

## HP Tango

**The world's first "smart home printer" made to fit your connected life, designed exclusively for your smart device<sup>1</sup>**



### Methodology

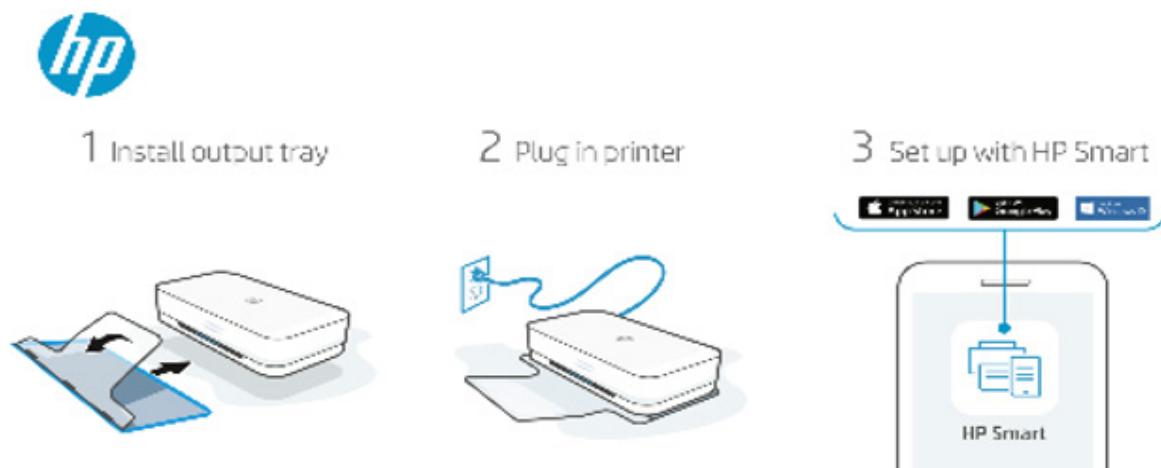
In August 2018, Keypoint Intelligence - Buyers Lab was contracted by HP to conduct a study to determine if the HP Tango, scheduled to be launched worldwide in the Fall of 2018, could be considered the world's first "Smart Home Printer" designed exclusively for mobile devices. "Smart Home Printer" is defined using the following criteria: 1) Designed exclusively for mobile devices, and driven by an OEM printer app, like other IoT devices; 2) Device uses both local Wi-Fi and cloud cell phone data connectivity for two-way connection with OEM app to control printer and get status; 3) Offers voice support for Amazon Alexa, the Google Assistant, and Microsoft Cortana; 4) Lacks a screen/display, buttons/LEDs (other than the power button), and a USB port. Smart home devices often lack screen/display and buttons/LEDs and USB port (since they are designed for wireless and control by OEM provided app on smart device like phone or tablet; 5) Apple MFi-certified for full compatibility with Apple devices and easier setup.

The HP Tango product is "designed exclusively for mobile devices". The HP Tango is unique for the desktop printer category in that it lacks a screen/display, buttons/LEDs (other than the power button), and a USB port; it includes a standard wireless connection and is designed to be exclusively installed via the HP Smart App on a smart device. The printer requires a mobile device for setup/installation. In addition, Buyers Lab reviewed the HP Smart App on a number of HP devices to determine features and functionality provided. And unlike most comparable models from other vendors, HP also provides full voice support for its printers (See Keypoint Intelligence report for details: [www.keypointintelligence.com/HPVoicePrint](http://www.keypointintelligence.com/HPVoicePrint)).

