, save to USB drive, send to FTP, send Internet fax, local address book, SMTP over SSL, blank page removal, edge erase, auto color sense, auto-crop-to-content, compact PDF	
			Plus: send to Microsoft Sharepoint, send to LAN fax, OCR, auto-tone, auto-orientation, multi-pick detect, auto-straighten, auto-crop-to-page
File formats		PDF, JPEG, TIFF, MTIFF, XPS, PDF/A	
			Plus: TEXT (OCR), unicode TEXT (OCR), RTF (OCR), searchable PDF (OCR), searchable PDF/A (OCR), HTML (OCR), CSV (OCR); scan to easy-access USB: PDF, JPEG, TIFF, MTIFF, XPS, PDF/A, TEXT (OCR), unicode TEXT (OCR), RTF (OCR), searchable PDF (OCR), searchable PDF/A (OCR), HTML (OCR), CSV (OCR); print from easy-access USB: PDF, PS, print ready files (.prn, .pcl, .cht)

	HP LaserJet Managed E50145dn printer	HP LaserJet Managed MFP E52645dn	HP LaserJet Managed Flow MFP E52645c
Copying		(cpm) (letter/A4, single-sided) and up	Copy speed: up to 45/43 copies per minute to 36/34 cpm (letter/A4, two-sided); e/enlarge from scanner glass (25 to 400%), djustments (darkness, background
Processor	1.2 GHz (all models)		
Memory	Standard/maximum: 512 MB/1.5 GB ³³	Standard/maximum: 1.25 GB/2.75 G	3 ³⁴ (printer), 500 MB/500 MB (scanner)
Durability ratings			
RMPV ³⁵	2,000 to as high as 15,000 pages	4,000 to as high as 15,000 pages	
RMSV ²⁴		4,000 to as high as 7,000 pages	8,000 to as high as 14,000 pages
Duty cycle ³⁶	Up to 150,000 pages (all models)		
Media specifications			
Input capacity	Up to 650/2,300 sheets (standard/max Tray 1: up to 100 sheets Tray 2: up to 550 sheets	imum ¹⁸) <i>(all models)</i>	
Output capacity	Up to 250 sheets (all models)		
			Plus: Convenience stapler ¹⁹
Two-sided printing	Automatic <i>(all models)</i>		
	Tray 2, optional trays 3-5: letter, legal,	, 16K, 76 x 127 mm, double postcard; Cu	.5 x 13 in; A4, A5, A6, RA4, B5, B6, Officio ustom media: 4.1 x 5.83 to 8.5 x 14 in atement; 4 x 6 in, 5 x 7 in, 5 x 8 in; A4, RA4
Media weights	Tray 1: 16 to 53 lb (60 to 199 g/m²)		
	Tray 2, optional trays 3-5, HCI: 16 to 32	lb (60 to 120 g/m²)	
		ADF: 12 to 53 lb (45 to 199 g/m²)	
Media types	Paper (bond, color, letterhead, plain, pre-printed, pre-punched, recycled, rough), envelopes, labels, cardstock, transparencies, user-defined		
Print languages	HP PCL 6, HP PCL 5 (HP PCL 5 driver available from the Web only), HP postscript level 3 emulation, native PDF printing (v 1.7)		
Fonts	105 internal TrueType fonts scalable in HP PCL, 92 internal scalable fonts in HP postscript Level 3 emulation (Euro symbol built-in), 1 internal Unicode font (Andale Mono World Type), 2 Internal Windows Vista® 8 fonts (Calibri, Cambria), additional font solutions available via third-party flash memory cards, HP LaserJet fonts and IPDS Emulation available at <u>hp.com/qo/laserjetfonts</u>		
Connectivity	Standard: 2 Hi–Speed USB 2.0 Host; 1 Hi–Speed Device USB 2.0; 1 Gigabit Ethernet; Hardware Integration Pocket ⁵		
Mobile printing	Standard: Apple® AirPrint®, ³⁷ HP ePrint,	³⁸ Mopria-certified, HP Roam capable fo	r easy printing, ³¹ Google Cloud Print™ 2.0
	Optional: wireless direct printing, ²⁸ NFC	touch-to-print ²⁹	
Network capabilities	Standard: via HP Jetdirect Ethernet embedded print server supports: 10Base-T, 100Base-Tx, 1000Base-T; 802.3az (EEE) support on Fast Ethernet and Gig links; IPsec		
	Optional: 802.11a/b/g/n wireless networking and second Ethernet port ²⁷		
Network protocols	Web Services Printing, IPP 2.0, Apple Air Services Discovery; IP Config: IPv4 (Boo	nent: SNMPv2/v3, HTTP/HTTPs, Telnet, ⁻	

