KEYPOINT INTELLIGENCE Buyers Lab

Custom Test Report

KPI Comparative Lab Test Report

FEBRUARY 2018

Canon imagePROGRAF TX-3000 MFP T36

vs. HP DesignJet T2530 eMFP

Advantage ✔	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Print Quality	✔	
Copy Quality	✔	
Scan Capture Quality	✔	
Print Productivity	✔	
Copy Productivity		✔
Scan Productivity	✔	
Direct Print Submission Functionality		✔
Banner Printing	✔	
Walk-up Ease of Use	✔	
Device Feature Set	✔	
Driver Feature Set	✔	

TEST OBJECTIVE

Keypoint Intelligence – Buyers Lab was commissioned by Canon Europe to conduct confidential document imaging device performance testing on the Canon imagePROGRAF TX-3000 MFP T36 and the HP DesignJet T2530 eMFP, and produce a report comparing the relative strengths and weaknesses of the two products in the areas of image quality, productivity, banner printing, direct print submission functionality, walk-up ease of use, device feature set and driver functionality. All testing was performed in Buyers Lab's European test facility in Wokingham, UK.

Executive Summary

Designed to meet the demands for high productivity and exceptional image quality of both the high-end Computer-Aided Design (CAD) inkjet market and the entry-level LED plotter market, the 5-colour, 36-inch Canon imagePROGRAF TX-3000 MFP T36 proved highly capable of fulfilling these requirements. This model gave an excellent overall performance in Buyers Lab's testing, outclassing the HP DesignJet T2530 eMFP in most categories tested. Specifically, the Canon model demonstrated superior print, copy and scan image quality, richer device and driver feature sets and far greater print and scan productivity than the HP DesignJet T2530 eMFP.

In Buyers Lab's round of productivity tests, the Canon TX-3000 MFP T36 delivered faster print speeds across the board, whether printing after a weekend of non-use, from a ready state or printing Buyers Lab's jobstream, (which simulates a typical mixed workflow for a large-format unit). Both devices offer a dual-roll design—a productivity boost for environments where users need to swap regularly between different types or sizes of media—and in Buyers Lab's dual jobstream test the Canon model, again, came out on top. One key advantage for the Canon TX-3000 MFP T36 is that its hot-swap ink tank system ensures uninterrupted printing. In contrast, when the HP T2530 eMFP runs out of ink, printing has to stop for a cartridge to be replaced, leading to some operator downtime. The Canon model gave a strong performance in the scan productivity evaluation with faster throughput and scan-to-desktop times in all modes tested. In copy mode, however, the HP DesignJet T2530 eMFP had the overall advantage. It displayed superior copy productivity in two of the three quality modes (Fast and Normal), whilst the Canon unit was faster in the highest quality setting.

In terms of image quality, both models delivered high-quality results that would easily satisfy any Architectural, Engineering and Construction (AEC), Geographical Information Systems (GIS) and CAD customer requirements, but the Canon TX-3000 MFP T36 delivered superior colour and black image quality overall. It produced larger colour gamuts, higher colour optical densities, pin-sharp text and fine lines, more vibrant colours and natural-looking skin tones. The Canon unit also produced superior image quality in both copy and scan modes, overall. For example, it delivered more accurate colour fidelity when copying Buyers Lab's Pantone corporate logo test chart and far more subtle gradations of halftone shades, especially in dark contrast areas in its Colour Graphic mode, when scanning the mixed text/image Buyers Lab test chart in full colour at 300 dpi. However, one particular noteworthy advantage for HP is its Color Center utility that offers third-party media and colour calibration management, while the Professional PANTONE Emulation feature enables users to create swatch-books containing any user-specified PANTONE colours so that they can check how accurately they can be reproduced on the chosen media.

In terms of operational ease of use, the new T36 scanner and All-in-One PC system are better integrated with the Canon unit than previously seen, and thanks in part to the large and responsive 15.6" touchscreen display, the Canon model also proved to be easier to use and maintain. The Canon SmartWorks MFP interface affords a simplified, time-saving Scan/Adjust/Print workflow. In contrast, the HP model's workflow of Scan/Print/Check Print/Change Settings and Re-scan/Reprint/Repeat as necessary, which is clearly a more time-consuming process. The Canon model also supports batch scanning, scanning to PDF and printing PDF files stored on a USB flash drive—all of which are only available with the HP T2530 eMFP's more expensive PostScript versions. The Canon's TX-3000 MFP T36's stacker was capable of holding more than 100 A0- and A1-sized CAD prints and in good alignment. However, Buyers Lab technicians were impressed with the design and build quality of the HP T2530 eMFP's rear-mounted 50-sheet capacity stacker assembly, which is integrated with the main unit giving it a more compact office footprint (which could be a critical factor where space is constrained).

The Canon TX-3000 MFP T36's feature set—both for the device and for the driver—is much stronger than that offered by the rival HP model. In addition to the aforementioned hot-swap ink tanks, the Canon unit's unidirectional print feature eliminates banding, even in Fast mode; it has higher cartridge capacities, smaller ink drop sizes, a lower rated energy consumption while printing, and a flexible layout nesting option that saves on paper. (The HP model offers a similar feature but the user doesn't have the same flexibility and control over image placement.) Both models support direct PDF submission without the need to open an application, plus HP users have the further advantage of being able to email jobs directly to the printer for instant printing, as well as the ability to print from Apple or Android smartphones or tablets, while Canon users can print via the Canon Print Service mobile app (Android currently supported, with iOS support to follow in 2018).

In summary, based on its superior print, copy and scan image quality, faster print and scan productivity, plus stronger ease of use and feature sets, Buyers Lab judges the Canon imagePROGRAF TX-3000 MFP T36 as the superior performer in its large-format production evaluation.

Print Quality

Advantage ✔	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Text	✔	
Fine Lines	✔	
Halftone Range	=	=
Halftone Fill	✔	
Solid Density	✔	
AEC Graphics	=	=
GIS Graphics	✔	
Business Graphics	✔	
Photographic Images	✔	
Colour Gamut (plain paper, default settings)	✔	
Colour Gamut (matte coated paper, High/Best quality settings)	✔	

+, — and O represent positive, negative and neutral attributes, respectively.

O Buyers Lab's print image quality test evaluation was conducted using Canon Standard Plain Paper 2 and HP Universal Bond.

\+ The Canon model delivered far superior colour and black optical densities in all modes tested, except for composite black in Standard/Normal mode, where it was comparable with the HP model.

\+ In Buyers Lab's colour gamut assessment, the Canon TX-3000 MFP T36 produced a larger colour gamut in all three quality modes; in Fast mode, the Canon model delivered a 64.6% larger colour gamut with a CIE volume of 202,526 versus a CIE volume of 123,078 for the HP unit; in Standard/Normal mode, it produced a 86.3% larger colour gamut than the HP unit with a CIE volume of 340,724 versus a CIE volume of 182,877 for the HP unit; and, in High/Best quality mode, the Canon model produced a 72.4% larger colour gamut, with a CIE volume of 348,280 versus a CIE volume of 202,010 for the HP unit.

\+ When printing on matte coated paper using Canon's High quality setting and the HP T2530 eMFP's Best quality setting, the Canon model delivered a 32.4% larger colour gamut than that of the HP unit, with a CIE volume of 402,815 compared with 304,174 for the HP T2530 eMFP.

\+ The Canon TX-3000 MFP T36 delivered superior colour and black text reproduction overall, with crisp serif and sans serif fonts legible down to the smallest (3-pt. level) size in Standard and High quality modes with no breakup and no ink bleed. In Normal mode, the HP model delivered fully legible colour fonts down to the 3-pt. level in Normal mode and 4-pt. level in Best mode, while black text was legible down to the 3-pt. level in both modes. Characters were less distinct, however, due to some ink bleed.

O When evaluating text in Fast mode, there were very slight differences in the output of the two models. Fonts were legible down to the 4-pt. level for both models in colour, while black text was crisp and legible down to the 3-pt. level in the output of both models.

+ Fine lines produced by the Canon TX-3000 MFP T36 were crisp and remained distinct down to the 0.1-pt. level in all modes, except for black lines in Fast mode which exhibited slight ghosting. In contrast, the HP unit's fine lines were distinct at the 0.25-pt. level in Fast mode, and 0.1-pt. level in Normal and Best quality modes, but in colour mode they exhibited some fuzziness and were less distinct.

+ White-on-black fine lines were visible at the 0.25-pt. level in all modes for both models; the Canon unit's output was rated very good as they were fully distinct whereas the HP unit's white-on-black fine fines were rated poor in Fast mode and good in Normal and Best quality modes as they displayed some fuzziness.

+ The Canon TX-3000 MFP T36 produced 0.1-pt. level circles that were smooth, clean and unbroken, and rated very good overall. In contrast, circles produced by the HP model in colour were rated fair in Fast mode as they exhibited some stair-stepping at the 0.1-pt. level, and good in Normal and Best quality modes with some ink bleed.

+ The Canon TX-3000 MFP T36 produced the 1x1 pixel grid with no quality issues, and coverage was consistently very good across all colours, except for its black 1x1 pixel grid in High quality mode which was rated excellent. In contrast, the HP model produced 1x1 pixel grids that showed inconsistent dot formation and were rated good.

O Both models delivered a very good halftone range—from the 10% to 100% dot-fill levels in all modes—with distinct transitions between all levels.

+ The Canon TX-3000 MFP delivered very good halftone fills in all modes, with smooth coverage; the HP unit's halftones were also rated very good in Normal and Best modes, but in Fast mode, the HP unit's halftone fills were slightly grainy compared with output from the Canon unit.

O Architectural, Engineering and Construction (AEC) graphics produced in Standard/Normal and High/Best modes by both models exhibited detailed and distinct fine lines and a pin sharp level of accuracy.

+ When outputting Geographic Information Systems (GIS) graphics in Standard/Normal and High/Best modes, the Canon unit delivered a finer level of detail and much greater depth of field than did the HP model, giving a more realistic three-dimensional appearance to topographical features.

+ Business graphics produced by the Canon TX-3000 MFP exhibited brighter colours and finer details than did those produced by the HP device.

+ When comparing colour photographic images, both models delivered excellent detailing in dark and light contrast areas, but the Canon TX-3000 MFP T36 delivered superior colours that were more true to the original test target, when compared with images produced by the HP unit. Skin tones produced by the Canon TX-3000 MFP T36 were natural-looking, while those produced by the HP model were pale in Fast mode and slightly yellow in Normal and Best modes.

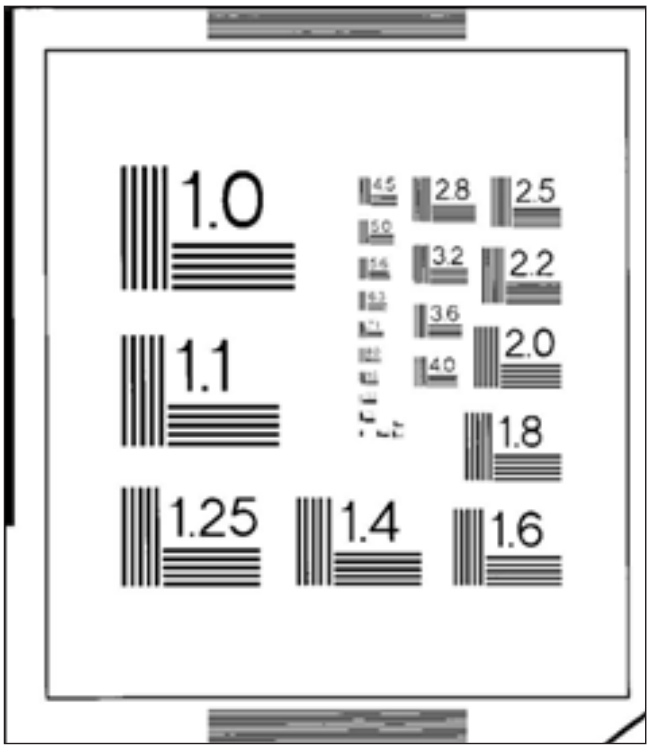
+ Overall, Buyers Lab technicians judged the Canon TX-3000 MFP T36 as the superior performer in Buyers Lab's image quality evaluation, delivering higher optical densities, larger colour gamuts on both media types, more vibrant colours, natural-looking skin tones, and none of the fuzziness in text and line art which were observed under magnification on output from the HP device. While both models delivered detailed and distinct fine lines in AEC drawings, the Canon device delivered superior depth of field in GIS graphics in all modes.