<sup>1</sup> "Smart Home Printer" defined using the following criteria: 1) Designed exclusively for mobile devices, and driven by an OEM printer app, like other IoT devices. This HP Tango device is designed exclusively for mobile devices since it requires a mobile device for install. 2) Uses both local Wi-Fi and cloud cell phone data connectivity for two-way connection with OEM app to control printer and get status. 3) Offers voice printing support for Amazon Alexa, the Google Assistant, and Microsoft Cortana. (See Keypoint Intelligence report for details: [www.keypointintelligence.com/HPVoicePrint](http://www.keypointintelligence.com/HPVoicePrint)). 4) Unique in-class in that it lacks a screen/display, buttons/LEDs other than the power button, and a USB port. Smart home devices often lack screen/display and buttons/LEDs and USB port, since they are designed for wireless and control by OEM provided app on smart device like phone or tablet; 5) Apple MFi-certified for full compatibility with Apple devices and easier setup. Compared to the majority of in-class letter-size color desktop inkjet printers and all-in-ones <\$150 USD. Claim based on HP internal research of printer manufacturers' published specifications and Keypoint Intelligence - Buyers Lab August 28, 2018 study commissioned by HP.

For details, see [www.keypointintelligence.com/HPTango](http://www.keypointintelligence.com/HPTango). Market share as reported by IDC CYQ4 2017 Hardcopy Peripherals Tracker.

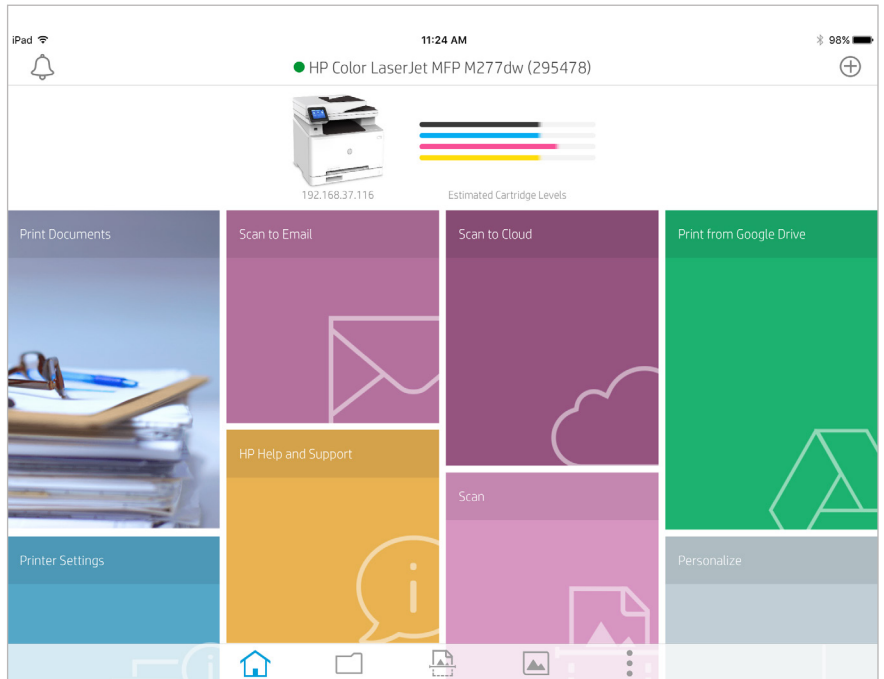
Buyers Lab's team reviewed a combination of product data sheets, setup sheets and user guides to determine if in-class inkjets met the criteria of being a "Smart Home Printer" designed exclusively for mobile devices. By reviewing product specifications for in-class desktop inkjet models, Buyers Lab has determined that none of the competitive models listed are MFi certified. While a number of portable, label, POS/receipt and lifestyle/photo printers are MFi-certified, the HP Tango is currently the only desktop inkjet printer to have received this certification as of August 28, 2018. Further, according to HP, the Tango will support bidirectional communication using cellular data; as of August 2018, Buyers Lab was unable to find any documentation stating that printers/apps in the competitive set allow for bidirectional communication using cellular data rather than wireless connectivity.