	HP LaserJet Managed E50145dn printer	HP LaserJet Managed MFP E52645dn	HP LaserJet Managed Flow MFP E52645c	
Security	Identity Management: Kerberos authent advanced authentication solutions (e.g.,	ication, LDAP authentication, 1000 user P badge readers)	IN codes, optional HP and 3rd party	
	Network: IPsec/firewall with Certificate, Pre-Shared Key, Kerberos authentication; Supports WJA-10 IPsec configuration Plug-in, 802.1X authentication (EAP-PEAP, EAP-TLS), SNMPv3, HTTPS, Certificates, Access Control List, HP Trusted Platform Module (TPM) comes standard			
	Data: Storage Encryption, Encrypted PDF and Email (uses FIPS 140 validated cryptographic libraries from Microsoft), Secure Erase, SSL/TLS (HTTPS), Encrypted Credentials			
	Device: Security lock slot, USB port disablement, Hardware Integration Pocket for security solutions, ⁵ Intrusion Detection with Red Balloon Security Technology (constant in-device monitoring for attacks), HP Sure Start Secure Boot (BIOS integrity checking with self-healing capability), Whitelisting (loads only known-good code (DLLs, EXEs, etc.)), HP Connectio Inspector (helps ensure network connections to device are safe)			
	Security management: Compatible with HP JetAdvantage Security Manager, ⁹ HP Printer Security Plugin for Microsoft SCCM, Device Security Syslog Messages processed and accessible in Arcsight, Splunk, McAfee (ESM), and SIEMonster SIEMs			
	For more security settings, go to <u>hp.com/ctg/Manual/c03602120</u>			
Printer management	HP Device Toolbox, HP Printer Assistant, Printer Administrator Resource Kit for HP Universal Print Driver ¹² (Driver Configuration Utility, Driver Deployment Utility, Managed Printing Administrator); HP Web Jetadmin Software; ⁸ HP SNMP Proxy Agent, HP WS Pro Proxy Agent, HP JetAdvantage Security Manager ⁹			
Compatible operating systems ³⁹	Windows OS compatible with In-Box Driv Windows 10 all 32- and 64-bit editions	ver: Windows 7 all 32- and 64-bit editions	, Windows 8.1 all 32- and 64-bit editions	
	Windows OS compatible with Universal R 32- and 64-bit editions, Windows 10 all	Print Driver ¹² (from <u>hp.com</u>): Windows 7 al 32- and 64-bit editions	ll 32- and 64-bit editions, Windows 8.1 al	
		<u>hp.com</u> and Apple Store): OS X 10.13 High) Sierra, OS X 10.14 Mojave, OS X 10.15	
	Mobile OS (In-OS drivers): iOS, Android, Windows 8.1/10 RT			
	Linux® OS (In-OS HPLIP): SUSE Linux (13.2, 42.1), Fedora (22-24), Linux Mint (17-17.3, 18), Boss (5.0), Ubuntu (12.04, 14.04, 15.1, 16.04, 16.10), Debian (7.0-8.6), Red Hat Enterprise (6, 7) Other OS: UNIX®			
Compatible patwork operating		vor: Windows Sorver® 2008 22 /64 hit W	indows Sarvar 2009 P2 64 hit	