Copy Quality

Advantage ✔	Canon imagePROGRAF TX-3000 MPF T36	HP DesignJet T2530 eMFP
Text	✔	
Fine Lines	✔	
Solid density	=	=
Halftone reproduction	=	=
Colour Fidelity	✔	

+ Using the QA-1 test chart, the Canon model produced excellent text copy quality in Standard mode. Fonts were legible down to the 6-pt. size (the smallest level on this chart), characters were dark and crisp, and showed no breakup or no sign of haloing. In copied output produced by the HP device, fonts were legible at the 6-pt. level in Normal mode but were less well defined and some ghosting was evident.

+ When evaluating fine lines using the same QA-1 test chart (see below) where the emphasis is on evaluating whether there is a clear distinction between lines, rather than the rendering of each line, the output produced by the HP model in Standard/Normal mode remained distinct only up to the 2.0 cpm (cycles per millimeter) level, compared with up to 2.8 cpm for the Canon unit.



Portion of QA-1 Image Evaluation Test Target used to evaluate fine line reproduction.

O Solid density was higher for yellow and black output produced by the Canon TX-3000 MFP T36 in copy mode, while the HP model produced higher cyan and magenta optical densities.

O In Standard/Normal mode, the HP model delivered better neutral greyscale coverage, whereas greyscale output from the Canon device displayed a slight magenta hue. However, colour halftones from the Canon unit were more vibrant than those produced by the HP T2530 eMFP.

\+ Solids on the QA-1 test chart were dark, smooth and consistent in all quality modes when produced by the Canon unit, whereas the solids produced by the HP T2530 eMFP had a 'washed out' appearance.

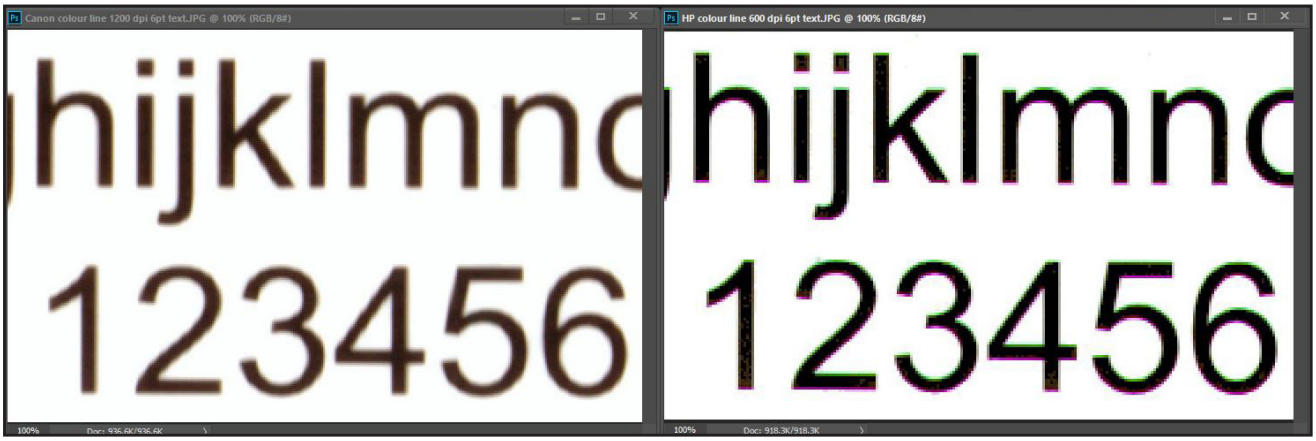
\+ In Buyers Lab's colour fidelity testing which is based on a select range of 12 Pantone shades for corporate logos, the Canon device had a 25.4% lower average Delta E shift of 9.1 compared with 12.2 for the HP unit.

Scan Capture Quality

Advantage ✔	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Resolution and Sharpness at Optical Resolution	✔	
Text	✔	
Fine Lines	=	=
Geometric Accuracy	=	=
Halftone Capture Quality	✔	

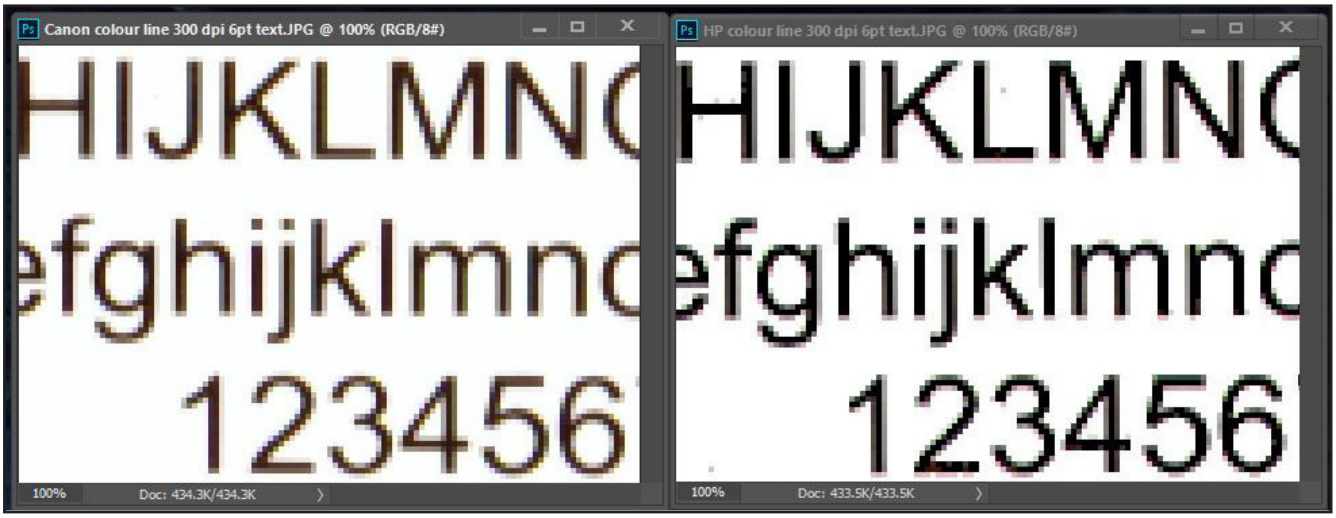
\+ When scanning text and fine lines using the QA-1 test chart, the Canon TX-3000 MFP T36 clearly benefitted from using its maximum 1200-dpi resolution, whereas the HP DesignJet T2530 eMFP has a maximum resolution of only 600 dpi. As PDF file formats are supported only by HP's PostScript sister model, the file was saved as a TIFF file.

\+ As illustrated below (under magnification), Buyers Lab technicians observed the Canon model delivered fonts that were crisper and more distinct than those produced by the HP unit, with none of the ghosting that was apparent in fonts produced by the HP model in Fast mode.



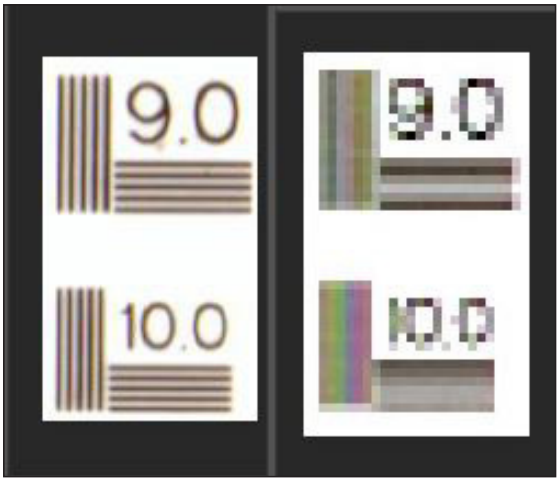
Canon (shown left) and HP (shown right) fonts at maximum resolution. Although the HP fonts are darker, they are less well defined and show some colour fringing. All images were scanned using the Colour Line setting on both models.

- Text produced by both models (using Line preset) at 300 dpi was legible down to the smallest 6-pt. level, with very little difference between them.

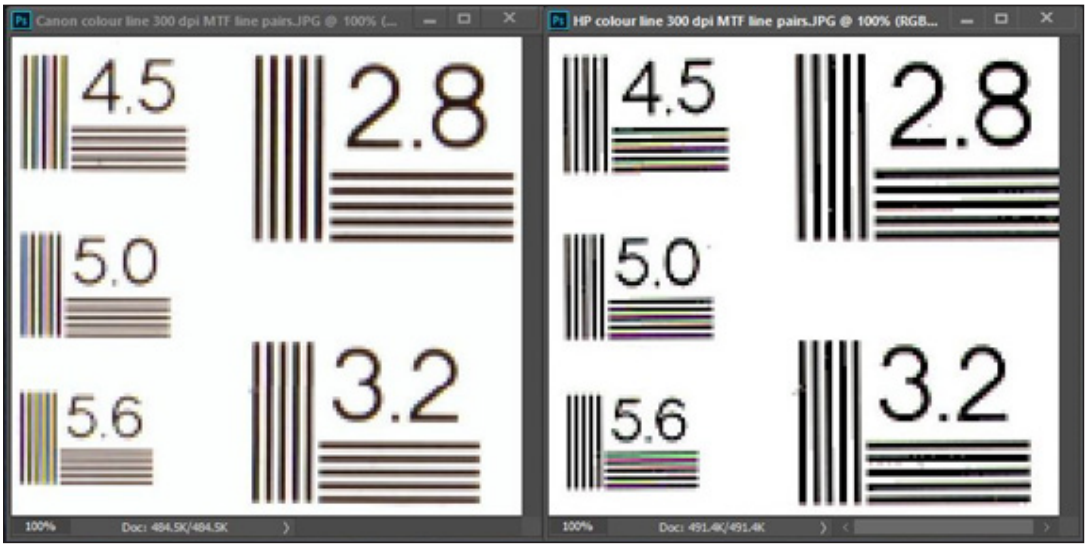


Canon (left) and HP (right) fonts at 300-dpi resolution. Note the pronounced stair-stepping in diagonal lines (K, M, N) from both models.

+ In the MTF Line Pairs Test, where the emphasis is on evaluating whether there is a clear distinction between lines, rather than the rendering of each line, fine lines at maximum resolution were more distinct in output produced by the Canon unit compared with the HP unit. Fine lines at 300 dpi were distinct up to the 3.2 level in output for both models.



Canon (left) and HP (right) fine line pairs at maximum resolution.



Canon (left) and HP (right) fine line pairs at 300-dpi resolution.

O Using the Adobe Photoshop Measuring Tool to evaluate geometric accuracy (defined as the variation between the actual length of the document and the length of the scanned image), both the Canon and HP models delivered comparably impressive accuracy, with a variation of 0.1 mm in landscape and 0.2 mm in portrait (see Supporting Test Data).

\+ When scanning the mixed text/image Buyers Lab test chart in full colour at 300 dpi, Buyers Lab technicians found that the Canon TX-3000 MFP T36 delivered far more subtle gradations of halftone shades, especially in dark contrast areas in its Colour Graphic mode, whereas those same areas of the darker halftones lost a lot of integrity when scanned by the HP DesignJet T2530 eMFP in its Mixed Colour mode. The quality of HP's halftone capture improved markedly when its Image mode was selected.

Halftone capture in full colour at 300 dpi with the Canon (left) and HP models (centre and right, in Mixed and Image modes, respectively).

Print Productivity

Advantage ✔	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
First Page Out	✔	
Throughput Speed (fastest mode)	✔	
Throughput Speed (default mode)	✔	
Throughput Speed (highest-quality mode)	✔	
Job Stream (multiple jobs submitted to device in fast succession simulating busy network environment)	✔	
Dual-roll Job Stream	✔	

+ The Canon TX-3000 MFP T36 was 31.7% faster than the HP T2350 eMFP in the first-page-out after a weekend of non-use evaluation, with a time of 86.28 seconds compared with 126.41 seconds for the HP device. Start-up time before printing commenced was, again, much faster for the Canon model at 62.25 seconds, compared with 101.56 seconds for the HP unit.

+ The Canon device delivered a 49.2% faster first-page-out time of 45.53 seconds from its ready state, compared with 89.69 seconds for the HP T2530 eMFP. Start-up time before printing commenced was slower for the Canon model—22.53 seconds for the Canon model, compared with 18.47 seconds for the HP model—but combined with the first-page-out from ready result, it is clearly the faster model, overall.

+ When printing Buyers Lab's job stream, designed to simulate a typical mixed workflow for a large-format unit, the Canon TX-3000 MFP T36 was 12.7% faster than the HP model in Fast mode, 34.5% faster in Standard/Normal mode, and 53.0% faster in High/Best mode.

+ As both models offer a dual-roll design, Buyers Lab conducted a second job stream test, sending the same files as alternate jobs to different rolls to test both models' efficiency when switching between rolls. The Canon TX-3000 MFP T36 completed the dual-roll job stream in Fast mode in 789.94 seconds—which is 8.8% faster than that of the HP T2530 eMFP model (866.30 seconds).