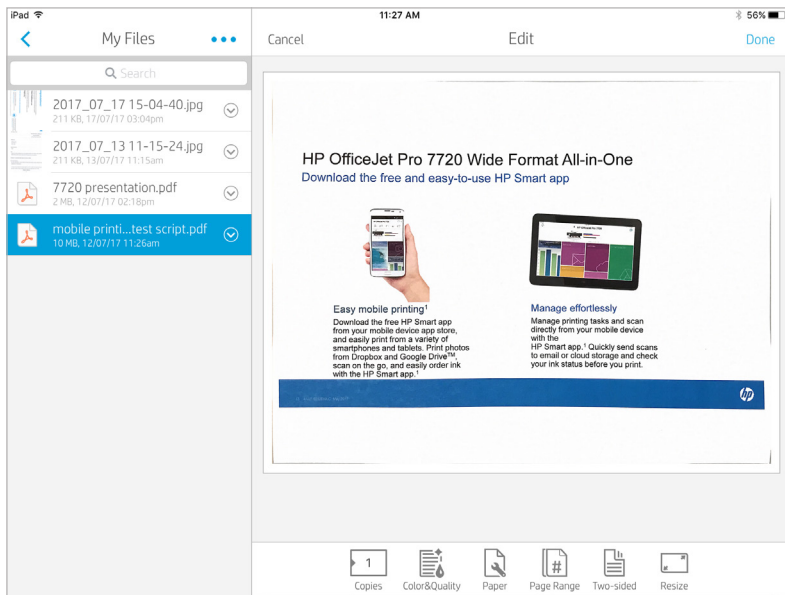
As noted on the included instruction sheet, the HP Tango must be set up using a mobile device and the HP Smart App.

## HP SMART APP

Tested by Buyers Lab on several different HP ink and laser devices, the HP Smart App is a free mobile printing app that lets users print, scan, share, and store documents from their mobile device to compatible HP output devices. The app also supports printing from cloud storage repositories, email, Microsoft Office and social media. It is available on iOS 9.0 or later, Android 4.1 or later, Windows 10 Mobile, Google Chrome, and Amazon-powered devices.

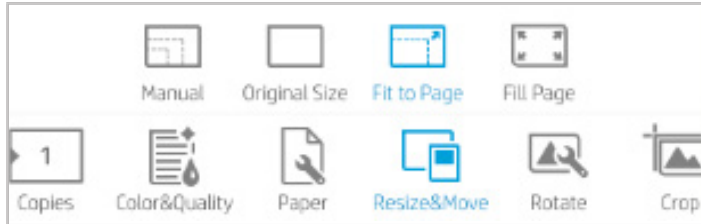


Compatible with a wide variety of HP models, the HP Smart App UI is nearly identical on both iOS (left) and Android (right) platforms.

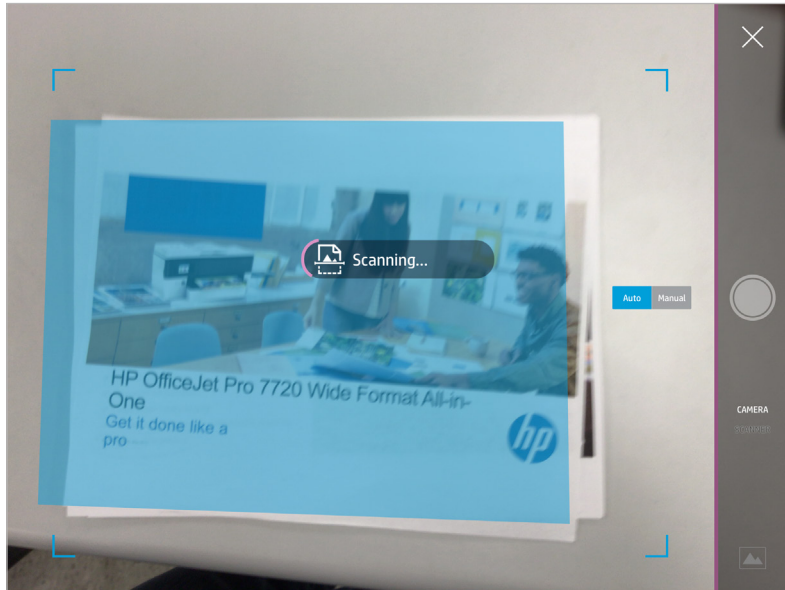


The print preview screen enables pinch-and-drag commands to zoom into the document and flick functionality to scroll through a set of pages (iOS pictured). The tree structure for files stored locally allows the user to move, rename, and delete documents, as well as create folders to store said documents.