Compatible network operating systems	Windows OS compatible with In-Box Driver: Windows Server® 2008 32-/64-bit, Windows Server 2008 R2 64-bit Windows OS compatible with Universal Print Driver (UPD) ¹² or Product-Specific drivers from <u>hp.com</u> : Windows Server 2008/2008 R2 32-/64-bit, Windows Server 2012/2012 R2 64-bit, Windows Server 2016 64-bit, Windows Server 2019			
	Citrix® (on Windows Server 2008/2008 R2 SP1 Edition): Citrix XenApp 6.0/6.5, Citrix XenApp and XenDesktop® 7.5, (supports Windows Server 2008 R2 SP1 operating system), XenServer 6.x+			
	Citrix (on Windows Server 2012/2012R2): Citrix XenApp and Citrix XenDesktop 7.x			
	Novell/Micro Focus (<u>novell.com/products/iprint</u>): Novell iPrint Appliance v1.1, Novell Open Enterprise Server 11/SP1			
	Novell iPrint Clients (<u>novell.com/products/iprint</u>): All Windows platforms: recommend v5.94+			
	Services Terminal Server Cluster Server; VMware ESX 4.x+ Workstation 9.x+; XEN on SUSE Linux Enterprise Server (SLES) 11/SP3			
System requirements, Windows		e above); 2 GB available hard disk space (printer/MFPs); Internet connection, USB port, Irdware (For OS hardware requirements see <u>microsoft.com</u>)		
System requirements, Macintosh		ble operating system (see above); 2 GB available hard disk space (printer/MFPs); Internet connection or USB por tible hardware (For OS hardware requirements see <u>apple.com</u>)		
Software included	No software solutions are included in the	e box, HP Scan and TWAIN driver available	e for download: <u>hp.com/support</u>	
Dimensions (width x depth x height)	Operating: 16.46 x 14.80 x 12.83 in (418 x 376 x 326 mm)	Operating: 18.98 x 19.52 x 19.55 in (48 Maximum: ⁴⁰ 19.96 x 24.83 x 19.55 in (5		
	Maximum: ⁴⁰ 16.46 x 25.16 x 12.83 in (418 x 639 x 326 mm)			
Weight (with print cartridges)	25.5 lb (11.48 kg)	47.56 lb (21.41 kg)	49.16 lb (22.13 kg)	
What's in the box	HP LaserJet Managed printer, HP Black LaserJet set-up cartridge (~9,000 pages), ²² power cord, User guide, Support flyers, Warranty cards, Required erratas			
Downloadable software	HP Easy Start (Guided Software Install fo Software Install), HP Mac PS Print Driver HP JetAdvantage Security Manager, ⁹ HP Resource Kit (Driver Configuration Utility more information, see <u>https://support.h</u>	I for Windows and Mac), HP PCL6 XPS Discrete Print Driver, HP Easy Start (Guided er, HP Easy Admin, HP ePrint ³⁸ Software (Mobile Driver for Windows), P Universal Print Drivers ¹² (PCL6 GDI and PS GDI for Windows), Printer Administrator ty, Driver Deployment Utility, Managed Printing Administrator), SAP Print Drivers (For <u>hp.com/us-en/document/c05051702</u>), HP Web Jetadmin, ⁸ ReadIris, HP Roam for (For more information, see <u>http://hplipopensource.com/hplip-web/index.html</u>), Unix		
Warranty	One-year, next-business day, onsite war	rranty. Warranty and support options vary partner or go to <u>hp.com/support</u> to learn a		