O Buyers Lab analysts observed that the actual time taken to switch between rolls (around 22 seconds) was similar for both models.

+ When printing Buyers Lab's 12-page DWF test file in colour, the Canon TX-3000 MFP T36 was faster than the HP unit in all modes tested; it was 7.8% faster in Fast mode; 36.5% faster in Standard/Normal mode; and 53.6% faster in High/Best mode.

+ Similarly, when printing Buyers Lab's 12-page DWF test file in monochrome, the Canon model was the faster model across the board; it was 8.4% faster in Fast mode; 33.1% faster in Standard/Normal mode and 53.5% faster in High/Best mode than the HP unit.

+ When printing Buyers Lab's single-page A0-size test target in Standard/Normal mode, the Canon TX-3000 MFP T36 delivered a first-page-out time (114.10 seconds) that was 22.1% faster than that of the HP unit (146.44 seconds). The time to print five A0-size pages was 30.1% faster for the Canon model than for the HP device (497.09 seconds versus 710.98 seconds).

+ The Canon model's unique sub ink tank system provides a further boost to productivity. When the HP T2530 eMFP model runs out of ink, printing must stop for the cartridge to be replaced, which leads to operator downtime. In contrast, when ink needs replacing on the Canon model it will continue to print, drawing ink from its sub tank,

while ink is replaced, so there's no operator downtime. For added convenience, the control panel alerts users to replace ink and also provides purchasing information.

O Both the Canon and HP models will pause and alert the operator when they run out of paper. After a new roll is installed, each device resumes printing at the beginning of the interrupted page, rather than printing the portion of the page that remained before running out of paper, so less ink and paper is wasted.

Copy Productivity

Advantage ✔	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
A1 (Landscape) First Page Out (fastest mode)		✔
A1 (Landscape) First Page Out (default mode)		✔
A1 (Landscape) First Page Out (highest-quality mode)	✔	
A0 First Page Out (fastest mode)		✔
A0 First Page Out (default mode)		✔
A0 First Page Out (highest-quality mode)	✔	

– In Buyers Lab's A1 (Landscape) testing in Fast mode in default dpi settings, the Canon TX-3000 MFP T36's first-copy time in monochrome was comparable with that of the HP DesignJet T2530 eMFP; it was 6.0% slower in greyscale and 10.7% slower in colour than the HP unit.

– In Buyers Lab's A1 (Landscape) testing in Standard/Normal mode, the Canon TX-3000 MFP T36's first-copy out time was 19.6% slower than that of the HP DesignJet T2530 eMFP in monochrome, 20.3% slower in greyscale and 14.6 % slower in colour than the HP unit.

+ However, in the models' highest quality modes at 300 dpi, the Canon model was 48.6% faster in monochrome, 47.2% faster in greyscale and 51.1% faster in colour than the HP unit.

– In Buyers Lab's A0 testing in Fast mode in default dpi settings, the Canon TX-3000 MFP T36's first-copy out time in monochrome was slightly (2.1%) slower than that of the HP model and it was 4.5% slower in greyscale, while it had a comparable time in colour.

– In Standard/Normal mode, the Canon device's A0 first-copy out time was 28.4% slower in monochrome, 28.0% slower in greyscale and 10.8% slower in colour than the HP model.

+ Similar to the results for A1 testing in the highest quality mode in 300 dpi, the Canon model's A0 first-page-out times in the highest quality mode were 43.2% faster in monochrome, 52.8% faster in greyscale, and 47.5% faster in colour than those of the HP model.

– When Normal is selected on the HP model, the printing mode is automatically set to 'fast mode' which is likely to contribute to its faster overall copy productivity over the Canon model.

Scan Productivity

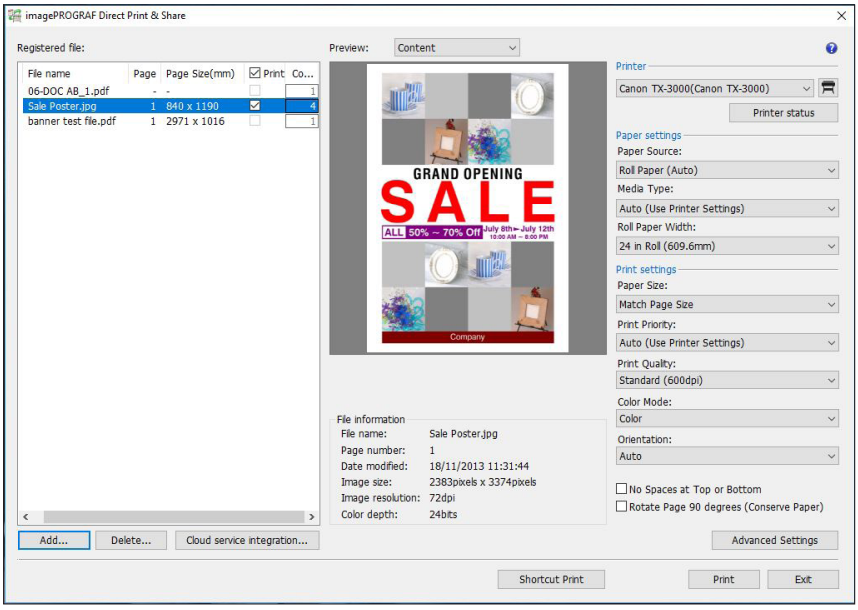
Advantage ✔	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Batch Scanning	✔	
Single-Page Scanning	✔	
First Page Out to Desktop	✔	

+ Batch scanning is not supported by the HP DesignJet T2530 eMFP, so no times could be recorded. In some environments this could have a highly adverse effect on productivity.
+ In Buyers Lab's A1 (L) scan throughput testing, timing from initiation to the document exiting the scanner, the Canon TX-3000 MFP T36 was faster in all modes tested, with speeds that were 47.5% faster in monochrome at 200 dpi and 47.3% faster at 300 dpi; in greyscale mode, the Canon model was 46.4% faster at 200 dpi and 47.9% faster at 300 dpi; at 200 dpi and 300 dpi in colour mode, the Canon model's performance was 20.6% and 6.4% faster, respectively, than the HP model.
+ Similarly, in Buyers Lab's A0 scan throughput testing the Canon TX-3000 MFP T36 was 43.1% faster than the HP DesignJet T2530 eMFP in monochrome mode at 200 dpi, and 6.0% faster at 300 dpi; in greyscale mode, the Canon model was 41.4% faster at 200 dpi and 5.0% faster at 300 dpi; in colour mode, the Canon model was 19.1% faster at 200 dpi and 4.4% faster at 300 dpi.
+ In Buyers Lab's scan-to-desktop A1 (Landscape) testing, measuring the time taken from initiation to the scan appearing at the desktop, the Canon TX-3000 MFP T36 was faster than the HP model in all modes tested. It was 73.7% faster in monochrome at 200 dpi, and 79.8% faster at 300 dpi; in greyscale mode, the Canon model was 70.3% faster at 200 dpi, and 77.9% faster at 300 dpi; in colour mode, the Canon unit was 71.5% faster at 200 dpi and 72.9% faster at 300 dpi.
+ In Buyers Lab's scan-to-desktop A0 testing, the Canon TX-3000 MFP T36 was 72.7% faster than the HP model in monochrome at 200 dpi, and 77.2% faster at 300 dpi; in greyscale mode, the Canon model was 69.5% faster at 200 dpi and 77.0% faster at 300 dpi; in colour mode, the Canon model was 70.9% faster at 200 dpi and 74.2% faster at 300 dpi.

Direct Print Submission Functionality

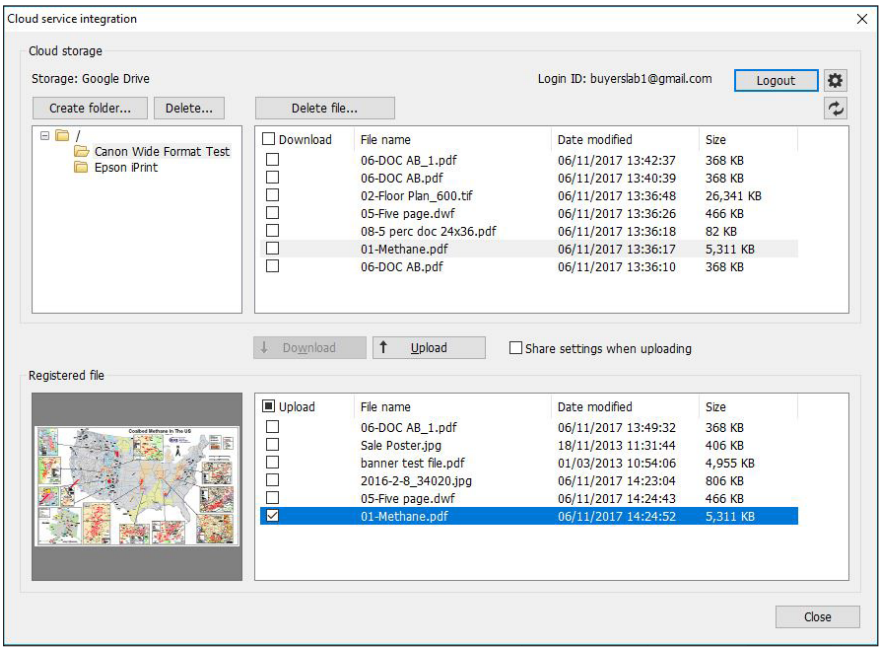
Advantage ✔	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Ease of Use	=	=
Direct Print Submission Functionality	=	=
Mobile App Integration		✔

- Available as a free download from Canon's website, the imagePROGRAF Direct Print & Share utility enables the direct printing of PDF, JPEG, TIFF and HPGL/2 files without the need for native applications or print drivers. Via the utility, users can preview print layouts and select print settings without the need to open up the driver properties. For added convenience, it also lets users print multiple files simultaneously.



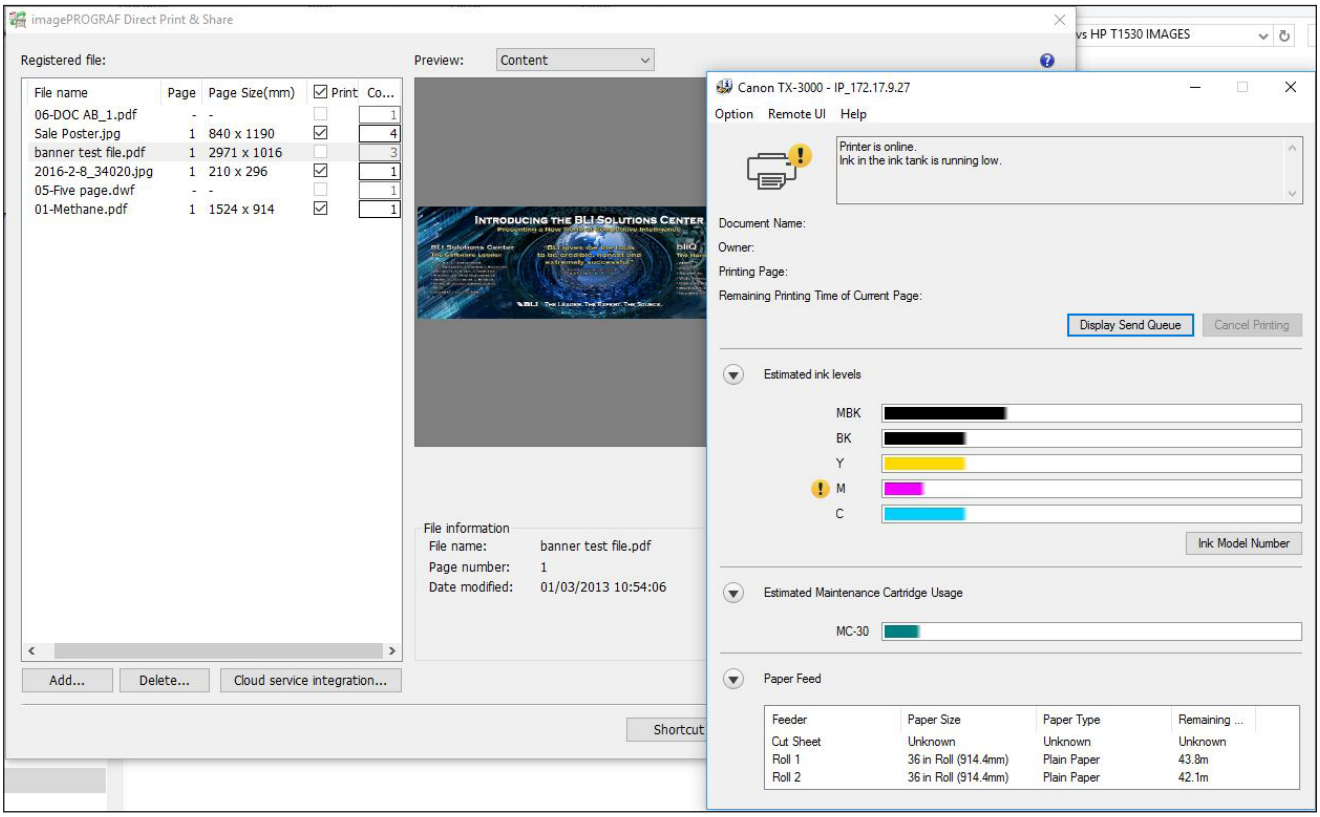
Canon's imagePROGRAF Direct Print & Share utility gives users an image preview.