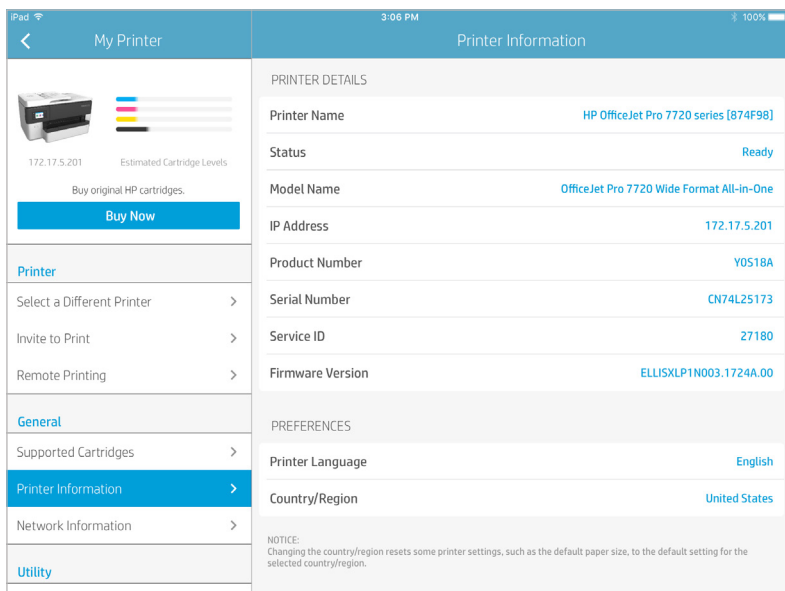
## Custom Research Report



A broad range of document editing options are available through the Preview function (iOS pictured).



The HP Smart App's Document Capture (iOS pictured) feature uses the mobile device's camera as a scanner to capture and digitize paper documents for printing and sharing.



The Printer Information menu houses general device and network information, as well as a list of available devices on the connected network. Cartridge levels are shown for both active and inactive devices. A Paper Out error message pops up when the machine's paper source(s) is empty. Printer reports are accessible underneath Utility, such as Demo Page, Print Quality Report, Wireless Test Report, Printer Status, and Network Configuration. Conveniently, ink levels for the connected device also appear on the main screen of the UI.

### Models Included in the Sample

Data analysis based on a comparison to the majority of in-class letter-size color desktop inkjet printers and all-in-ones ≤\$150 USD. Claim based on HP internal research of printer manufacturers' published specifications and Keypoint Intelligence - Buyers Lab's August 28, 2018 study commissioned by HP. For details, see [www.keypointintelligence.com/HPTango](http://www.keypointintelligence.com/HPTango). Market share as reported by IDC CYQ4 2017 Hardcopy Peripherals Tracker.

#### EXCLUDED FOR: USB PORT; NO MOBILE CAPABILITY

Canon PIXMA iP1188	HP Deskjet 2136	HP Deskjet 2131	HP Deskjet Ultra Ink Advantage 2029	HP DeskJet Ink Advantage 1115	HP Deskjet 1111
HP Deskjet Ink Advantage 2138	HP Deskjet 2132	HP Deskjet 2130	HP Deskjet Ink Advantage 1118	HP Deskjet 1112	HP Deskjet 1110
HP Deskjet Ink Advantage 2135					