Environmental specifications

	HP LaserJet Managed E50145dn	HP LaserJet Managed MFP E52645dn	HP LaserJet Managed Flow MFP E52645c
Environmental ranges			
Temperatures	Recommended operating: 59 to 80.6° F (1	5 to 27° C); Operating: 50 to 90.5° F (10 to 32	5° C); Storage: -4 to 104° F (-20 to 40° C)
Relative Humidity	Recommended operating range: 30 to 70%	6 RH; Operating range: 10 to 80% RH	
Acoustic pressure emissions ⁴¹	Ready mode: 24 dB(A) Active print: 54 dB(A)	Ready mode: 26 dB(A) Active print: 54 dB(A) Active scan: 52 dB(A)	Ready mode: 26 dB(A) Active print: 54 dB(A) Active scan: 52 dB(A)
Acoustic power emissions	Ready mode: 3.9 B(A) Active print: 6.8 B(A) ⁴²	Ready mode: 4.0 B(A) Active print: 6.8 B(A) ⁴² Active scan: 6.7 B(A)	Ready mode: 4.0 B(A) Active print: 6.8 B(A) ⁴² Active scan: 6.7 B(A)
Power specifications ⁴³			
Power supply	Built-in power supply; Input Voltage: 100 t	0 to 240 VAC, 50/60 Hz	
Power consumption	Printing: 601 watts; Ready: 7.6 watts; Sleep: 2.61 watts; Auto-Off/Manual On: 0.06 watts; Off: 0.06 watts; Auto-Off/ Wake on LAN: 0.73 watts	Printing: 629 watts; Ready: 28.8 watts; Sleep: 5.28 watts; Auto-Off/Manual On: 0.7 watts; Auto-Off/Wake on LAN: 0.06 watts	
Typical Electricity Consumption (TEC)	ENERGY STAR [®] : 1.3 kWh/week	ENERGY STAR: 1.4 kWh/week	
Energy-saving features	HP Auto-On/Auto-Off Technology; ⁴⁴ Instar	stant-on Technology ⁴⁵ Plus: Instant-on Copy	
Environmental specifications	ENERGY STAR certified; CECP; EPEAT® Silver; ⁴⁶ mercury-free	ENERGY STAR certified; CECP; EPEAT Gold; ⁴⁶ mercury-free	ENERGY STAR certified; CECP; EPEAT Silver; ⁴⁶ mercury-free
Safety and regulatory compliance	60825-1:2014/IEC 60825-1:2014 (Class 1 with CE Mark (Europe); IEC 62471:2006/EN (US/Canada); CAN/CSA C22.2 No. 60950-1	ternational); EN60950-1:2006 +A11:2009 +/ Laser Product); EN 62479:2010/IEC 62479:2 I 62471:2008 (LED lighting); GS Certificate (G -07 2nd Ed. 2011-12; Compliance with Laser Laser notice No. 50, Dated June 24, 2007; Ot	2010; Low Voltage Directive2014/35/EU ermany, Europe); UL/cUL Listed and UC CoC safety standards 21 CFR 1040.10 and
Electromagnetic emission standard		155032: 2012 (EU) - Class A, EN 61000-3-2: 47 Part 15 Class A/ICES-003, Issue 6 Class A	

Ordering information

Product	HP LaserJet Managed E50145dn HP LaserJet Managed MFP E52645dn HP LaserJet Managed Flow MFP E52645c	1PU51A 1PS54A 1PS55A
Supplies	HP Black Managed LaserJet Cartridge (~23,000 pages) ²²	W9008MC
	MFP E52645 series only: HP Staple Cartridge Refill (2 cartridges, 1,500 staples each)	Q7432A
Accessories	HP LaserJet 550-sheet Paper Tray HP LaserJet Printer Cabinet HP Accessibility Assistant HP Jetdirect 2900nw Print Server HP Jetdirect 3100w BLE/NFC/Wireless Accessory HP Internal USB Ports HP USB Universal Card Reader HP HIP2 Keystroke Reader HP Legic Card Reader HP Removable Hard Drive Enclosure E50145dn only: HP 1 GB 90-Pin DDR3 DIMM HP 1 GB 90-Pin DDR3 DIMM (TAA version; U.S. only) E52645dn only: HP LaserJet MFP Analog 700 Fax Accessory MFP E52645 series only: HP 1 GB 144-Pin DDR3 800 MHz DIMM HP 2 GB 144-Pin DDR3 800 MHz DIMM HP 2 GB 144-Pin DDR3 DIMM (TAA version; U.S. only) HP foreign Interface Harness	F2A72A F2A73A 2MU47A J8031A 3JN69A B5L28A X3D03A Y7C05A 4QL32A 2NR12A G6W84A 2NR03A 2EH31A E5K48A E5K49A 2NR09A B5L31A
	HP Accessibility Kit E50145dn and MFP E52645dn models only: HP Secure High Performance Hard Disk Drive HP Secure Hard Disk Drive with FIPS Validation (TAA Compliant; U.S. only)	2TD64A B5L29A 5EL03A
Solutions	HP Web Jetadmin: <u>hp.com/qo/wia</u> HP Universal Print Driver: <u>hp.com/qo/upd</u> HP JetAdvantage Security Manager: <u>hp.com/qo/securitymanager</u> HP JetAdvantage On Demand Cloud Solutions: <u>hp.com/qo/jetadvantage.com/ondemand</u>	

HP Laser Jet fonts, barcodes, and IPDS Emulation: <u>hp.com/qo/laserjetfonts</u> To learn more about available infrastructure, management, and workflow solutions, visit <u>hp.com/qo/printing solutions</u>.