- The imagePROGRAF Direct Print & Share utility supports "Shortcut Print" functionality, enabling users to create a desktop shortcut that includes commonly used print settings. Akin to a hot folder workflow, files are automatically printed with the predefined settings when users drag-and-drop the files to the desktop icon. Multiple desktop icons can be created for different print settings or combinations of print settings.



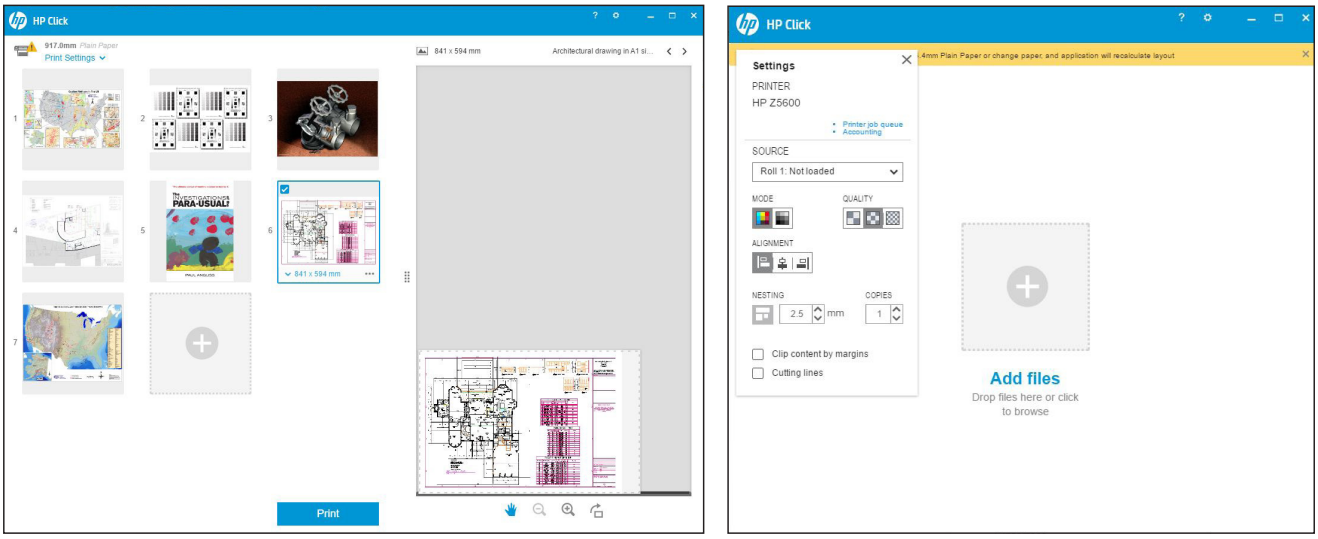
Retrieving files from Google Cloud using imagePROGRAF Direct Print & Share.

- Users can download stored files from Google Drive and AutoCAD 360 cloud storage services for printing via the imagePROGRAF Direct Print & Share utility, and can upload files directly to cloud storage as well, which boosts collaboration. For added convenience, the utility also offers the option of sharing files simultaneously with one or more users (via Google Drive only), who will receive an email notification with a link to download the shared file without the need to log in.



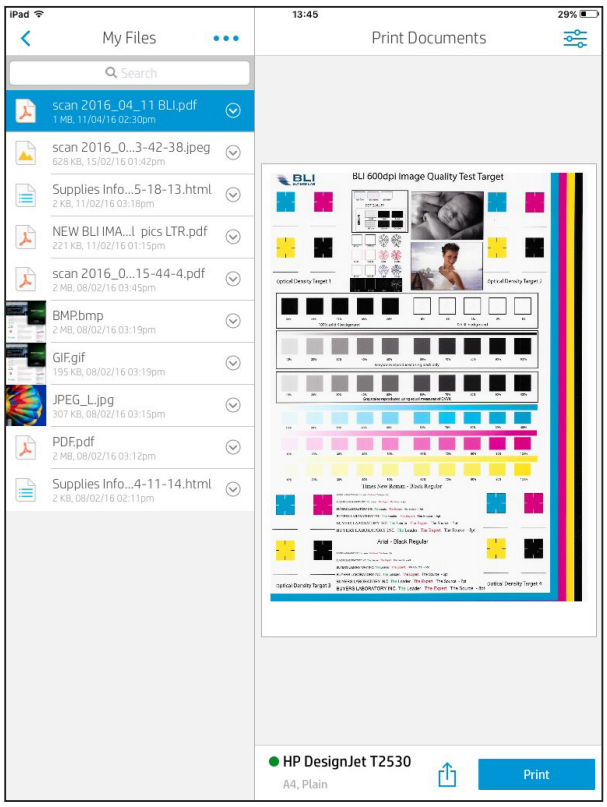
Users can view device status information via the imagePROGRAF Direct Print & Share utility.

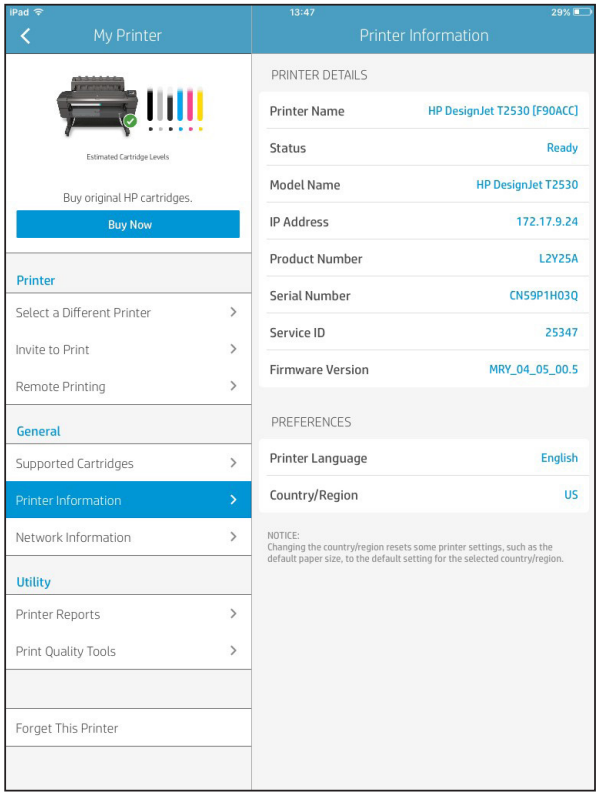
- Available as a free download, HP Click printing software allows direct printing of PDF, JPEG, TIFF and HPGL/2 files from the desktop, without the need for native applications or print drivers. Via the utility, users can preview print layouts, resize and align images without the need to open up the driver properties. It also has an automatic nesting feature to reduce waste.



Via HP Click, users can select basic print settings, preview images, manipulate images as well as utilise the automatic nesting feature to reduce paper waste.

- In addition, the T2530 eMFP supports HP ePrint functionality, whereby users are able to send print jobs remotely by email either from their workstation PC or from their mobile device to the printer; PDF, TIFF and JPEG files (up to 10 MB) are supported.
- The HP Mobile Printing service allows users to print directly from an iOS or Android smart device to a compatible HP large-format device. Unlike the previous version (ePrint & Share), users do not need to create an account in order to access direct print functionality. Instead, the mobile device quickly pairs with the printer via a wireless network connection or by Wi-Fi Direct for direct job submission. Android users have the extra step, however, of downloading and enabling the free HP Print Service Plugin app, which is available from Google Play, before being able to access the HP Mobile Printing service. Users can print a vast selection of file formats such as Microsoft Office documents, as well as PDF, JPEG and TIFF files. Whether a file is stored locally on the device, in a cloud service account, or sent as an email attachment, the user just needs to open the file and select the Share option, which then allows them to send the job to their preferred HP printer.





The HP Smart mobile app enables Android and iOS mobile devices to pair with the T2530 eMFP and other compatible HP devices easily. Users can retrieve files from popular cloud storage services (Box, Dropbox, Evernote and Google Drive are supported, among others) to print, preview images and perform image adjustments, as well as scan directly to the cloud.

O The Canon TX large-format series supports Canon Print Service, a mobile print app for Android users (with support for Apple iPad devices to follow in 2018), which is a productivity boost in environments where workers are travelling between sites or working remotely.

Banner Printing

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Image Quality	=	=
Productivity	✔	

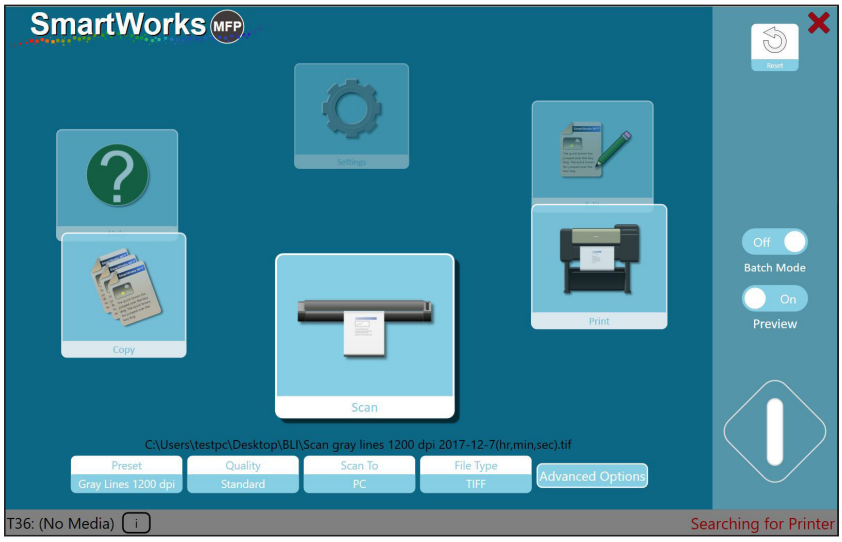
\+ Both models successfully printed Buyers Lab's 36" x 105" banner (a 4,955-KB PDF file) in Fast mode. The HP DesignJet T2530 eMFP took 4 minutes, 14.9 seconds to print the banner, and no preview was available. In contrast, the Canon model took 7.68 seconds to generate a preview at the desktop, and an additional 1 minute, 54.53 seconds from preview to final paper cut. With a total preview and print time of 2 minutes, 2.21 seconds, the Canon TX-3000 MFP T36 is clearly the faster model.

Buyers Lab's Banner Test File

Walk-Up Ease of Use

Advantage ✔	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Touchscreen Interface	✔	
Scanner Media Handling	✔	
Print Media Handling	=	=
User Maintenance/Consumable Replacement	=	=
Copy Programming	✔	
Scan to Desktop/Network Folder Programming	✔	
Scan to Email/USB/Cloud Programming	✔	
Stored Job Reprinting (including via USB key and Cloud)	✔	

The Canon TX-3000 MFP's T36 Colortrac Scanner is operated via the All-in-One PC system, which features a large 15.6-inch colour touchscreen user interface and updated SmartWorks software. The MFP scanner and AIO system is more tightly integrated with the main unit than previously seen with Canon MFP models, thus reducing the MFP's overall office footprint.