#### EXCLUDED FOR: BUTTONS/LED AND USB PORT

Canon PIXMA E3140	Canon PIXMA G2400	Canon PIXMA MG2400	Canon PIXMA MG3040	Canon PIXMA TS302	Epson L310
Canon PIXMA E3170	Canon PIXMA G2800	Canon PIXMA MG2410	Canon PIXMA MG3050	Canon PIXMA TS307	Epson L312
Canon PIXMA E401	Canon PIXMA G3100	Canon PIXMA MG2460	Canon PIXMA MG3060	Canon PIXMA TS308	Epson L313
Canon PIXMA E402	Canon PIXMA iP2700	Canon PIXMA MG2470	Canon PIXMA MG3070	Canon PIXUS iP7230	Epson L360
Canon PIXMA E410	Canon PIXMA iP2770	Canon PIXMA MG2490	Canon PIXMA MG3070S	Canon PIXUS MG3630	Epson L380
Canon PIXMA E414	Canon PIXMA iP2772	Canon PIXMA MG2510	Canon PIXMA MG3077	Epson EP-306	Epson L382
Canon PIXMA E418	Canon PIXMA iP2780	Canon PIXMA MG2522	Canon PIXMA MG3080	Epson Expression Home XP-100	Epson L383
Canon PIXMA E470	Canon PIXMA iP2810	Canon PIXMA MG2525	Canon PIXMA MG3520	Epson Expression Home XP-200	Epson L805
Canon PIXMA E471	Canon PIXMA iP2820	Canon PIXMA MG2540S	Canon PIXMA MG3610	Epson Expression Home XP-214	Epson M100
Canon PIXMA E474	Canon Canon PIXMA iP2840	Canon PIXMA MG2550	Canon PIXMA MG3620	Epson Expression Home XP-220	Epson M105
Canon PIXMA E477	Canon Canon PIXMA iP2850	Canon PIXMA MG2550S	Canon PIXMA MG3640	Epson Expression Home XP-225	Epson PX-045A
Canon PIXMA E478	Canon PIXMA iP2870S	Canon PIXMA MG2560	Canon PIXMA MG3650	Epson Expression Home XP-231	Epson PX-049A
Canon PIXMA E560	Canon PIXMA iP2880S	Canon PIXMA MG2570	Canon PIXMA MG3660	Epson Expression Home XP-235	Epson PX-105
Canon PIXMA E568	Canon PIXMA iP7210	Canon PIXMA MG2570S	Canon PIXMA MG3670	Epson Expression Home XP-240	Epson PX-K150
Canon PIXMA E569	Canon PIXMA iP7220	Canon PIXMA MG2577S	Canon PIXMA MG3680	Epson Expression Home XP-241	Epson Stylus C88 Plus
Canon PIXMA G1000	Canon PIXMA iP7240	Canon PIXMA MG2580S	Canon PIXMA MP230	Epson Expression Home XP-245	Epson Workforce M100
Canon PIXMA G1010	Canon PIXMA iP7250	Canon PIXMA MG2920	Canon PIXMA MP236	Epson Expression Home XP-247	Epson Workforce WF-2010W
Canon PIXMA G1100	Canon PIXMA iP7260	Canon PIXMA MG2960	Canon PIXMA MP237	Epson Expression Photo XP-55	HP AMP 130
Canon PIXMA G1400	Canon PIXMA iP7270	Canon PIXMA MG2965	Canon PIXMA MP287	Epson L120	HP Officejet 7110 Wide Format ePrinter
Canon PIXMA G1800	Canon PIXMA iP7280	Canon PIXMA MG3010	Canon PIXMA MP288	Epson L130	HP Inc Officejet Pro 6230

Canon PIXMA G1900	Canon PIXMA iX6810	Canon PIXMA MG3020	Canon PIXMA TS202	Epson L132	Samsung SL-J1660
Canon PIXMA G2000	Canon PIXMA iX6820	Canon PIXMA MG3022	Canon PIXMA TS207	Epson L220	Samsung SL-J1663
Canon PIXMA G2100	Canon PIXMA iX6860	Canon PIXMA MG3029	Canon PIXMA TS208	Epson L300	Samsung SL-J1665