Appendix A: Control panel features



To access additional apps on the new printer user interface, simply swipe right to left

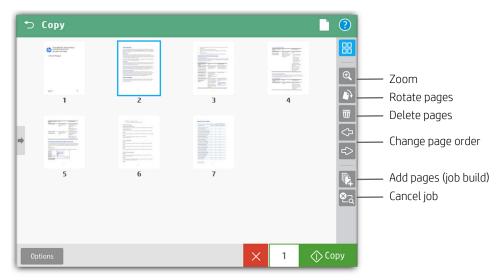
Upgrade to a modern interface

The HP Laser Jet Managed E50145dn printer and MFP E52645 series are powered by HP FutureSmart 4 firmware. The modern, tablet-like interface (9.0-inch (22.8 cm) functional touchscreen with 8.0-inch (20.3 cm) Color Graphics Display on the MFP models, 4.3-inch (10.9 cm) on the E50145dn printer) keeps things simple and intuitive across your fleet of Enterprise devices. A scalable control panel interface improves future extensibility and allows for customization, along with a robust set of apps and usability features. You can even customize with your own wallpaper image and company logo. The new Message Center, with more detailed information and helpful animations, makes it easy to address device events. The simplified home screen displays just a few core apps by default. Additional apps are easily accessed by swiping right to left, like with a smartphone or tablet.



Edit jobs right at the MFP

The control panel on the MFP E52645 series features an enhanced image preview—now for both copies and scans. Right from the MFP's 9.0-inch (22.8 cm) functional touchscreen with 8.0-inch (20.3 cm) Color Graphics Display, you can easily preview and edit scans before sending them. You can apply changes (like rotating) to a single page, or to multiple pages at once. Batch separation allows users to create separate PDF or PDF/A files from scanned pages. Flow models can also create PDF OCR and PDF/A OCR files.



You can start a preview prior to committing to the copy job

The new MFP user interface

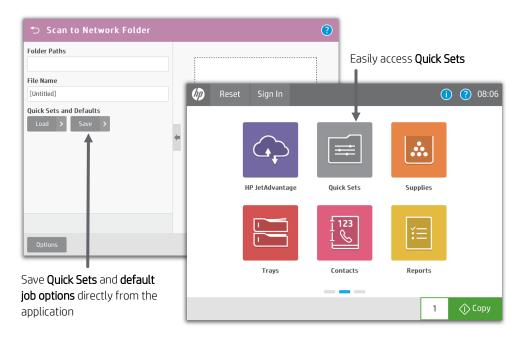
enables **swipe**, **rotate**, and **drag-and-drop** capabilities

Use Quick Sets to launch automated workflows

The digital sending capability on MFP E52645 models allows users to route documents to a variety of destinations like email recipients, network folders, fax, FTP, a USB device, or Microsoft SharePoint.

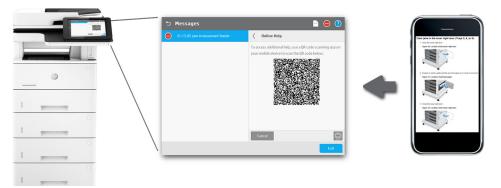
Quick Sets automate all of the steps of a complicated workflow and provide easy access to the configurations you use most, such as page size, resolution, and file format. You can also specify security settings, such as encrypted PDFs to be delivered through encrypted and signed emails.

Help users find what they need by moving individual Quick Sets to any screen or folder using the home screen customization feature. With Quick Sets, IT can promote or block access to certain device features. Calls to the helpdesk can be reduced when users have everything they need and are restricted from accessing settings they shouldn't tamper with.