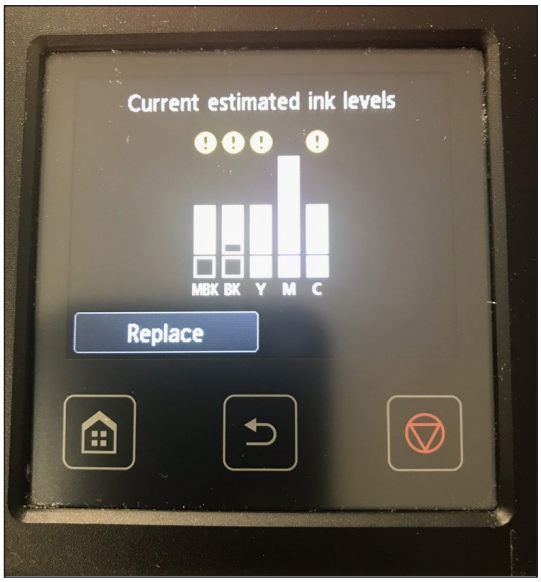


SmartWorks MFP Home Screen

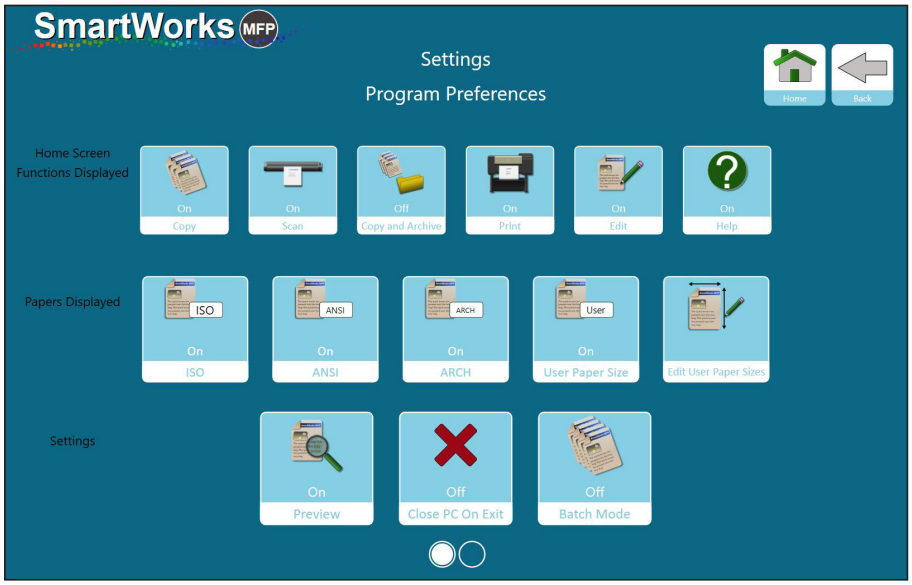
+ The Canon TX-3000 MFP T36 has a 15.6" All-in-One (AIO) touchscreen monitor for programming copy and scan jobs, whereas the HP T2530 eMFP has a smaller 4.3" touchscreen LCD display.

+ Buyers Lab technicians were very impressed by the Canon TX-3000 model's 15.6" touchscreen interface which is intuitive and responsive, and offers a familiar Windows-based environment to reduce the learning curve for first-time users. All main functions—Copy, Scan and Print—are available from the icon-based carousel on the SmartWorks home page, along with Settings, Presets and Help options. When a function is selected, the current active job settings for that function are shown on the bottom of the home screen; these can be edited by clicking on the buttons or via the 'Advanced Options' button, so users have full control over all settings, which greatly simplifies job programming at the device. Users are able to 'pinch and zoom' to enlarge specific areas of the touchscreen, and, when zoomed in, pan with one finger on the image. A 'Virtual Keyboard' can be displayed to make it easy to enter email addresses and a numerical keypad can also be displayed for quantity selections.

– However, although the angle of the Canon AIO touchscreen can be adjusted, it's positioned at a height that makes it inaccessible to users in wheelchairs. The HP control panel display can be raised or lowered to adjust the viewing angle.

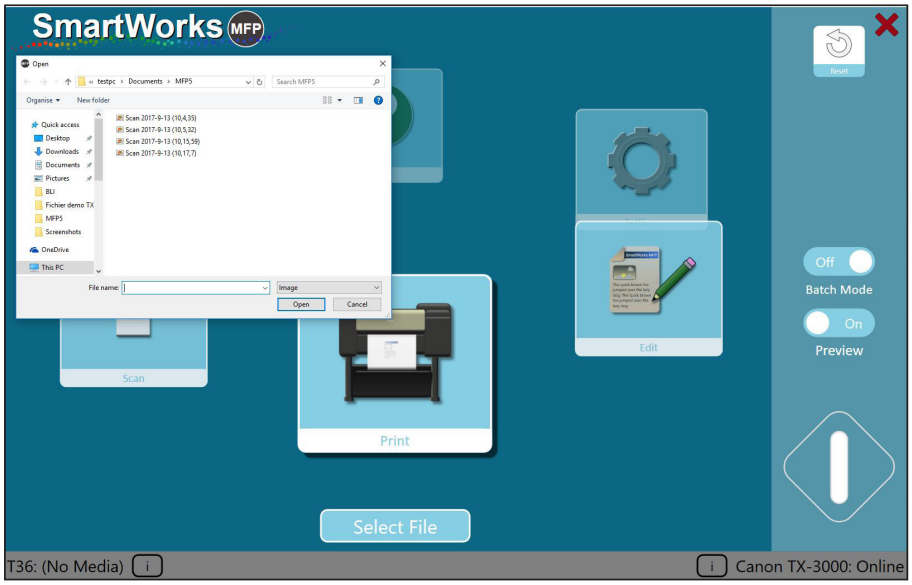


The Canon TX-3000 MFP's control panel on the main unit displays feedback on consumable levels.

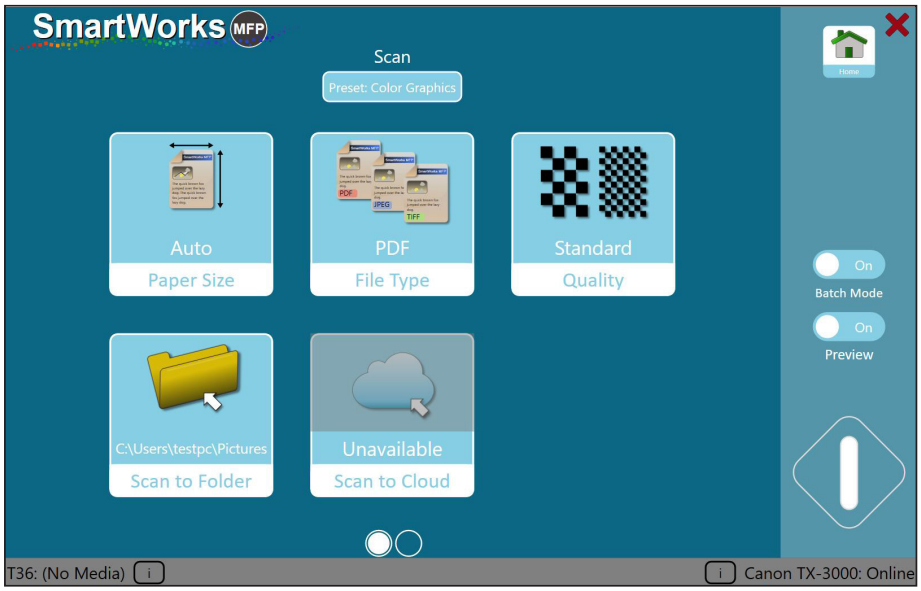


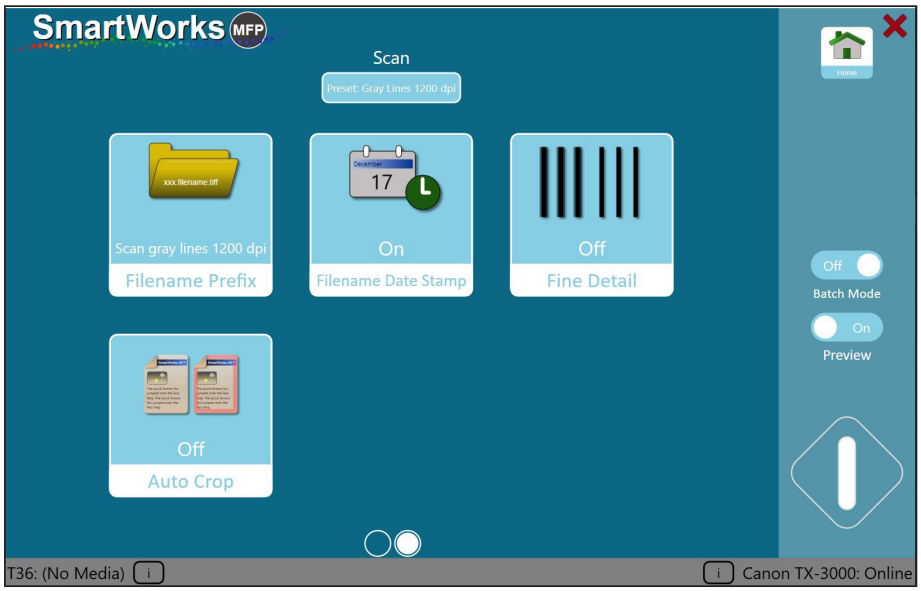
Users can configure the SmartWorks Home Screen appearance and enable settings such as Batch Mode and Preview, via the Program Preferences screen.

O Not all device control for the Canon unit is provided by the AIO touchscreen with media control, ink and print-head maintenance and other tasks accessed via the Canon printer's LCD control panel on the main unit, which has a small but responsive touchscreen and soft button navigation controls.



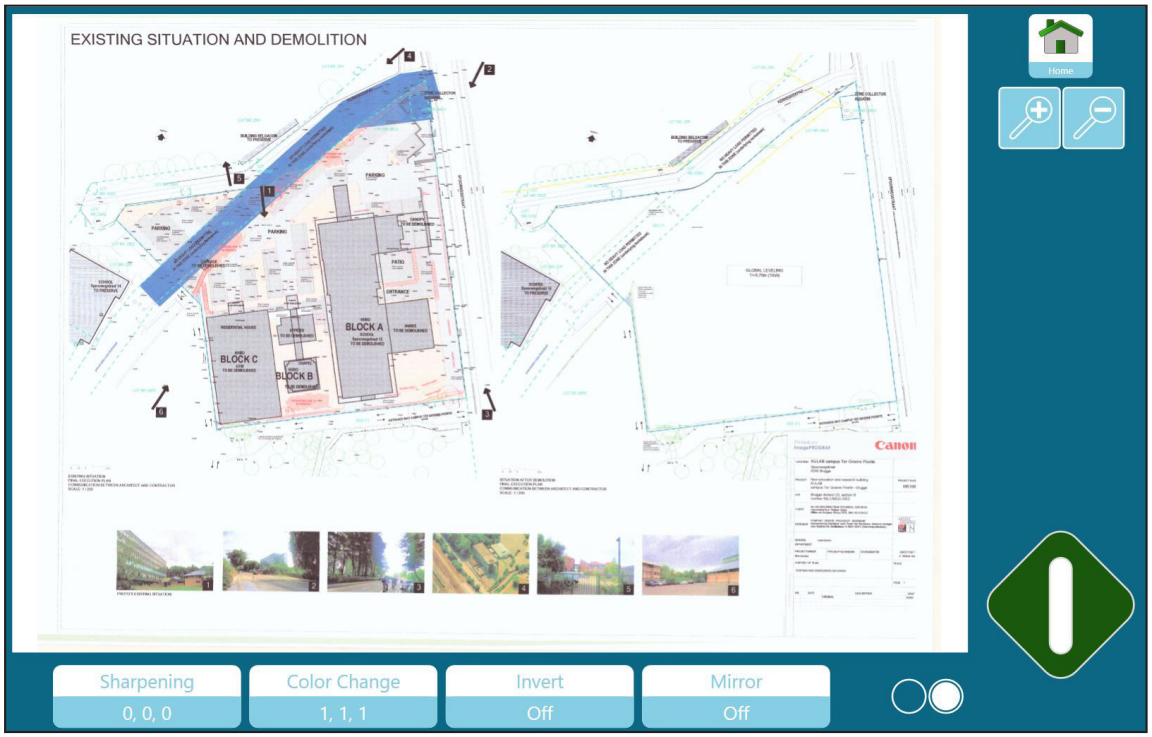
SmartWorks MFP offers users the ability to browse network folders and select files for printing easily.