### EXCLUDED FOR: DISPLAY, BUTTONS/LED AND USB PORT

Brother DCP-J100	Canon PIXMA E488	Canon PIXMA TS3110	Epson Expression Home XP-411	Epson Workforce WF-3640DTWF	HP Deskjet Ink Advantage 2645
Brother DCP-J100 InkBenefit	Canon PIXMA E489	Canon PIXMA TS3120	Epson Expression Home XP-420	Epson Workforce WF-4630DWF	HP Deskjet Ink Advantage 2646
Brother DCP-J105 InkBenefit	Canon PIXMA E510	Canon PIXMA TS3122	Epson Expression Home XP-432	Epson Workforce WF-7610DWF	HP Deskjet Ink Advantage 2648
Brother DCP-T300	Canon PIXMA E518	Canon PIXMA TS3140	Epson Expression Home XP-434	Epson WorkForce WF-7710DWF	HP Deskjet Ink Advantage 2675
Brother DCP-T310	Canon PIXMA G4100	Canon PIXMA TS3150	Epson Expression Home XP-440	HP Deskjet 2620	HP Deskjet Ink Advantage 2676
Brother DCP-T500W	Canon PIXMA MG4250	Canon PIXMA TS3160	Epson Expression Home XP-441	HP Deskjet 2621	HP Deskjet Ink Advantage 2677
Brother DCP-T700W	Canon PIXMA MG5720	Canon PIXMA TS3170	Epson Expression Home XP-442	HP Deskjet 2622	HP Deskjet Ink Advantage 2678
Brother MFC-J200	Canon PIXMA MG5722	Canon PIXMA TS3180	Epson Expression Home XP-445	HP Deskjet 2623	HP Deskjet Ink Advantage 3635
Canon MAXIFY iB4020	Canon PIXMA MG5750	Canon PIXMA TS5020	Epson Expression Home XP-446	HP Deskjet 2630	HP Deskjet Ink Advantage 3636
Canon MAXIFY iB4120	Canon PIXMA MG5760	Canon PIXMA TS5040	Epson Expression Premium XP-530	HP Deskjet 2632	HP Deskjet Ink Advantage 3638
Canon MAXIFY iB4130	Canon PIXMA MG5765	Canon PIXMA TS5050	Epson Expression Premium XP-540	HP Deskjet 2655	HP Deskjet Ink Advantage 3775
Canon MAXIFY iB4150	Canon PIXMA MG5770	Canon PIXMA TS5060	Epson Expression Premium XP-6000	HP Deskjet 3630	HP Deskjet Ink Advantage 3776
Canon MAXIFY iB4170	Canon PIXMA MG5795	Canon PIXMA TS5070	Epson Expression Premium XP-6005	HP Deskjet 3632	HP Deskjet Ink Advantage 3777
Canon MAXIFY MB2020	Canon PIXMA MX475	Canon PIXMA TS5120	Epson Expression Premium XP-630	HP Deskjet 3633	HP Deskjet Ink Advantage 3778
Canon MAXIFY MB2110	Canon PIXMA MX477	Canon PIXMA TS5140	Epson Expression Premium XP-640	HP Deskjet 3634	HP Deskjet Ink Advantage 3785
Canon MAXIFY MB2120	Canon PIXMA MX490	Canon PIXMA TS5150	Epson Expression Premium XP-645	HP Deskjet 3636	HP Deskjet Ink Advantage 3787
Canon MAXIFY MB2140	Canon PIXMA MX492	Canon PIXMA TS5160	Epson L475	HP Deskjet 3637	HP Deskjet Ink Advantage 4645
Canon MAXIFY MB2150	Canon PIXMA MX494	Canon PIXMA TS5170	Epson L575	HP Deskjet 3638	HP Deskjet Ultra Ink Advantage 2529
Canon MAXIFY MB2160	Canon PIXMA MX495	Canon PIXUS TS3130	Epson M205	HP Deskjet 3639	HP Deskjet Ultra Ink Advantage 4729
Canon MAXIFY MB2320	Canon PIXMA MX496	Canon PIXUS TS5030	Epson Workforce WF-2510WF	HP Deskjet 3720 All-in-One Printer	HP Ink Tank 310
Canon MAXIFY MB2710	Canon PIXMA MX497	Canon PIXUS TS5130	Epson Workforce WF-2540WF	HP Deskjet 3721	HP Ink Tank 315
Canon MAXIFY MB2720	Canon PIXMA MX498	Epson EP-709A	Epson Workforce WF-2630WF	HP Deskjet 3721 All-in-One Printer	HP Ink Tank Wireless 410