Troubleshoot with ease

The HP Laser Jet Managed E50145dn printer and MFP E52645 series can help save your IT department valuable time when it comes to troubleshooting problems. The Remote Control Panel allows users to operate the user interface remotely, so IT can troubleshoot problems without running to the printer or MFP.⁴⁷ Users can also quickly troubleshoot technical issues with HP's innovative, cloud-based Online Help services that are relevant and up to date. Easily solve problems from your PC or mobile device. A Quick Response (QR) code on the touchscreen links to Online Help using smart phones and tablets.⁴⁸ You can also find these links in the HP Embedded Web Server event log.



¹ In July 2018, HP was named Buyers Lab's Most Reliable Business Printer & MFP Brand by the analysts at Buyers Lab (BLI), based on lab testing from 2012 to 2018. For more information, see <u>keypointintelligence.com/news/awards</u>.

² Based on HP review of 2018 published security features of competitive in-class printers. Only HP offers a combination of security features for integrity checking down to the BIOS with self-healing capabilities. For a list of compatible products, visit <u>hp.com/qo/printersthatprotect</u>. For more information, see <u>hp.com/qo/printersecurityclaims</u>.

³ Some features require additional purchase. A FutureSmart service pack update may be required to activate security features. Learn more at <u>hp.com/go/printsecurity</u>.

⁴ The encrypted HP High-Performance Secure Hard Disk is optional on the HP LaserJet Managed E50145dn printer and MFP E52645dn models and standard on the HP LaserJet Managed Flow MFP E52645c model.

⁵ Solutions deployed through the Hardware Integration Pocket (HIP) may require additional purchase. The HP LaserJet Managed E50145dn printer and Managed E52645 series come with a second-generation HIP.

⁶ Use of the HP Trusted Platform Module accessory may require a firmware upgrade.

⁷ Additional solution such as HP Access Control is required to use optional proximity card reader. HP Proximity Card Reader (CZ208a) is available for separate purchase for select HP devices with Hardware Integration Pocket (HIP) and touchscreen display.

⁸ HP Web Jetadmin is available for download at no additional charge at <u>hp.com/qo/wja</u>.

⁹ HP JetAdvantage Security Manager must be purchased separately. For details, see <u>hp.com/go/securitymanager</u>.

¹⁰ HP JetAdvantage Secure Print works with any network-connected printer or MFP. On-device authentication is available for many HP LaserJet, PageWide, and OfficeJet Pro devices and selected non-HP devices. Some devices may require a firmware upgrade. Internet connection required for cloud storage and retrieval of print jobs. Print-job release from a mobile device requires a network connection and QR code. For more information and a list of supported printers and MFPs, see <u>hp.com/qo/JetAdvantageSecurePrint</u>.

¹¹ Color access control capabilities vary from device to device.

¹² The HP Universal Print Driver is available for download at no additional charge at <u>hp.com/qo/upd</u>.

¹³ Measured using ISO/IEC 17629. Exact speed for first page out varies depending on the system configuration, software application, driver, and document complexity. Learn more at <u>hp.com/qo/printerclaims</u>. FPO varies by model; see Technical specifications table on page 10 for more details.

¹⁴ Measured after 15 minutes in sleep. Exact speed varies depending on the system configuration, software application, driver, document complexity, and time in sleep. FPO varies by model; see Technical specifications table on page 10 for more details.

¹⁵ Measured using ISO/IEC 24734, excludes first set of test documents. For more information, see <u>hp.com/qo/printerclaims</u>. Exact speed varies depending on the system configuration, software application, driver, and document complexity.

¹⁶ Scan speed measured from ADF at default 300 dpi (black-and-white, grayscale, and color). Actual processing speeds may vary depending on scan resolution, network conditions, computer performance, and application software.

¹⁷ Requires an Internet connection to the printer. Services may require registration. App availability varies by country, language, and agreements. For details, see <u>hpconnected.com</u>.

¹⁸ Purchase of optional paper trays required to reach maximum input capacity.

¹⁹ The convenience stapler is only available on the Flow MFP E52645c model.

²⁰ HP calculations based on Energy Star normalized TEC data comparing the HP LaserJet 500 series monochrome printers introduced in spring 2019 HP 89A/X/Y compared to HP 87A/X.

²¹ Program availability varies. For more information, visit <u>hp.com/recycle</u>.