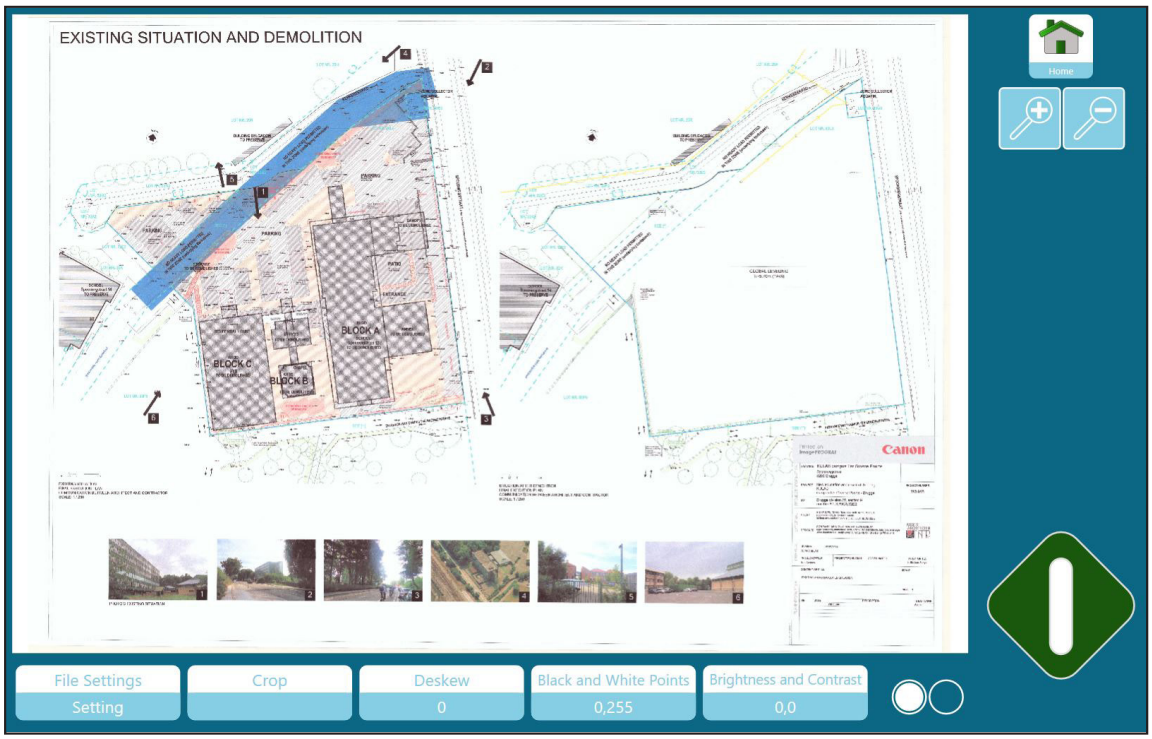




SmartWorks Scan adjustment settings (shown top and bottom).

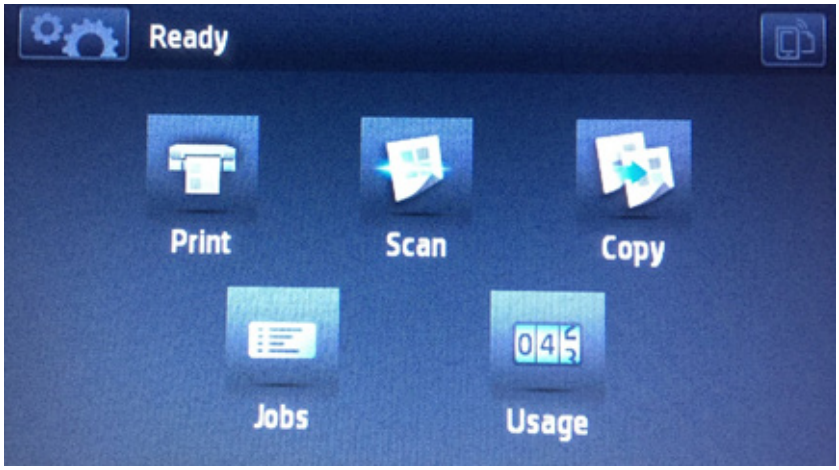
+ The Canon model's Copy, Edit, Scan and Print functions all offer a Preview screen with the document displayed in the centre and a variety of image adjustment options—Crop, Deskew, Black Point & White Point, Brightness and Contrast, Sharpening, RGB Colour Change, Invert, Mirror and Simple/Adaptive Threshold—running along the bottom of the screen. Users are given full control over image quality before jobs are released. The preview allows users to zoom in multiple levels of magnification on a linear scale (whereas the HP unit's preview screen permits only three levels of magnification). The Canon SmartWorks MFP interface comprises a simplified, time-saving Scan/Adjust/Print workflow. In contrast, the HP model's workflow of Scan/Print/Check Print/Change Settings and Re-scan/Reprint/Repeat as necessary, is clearly a more time-consuming process for practical use.



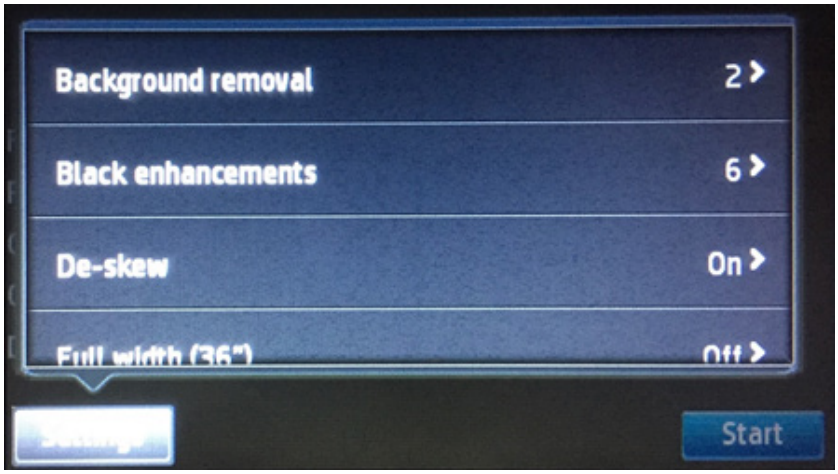


Preview screen showing the range of image adjustment settings available from two menu screens (shown top and bottom).

+ The HP T2530 eMFP's touchscreen UI is bright and easy to navigate, however Buyers Lab technicians found the smaller touchscreen more difficult to use as the screen had to be tapped quite firmly in order to elicit a response. In addition, the buttons on the keyboard display are fairly small, which makes entering email addresses more of an error-prone process compared when using the Canon MFP's larger virtual keyboard.

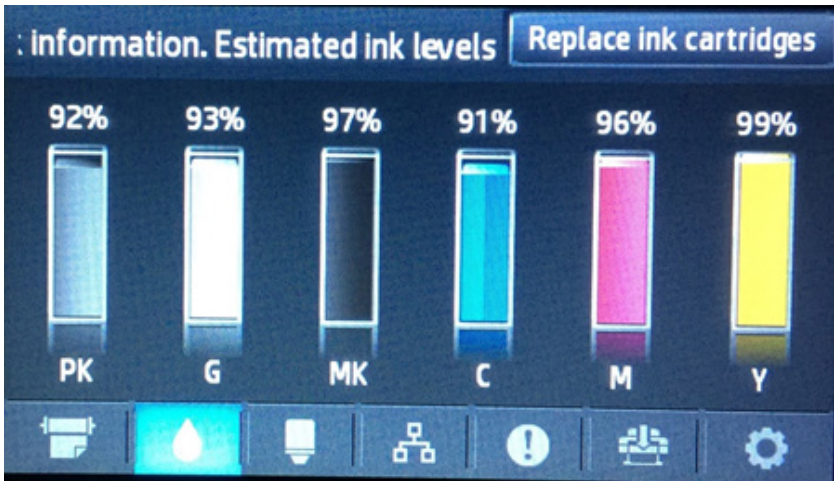


HP DesignJet T2530 eMFP Home Screen

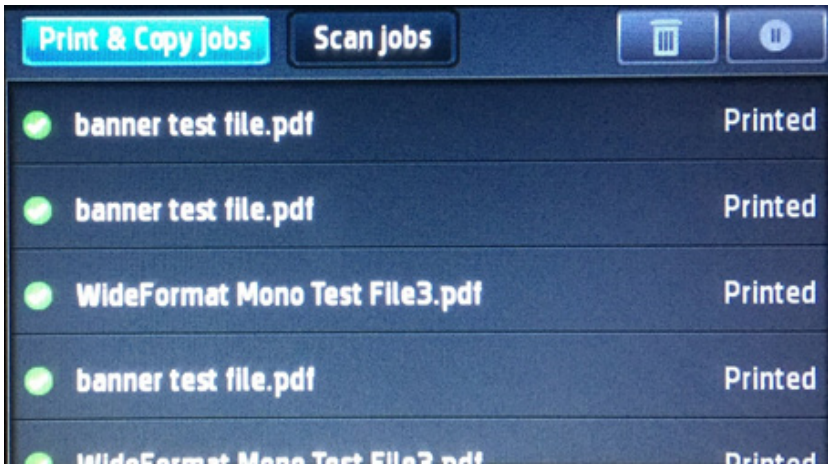


HP DesignJet T2530 eMFP Scan Image Adjustment Screen

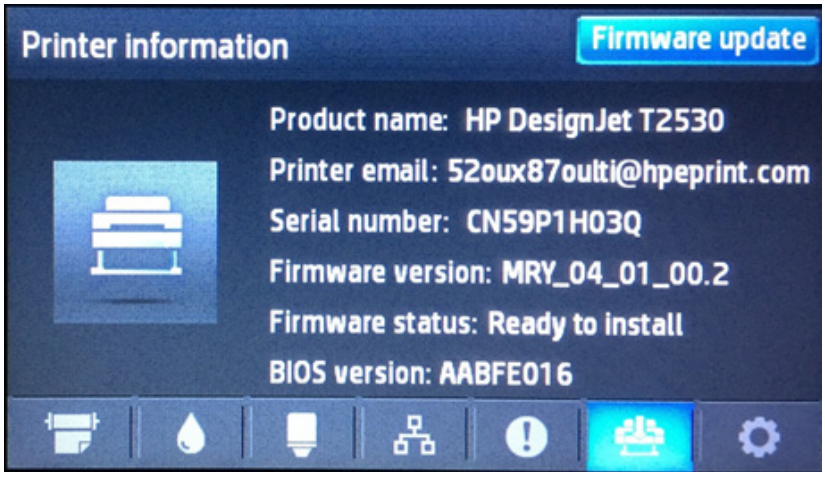
HP DesignJet T2530 eMFP Scan Destination Screen.



Percentage of ink remaining is displayed in 1 percent increments.



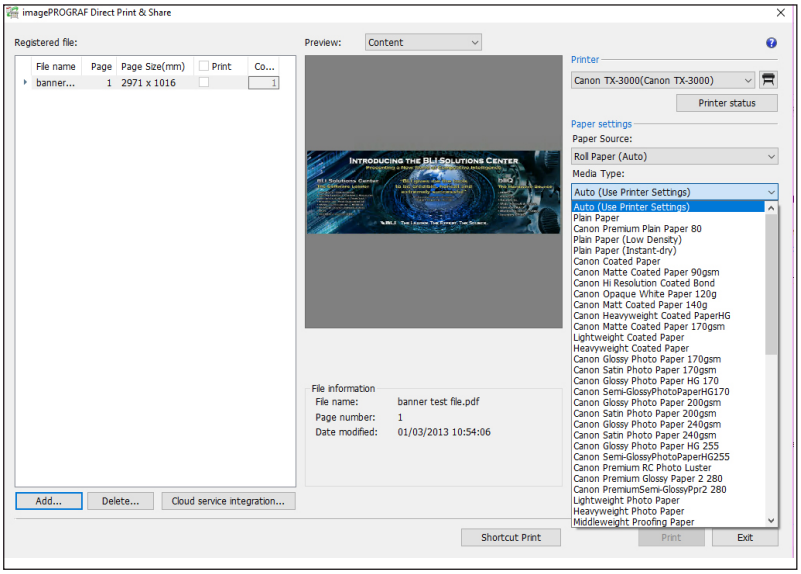
Print & Copy Jobs Log on the HP DesignJet T2530 eMFP.



Printer Information Page on the HP DesignJet T2530 eMFP.

Media Handling

O Both MFPs are compatible with a wide range of media types. The Canon unit supports 53 media types, plus 10 user-defined media, while the HP unit supports 33, including Coated and Heavyweight Coated, as well as Matte Photo, Premium Gloss Photo and Semi-Gloss/Satin media for photographs. A specific drying time is built into many of the selections to ensure that prints will be dry after completion. Custom media types can be added and saved as well.



Canon's imagePROGRAF Direct Print & Share displays a wide range of media types.

O For maximum convenience and minimum downtime, both models offer the advantage of a dual-roll design, giving users the flexibility of switching between different media types and sizes without reloading the media each time.

O Both devices employ automatic roll switching, so that jobs are automatically routed to a second roll after the first is depleted. If this happens while a page is printing, the interrupted page will be printed in its entirety once a new roll is loaded without further user intervention.

O The Canon model provides excellent ease of access when loading or unloading rolls at the front of the device. However, if the stacker assembly is already attached to the device, operators will need to remove it in order to gain access to load the rolls. In contrast, the second roll is located at the rear of the HP printer, making it more awkward to access.