Canon MAXIFY MB2740	Canon PIXMA MX499	Epson Expression Home XP-320	Epson Workforce WF-2631	HP Deskjet 3724 All-in-One Printer	HP Ink Tank Wireless 415
Canon MAXIFY MB2750	Canon PIXMA MX532	Epson Expression Home XP-324	Epson Workforce WF-2650WF	HP Deskjet 3730	HP Officejet 4500
Canon MAXIFY MB2760	Canon PIXMA MX535	Epson Expression Home XP-330	Epson Workforce WF-2651	HP Deskjet 3732	HP Officejet 4620
Canon MAXIFY MB5110	Canon PIXMA MX538	Epson Expression Home XP-332	Epson Workforce WF-2750DWF	HP Deskjet 3733	HP Officejet 4630
Canon MAXIFY MB5410	Canon PIXMA MX726	Epson Expression Home XP-340	Epson Workforce WF-2760DWF	HP Deskjet 3755	Samsung SL-J1760FW
Canon PIXMA E480	Canon PIXMA MX922	Epson Expression Home XP-342	Epson Workforce WF-3620DWF	HP DeskJet GT 5810	Samsung SL-J3520W
Canon PIXMA E481	Canon PIXMA MX925	Epson Expression Home XP-345	Epson Workforce WF-3640	HP DeskJet GT 5820	Samsung SL-J3525W
Canon PIXMA E484	Canon PIXMA MX926				

**EXCLUDED FOR: TOUCHSCREEN AND USB PORT**

Brother DCP-J4120DW	Canon PIXMA MG6850	Epson Workforce Pro WF-3725DWF	HP ENVY 4523	HP ENVY 5642	HP Officejet 4650
Brother DCP-J562DW	Canon PIXMA TR7520	Epson WorkForce Pro WF-4720DWF	HP ENVY 4524	HP ENVY 5644	HP Officejet 4655
Brother DCP-J567N	Canon PIXMA TR7550	Epson WorkForce Pro WF-4730	HP ENVY 4525	HP ENVY 5646	HP Officejet 4656
Brother DCP-J572N	Canon PIXMA TR7560	HP Deskjet Ink Advantage 3835	HP ENVY 4526	HP ENVY 5660	HP Officejet 4657
Brother DCP-J767N	Canon PIXMA TR8520	HP Deskjet Ink Advantage 3838	HP ENVY 4527	HP ENVY 7155	HP Officejet 4658
Brother DCP-J772DW	Canon PIXMA TS6020	HP Deskjet Ink Advantage 4515	HP ENVY 4528	HP ENVY 7640	HP Officejet 5220
Brother DCP-J968N	Canon PIXMA TS6050	HP Deskjet Ink Advantage 4535	HP ENVY 5020	HP ENVY Photo 6220	HP Officejet 5230
Brother DCP-J973N	Canon PIXMA TS6060	HP Deskjet Ink Advantage 4675	HP ENVY 5030	HP ENVY Photo 6222	HP Officejet 6950
Brother MFC-J4320DW	Canon PIXMA TS6120	HP Deskjet Ink Advantage 4678	HP ENVY 5530	HP ENVY Photo 6230	HP Officejet 6962
Brother MFC-J4420DW	Canon PIXMA TS6140	HP Deskjet Ink Advantage 5075	HP ENVY 5540	HP ENVY Photo 6232	HP Officejet 7510 WF
Brother MFC-J4620DW	Canon PIXMA TS6150	HP Deskjet Ink Advantage 5078	HP ENVY 5541	HP ENVY Photo 6255	HP Officejet 7612 Wide Format e-All-in-One Printer
Brother MFC-J480DW	Canon PIXMA TS6160	HP Deskjet Ink Advantage 5085	HP ENVY 5542	HP ENVY Photo 7120	HP Officejet Pro 6960
Brother MFC-J485DW	Canon PIXMA TS8020	HP Deskjet Ink Advantage 5088	HP ENVY 5543	HP ENVY Photo 7130	HP Officejet Pro 6968