²² Approximate average yield based on ISO/IEC 19752. Actual yield varies considerably based on content of printed pages and other factors. HP Managed Cartridges are not included in printer purchase; purchase separately. For details, see <u>hp.com/go/learnaboutsupplies</u>.

²³ The 100-sheet ADF can scan documents up to 11.7 x 17 in (297 x 432 mm), as well as up to 11.7 x 39 in (297 x 1000 mm) when "long scan size" is selected.

²⁴ The HP LaserJet Managed Flow MFP E52645c model has an RMSV of 8,000 to 14,000 pages. The HP LaserJet Managed MFP E52645dn model has an RMSV of 4,000 to 7,000 pages. HP recommends that the number of scanned 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.

²⁵ Advanced workflow features are available on the Flow MFP E52645c model only and include HP EveryPage, a pull-out keyboard, embedded capture functionality, built in OCR, plus automatic page orientation, cropping, and tone adjustment.

²⁶ An administrator must enable the easy-access USB port before use.

²⁷ Wireless networking requires purchase of optional HP Jetdirect 2900nw Print Server for the HP LaserJet Managed MFP E52645dn/c. Wireless performance is dependent on physical environment and distance from access point and may be limited during active VPN connections.

²⁸ Wireless direct printing is optional and can be added with purchase of the HP Jetdirect 3100w BLE/NFC/Wireless Accessory (3JN69A). For details, see <u>hp.com/qo/businessmobileprinting</u>.

²⁹ NFC touch-to-print is optional and can be added with purchase of the HP Jetdirect 3100w BLE/NFC/Wireless Accessory (3JN69A). For more information, see <u>hp.com/qo/businessmobileprinting</u>.

³⁰ 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/qo/mobileprinting</u>.

³¹ Subscription or accessory may be required. For more information, visit <u>hp.com/qo/roam</u>. To enable HP Roam, some devices may require firmware to be upgraded and an optional accessory to add Bluetooth[®] Low Energy (BLE) beaconing capabilities. Customer can purchase the HP Jetdirect 3100w BLE/NFC/Wireless accessory or the RadBeacon USB. ³² Measured using ISO 24734 Feature Test, A5 Landscape Feed. Speed may vary based on content, PC, media orientation, and media type.

³³ Expandable to 1.5 GB through 90-pin DDR3 DIMM.

³⁴ Maximum memory is with 1 GB DIMM installed. The maximum the firmware can use is 2 GB so 250 MB is unused in this configuration.

³⁵ 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.

³⁶ 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.

³⁷ 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.

³⁸ Printer requires ePrint account registration. App or software may be required. Wireless operations are compatible with 2.4 GHz operations only. Learn more at <u>hp.com/qo/mobileprinting</u>.

³⁹ Not all "Compatible Operating Systems" are supported with inbox software; Full solution software available only for Windows[®] 7 and newer; Legacy Windows Operation Systems (XP, Vista, and equivalent servers) get print and Scan drivers only; Windows RT OS for Tablets (32- and 64-bit) uses a simplified HP print driver built into the RT OS; UNIX model scripts are available on <u>HP.com</u> (Model scripts are printer drivers for UNIX operating systems); Linux systems use in-OS HPLIP software.

⁴⁰ Maximum dimensions of the device are measured with all paper trays folded out and standard accessories installed.

⁴¹ Acoustic values are subject to change. For current information, see <u>hp.com/support</u>.

⁴² Configuration tested: base model, simplex printing, A4 paper at an average of 43 ppm.

⁴³ Power requirements are based on the country/region where the printer is sold. Do not convert operating voltages. This will damage the printer and void the product warranty. Energy Star value typically based on measurement of 115V device.

⁴⁴ HP Auto-On/Auto-Off Technology capabilities are subject to printer and settings.

⁴⁵ HP LaserJet products with Instant-on Technology use an innovative, quick-heating fuser system that warms rapidly and cools quickly, helping you conserve energy compared with products that use traditional fusing.

⁴⁶ EPEAT® registered where applicable. EPEAT registration varies by country. See <u>epeat.net</u> for registration status by country.

⁴⁷ Availability dependent on firmware or software updates or upgrades.

⁴⁸ Online Help must be enabled on the printer or MFP. Mobile device must have an Internet connection to access online services.

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