\+ With the HP DesignJet T2530 eMFP, Buyers Lab technicians found loading cut-sheet media slightly more challenging than loading roll media, and often were unable to load cut-sheets correctly at the first attempt. The operator manually inserts the sheet on the right hand side, aligning the edge with a slightly raised line at the far right of the unit's cover. Several times during the loading process the control panel reported that the sheet was skewed. The media lever had to be released and the sheet repositioned before returning the lever to its locked position. This process had to be repeated several times. Buyers Lab technicians found loading cut-sheet media on the Canon TX-3000 MFP T36 to be a fairly straightforward process; the user must press the Load button on the touchscreen control panel and then open the cover and lift the release lever located on the right of the device in order to insert the sheet into the gap at the front of the device. There are insertion guide marks to help the user to judge where to align paper.

O Both models coped well when handling creased or folded originals.

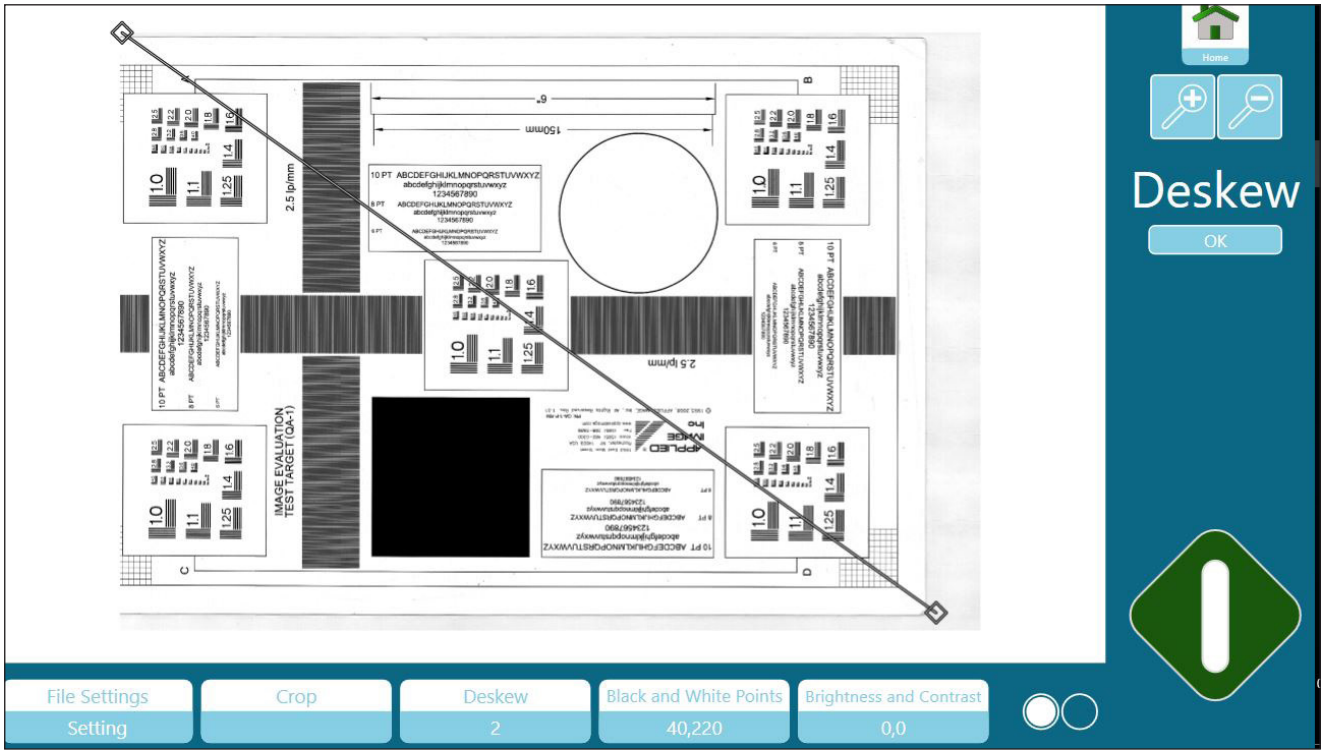
– However, Buyers Lab technicians observed that if an original is excessively curled, the document will catch inside the unit leading to tiny tear marks appearing on the leading edge of the original. Operators should be vigilant and use a document carrier sheet as a precaution to avoid tearing.

+ The Canon TX-3000 MFP T36 was able to scan and copy lightweight documents such as a newspaper in both portrait and landscape, whereas the HP T2350 eMFP's scanner could only accept lightweight documents in portrait mode.

The Canon MFP scanned a double-page newspaper original in both portrait and landscape.

The HP model jammed when scanning newsprint in landscape mode.

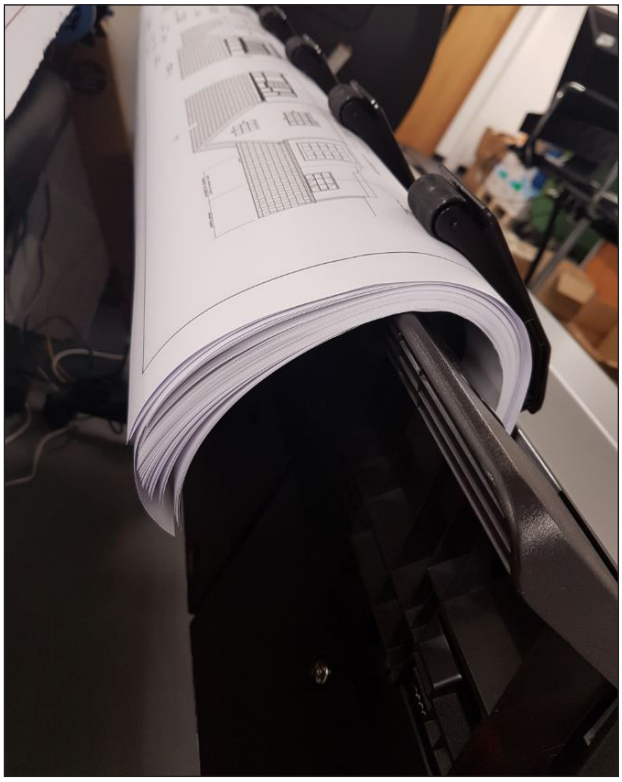
- Both devices include a deskew function within the scanner hardware firmware, which, when enabled, automatically allows skew to be compensated prior to delivery to the desktop.



SmartWorks MFP Deskew Function

- Buyers Lab technicians were highly impressed with the design and robust build quality of the HP T2530 eMFP's rear-mounted stacker assembly which can hold up to 50 printed sheets of multiple media sizes in perfect alignment.

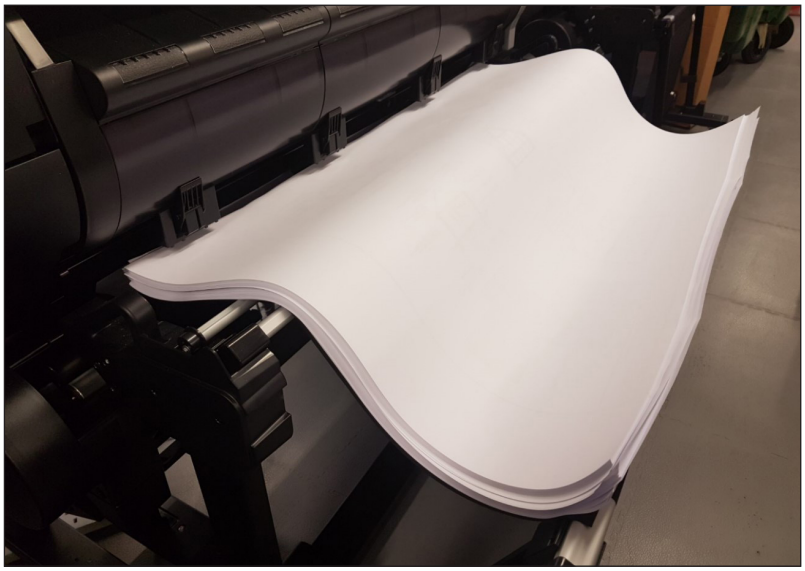
HP T2530 eMFP stacker (image taken from the front of the device).



HP T2530 eMFP stacker (image taken from the front of the device).

+ Although it took several attempts to install the Canon's stacker assembly in the correct configuration, and at times during testing required more operator intervention to ensure output was being stacked correctly, Buyers Lab technicians noted the 100-sheet capacity stacker held A0- and A1-sized CAD prints in good alignment. In fact, it was capable of holding up to 150 A0-size sheets without issue (although it should be noted that the weight of the print stack would make it difficult to lift and remove the sheets from the stacker).

— While Canon's high-capacity stacker is better suited for stacking CAD drawings, the HP unit stacks any type of output (CAD or poster prints) in a consistent manner.



The Canon MFP stacker held A0 and A1 sheets in good alignment.

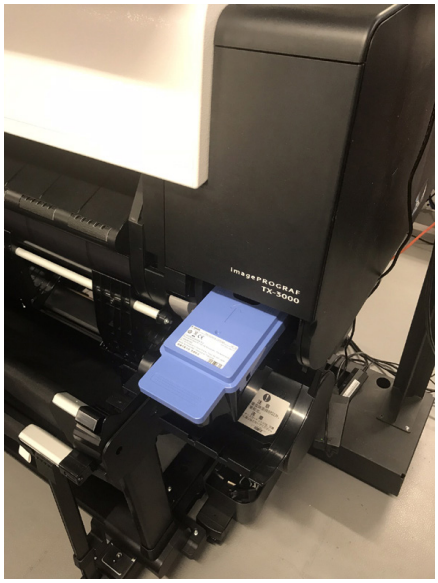
User Maintenance/Consumable Replacement

O Ink replacement is a very simple process with both devices. The HP T2530 eMFP has three ink cartridges under covers at each end of the device, including separate cartridges for Photo Black, Matte Black and Grey. Each cartridge is slotted differently to prevent incorrect replacement. All inks are located on the right hand side of the Canon device; the user needs to lift the ink cartridge cover and pull a blue lever to release the ink tanks. If the AIO PC is attached to the device, the user must swivel the monitor in order to gain easier access.

\+ Ink cartridges can be replaced during operation with the Canon model, but not with the HP device, helping to reduce operator downtime.

O Printhead replacement is a straightforward process with both devices, and takes a comparable amount of time to complete.

Replacing ink tanks on the Canon TX-3000 MFP T36 is very easy; however, the AIO monitor will need turning to one side to gain better access to the ink cartridge assembly.

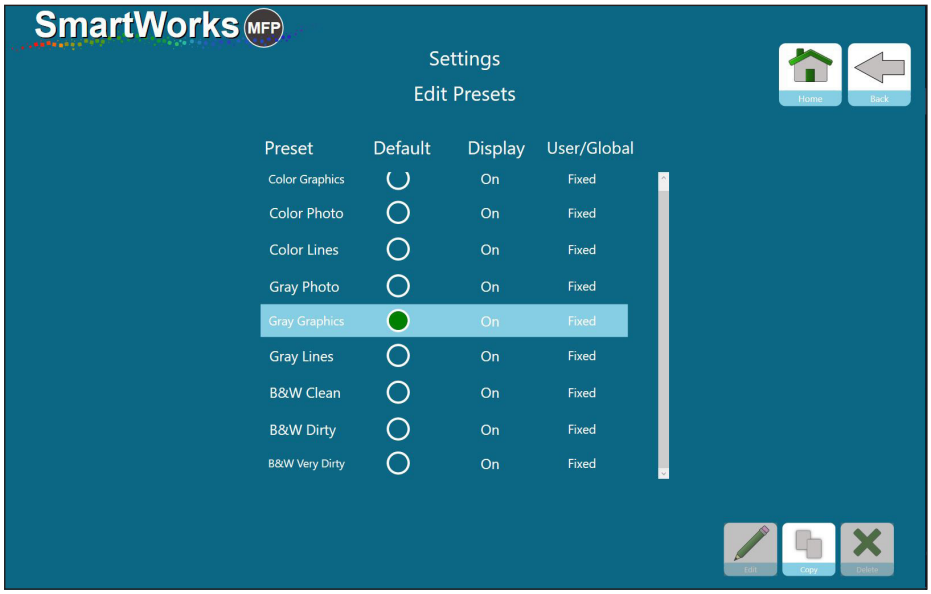


The Canon device also includes a maintenance cartridge that will occasionally need to be changed. This process cannot be conducted during printing. Note: Buyers Lab conducted three maintenance cartridge changes during its lab evaluation.