Brother MFC-J5330DW	Canon PIXMA TS8050	HP Deskjet Ink Advantage 5225	HP ENVY 5544	HP Officejet 3830	HP Officejet Pro 6970
Brother MFC-J680DW	Canon PIXMA TS8060	HP Deskjet Ink Advantage 5275	HP ENVY 5545	HP Officejet 3831	HP Officejet Pro 6974
Brother MFC-J880DW	Epson EP-710A	HP ENVY 4500	HP ENVY 5546	HP Officejet 3832	HP Officejet Pro 8210
Brother MFC-J880N	Epson EP-808A	HP ENVY 4520	HP ENVY 5547	HP Officejet 3833	HP Officejet Pro 8710
Brother MFC-J885DW	Epson Expression Photo XP-850	HP ENVY 4521	HP ENVY 5548	HP Officejet 3834	Samsung SL-J2160W
Canon PIXMA MG6620	Epson Expression Premium XP-830	HP ENVY 4522	HP ENVY 5640	HP Officejet 3835	Samsung SL-J2165W
Canon PIXMA MG6822	Epson Workforce Pro WF-3720DWF				

<sup>1</sup> "Smart Home Printer" defined using the following criteria: 1) Designed exclusively for mobile devices, and driven by an OEM printer app, like other IoT devices. This HP Tango device is designed exclusively for mobile devices since it requires a mobile device for install. 2) Uses both local Wi-Fi and cloud cell phone data connectivity for two-way connection with OEM app to control printer and get status. 3) Offers voice printing support for Amazon Alexa, the Google Assistant, and Microsoft Cortana. (See Keypoint Intelligence report for details: [www.keypointintelligence.com/HPVoicePrint](http://www.keypointintelligence.com/HPVoicePrint)). 4) Unique in-class in that it lacks a screen/display, buttons/LEDs other than the power button, and a USB port. Smart home devices often lack screen/display and buttons/LEDs and USB port, since they are designed for wireless and control by OEM provided app on smart device like phone or tablet; 5) Apple MFI-certified for full compatibility with Apple devices and easier setup.

Compared to the majority of in-class letter-size color desktop inkjet printers and all-in-ones <\$150 USD. Claim based on HP internal research of printer manufacturers' published specifications and Keypoint Intelligence - Buyers Lab August 28, 2018 study commissioned by HP. For details, see [www.keypointintelligence.com/HP Tango](http://www.keypointintelligence.com/HP Tango). Market share as reported by IDC CYQ4 2017 Hardcopy Peripherals Tracker.

Models employing thermal inkjet and piezo inkjet technology were included in the sample, while other printing technologies (including direct thermal, dye sublimation, thermal wax, and other non-inkjet technologies) were excluded. "Portable" models (defined by Buyers Lab as models small enough to be carried and that include a self-contained power supply and battery/car adapter) were also excluded. While every effort was made to include the most accurate and complete information, some markets/regions lack complete coverage due to limited engagement with vendors or lack of public availability of specification information.

## ABOUT KEYPOINT INTELLIGENCE - BUYERS LAB

Since 1961, Keypoint Intelligence - Buyers Lab (BLI) has been the leading global independent office equipment test lab and business consumer advocate. In addition to publishing the industry's most comprehensive and accurate test reports on office document imaging devices, each representing months of exhaustive hands on testing in Buyers Lab's US and UK laboratories, the company has been the leading source for extensive runnability testing on imaging media and consumables, as well as extensive specifications/pricing databases on MFPs, printers, scanners, and fax machines. Buyers Lab also has a long-standing reputation for being the industry's most trustworthy and complete source for quality testing services and global competitive intelligence.

In addition to testing over 200 office document imaging devices and related consumables annually for its subscribers, Buyers Lab provides consulting services to buyers and a range of private testing services that include document imaging device beta and pre-launch testing, performance certification testing, consumables testing (including toner, ink, fusers, and photoconductors), solutions evaluations, and imaging media runnability testing.

For more information on Buyers Lab, call (973) 797-2100, visit [www.keypointintelligence.com](http://www.keypointintelligence.com), or email [info@keypointintelligence.com](mailto:info@keypointintelligence.com).