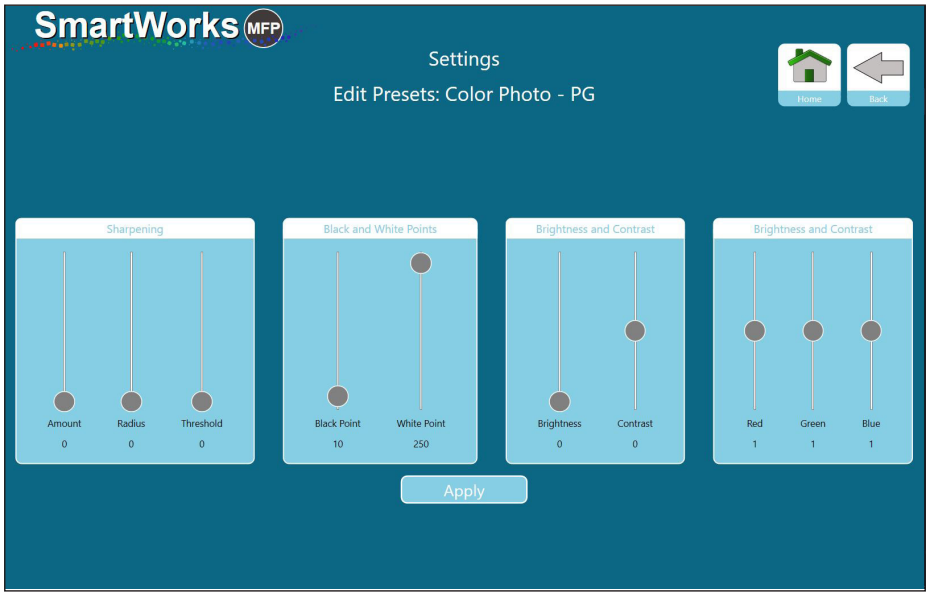
Loading ink is a straightforward process on the HP DesignJet T2530 eMFP.

Copy Programming

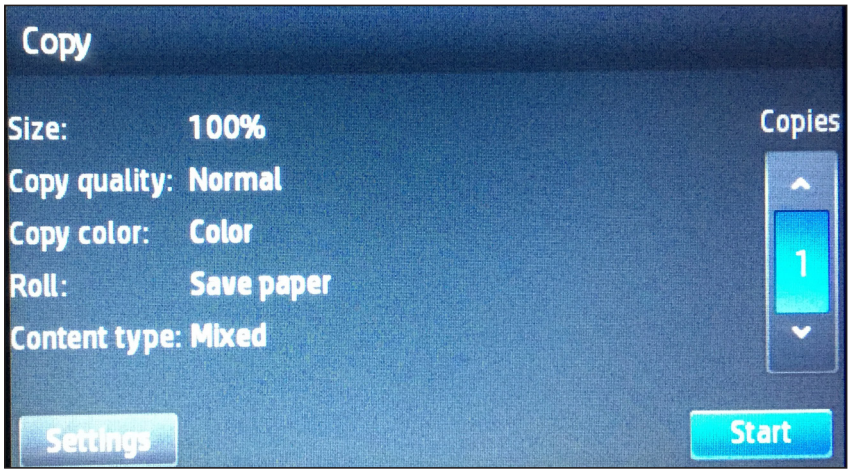
+ The Canon touchscreen in Copy mode offers a choice of nine (fixed) preset profiles, which include Colour Graphics, Colour Photographic images, etc., and new custom preset profiles can be created as well via the Settings screen, Presets option. Buyers Lab technicians found the process of creating copy presets very straightforward and were able to add at least 20 custom presets. Custom presets—not fixed presets—can be named, edited and deleted. The HP unit offers four image type presets (Quicksets, Images, Lines and Mixed Originals), and users can specify the original paper type (White Paper, Photo Paper, Blueprints, Recycled and Translucent).



SmartWorks MFP Copy Fixed Presets



SmartWorks MFP offers various image adjustment settings when creating copy and scan presets.



HP DesignJet T2530 eMFP Copy Screen

Scan to Desktop/Network Folder Programming

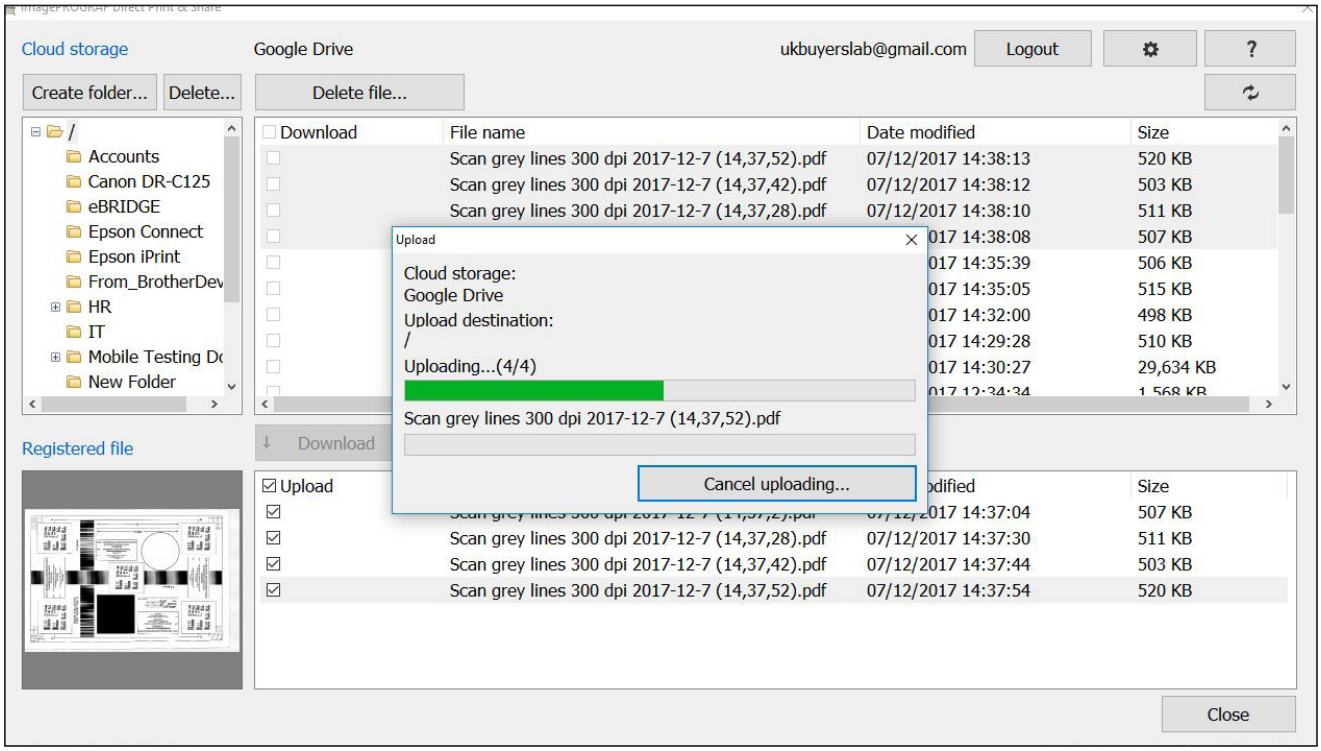
+ The same 'Preview & Edit' functionality, with a similar list of fixed preset scan profiles and a full listing of setting selections, can be used in Canon's Scan mode, and again, users have the same ability to create and edit new presets. 'Scan to PC' is the default destination except when a USB flash drive is inserted. Users can edit custom presets to change the Filename Prefix, Scan Folder destination, File Type and File Compression for JPG and PDF files, and can opt to scan concurrently both to the cloud and one other destination, with a date stamp automatically added to the file name if desired. A button to the right selects Batch Mode so that documents can be combined together in a single folder without the need for additional third-party software. Scanning to a network folder was straightforward on the HP T2350 eMFP, but its lack of a Batch Mode means more scan-intensive tasks will take longer to achieve.

Scan to Email/USB/Cloud Programming

– The Canon TX-3000 MFP T36 does not support scan to email functionality, whereas the HP T2350 eMFP does.

+ However, scan to cloud functionality is offered on the Canon MFP and not on the HP unit.

+ The Canon imagePROGRAF Direct Print & Share utility must be installed on the same PC as SmartWorks MFP to enable the Scan to Cloud option. As noted above, scanning to the cloud (Google Drive only) and one other destination (USB or network folder) is a quick and easy process, with files being uploaded or downloaded quickly, with no apparent delays. Multiple files can be scanned and then uploaded in one go.



Uploading multiple scan files to Google Drive cloud account via SmartWorks MFP.

O When a USB flash drive is inserted on the Canon TX-3000 MFP T36, the Windows-based AIO system registers it and users can browse into sub-folders and create new folders in which to store scanned documents, as well as edit filenames. When a USB drive is inserted on the HP T2530 eMFP, the user is provided two options: 'Print Documents' or 'Scan To'. When scanning to USB, users can opt to save the file in JPEG or TIFF format, and make other selections like resolution and colour mode, as well as input a file name. Users are notified when the scan job is completed and the file is saved successfully on the drive; users must actively eject the original from the device. Scan files are saved into a specific sub-folder (HPSCANS) which has been automatically created on the USB drive.

Stored Job Reprinting (including via USB flash drive and Cloud)

+ Although printing from a USB flash drive is a straightforward process for both models, with full control over document settings, the HP DesignJet T2530 eMFP's lack of support for printing PDF files (only available with the more expensive PostScript version of the eMFP) is a major limitation.

O Jobs that need reprinting on the Canon TX-3000 MFP T36 can be quickly and easily retrieved either from the device hard drive, PC network or cloud storage (via the Direct Print & Share utility), with the same Preview & Edit functionality giving full control over output quality and settings. The Canon Print Service mobile app lets users print directly from their Android mobile device to a TX-series printer model.

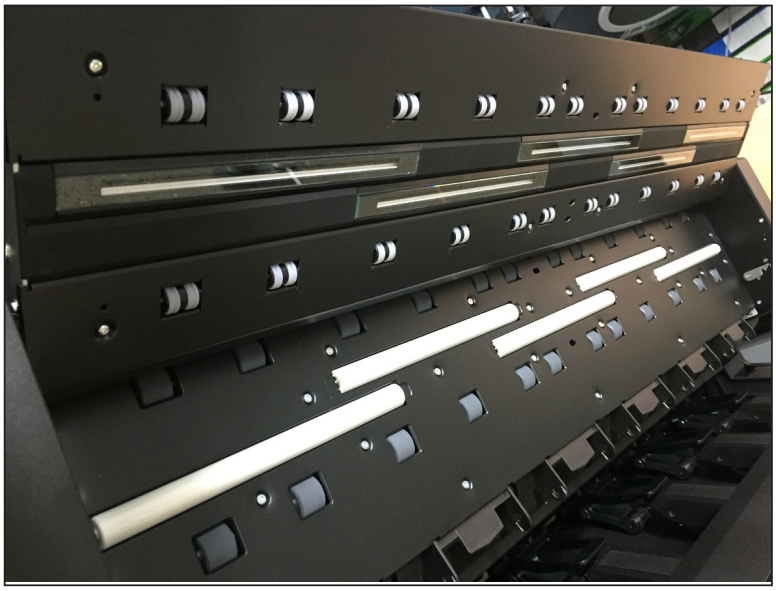
O The HP Mobile Printing service allows users to print directly from an iOS or Android smart device to a compatible HP large-format device. Users can print a wide selection of file formats such as Microsoft Office documents,

as well as PDF, JPEG and TIFF files; when they wish to print a file either stored locally on their mobile device, an email attachment, or a document stored in a cloud service account, the user just needs to open the file and choose the Share option, which then allows them to select and send their job to their preferred HP printer.

(See the section on Direct Print Submission above for Buyers Lab's analysis of the differences between the two utilities in terms of functionality and ease of use).

Device Feature Set

Canon's SingleSensor array extends across the full width of the T36 scanner.



HP DesignJet T2530 eMFP scanner, showing its staggered array of RGB LEDs.

+ The Canon MFP's T36 scanner offers a wider range of eight scanning resolutions from 100 to 1200 dpi, whereas the HP unit's scanner only offers three—from 200 to 600 dpi.

+ The Canon T36 scanner offers superior media-handling capabilities; it can handle documents up to 965 mm by 15,200 mm in size compared with 914 mm by 15,000 mm with the HP scanner. In addition, the Canon scanner can accommodate media up to 2.0 mm thick when the rear exit paper path is used (and with operator assistance to guide paper as it enters and exits the scanner), compared with just 0.8 mm for the HP scanner.

+ Scanned images can be saved as TIFF, JPEG, or PDF files for the Canon TX-3000 MFP T36, whereas the HP device offers PDF file scan creation only with the more expensive PostScript version of its eMFP.

+ Batch scanning is not supported by the HP T2530 eMFP, which would have an adverse impact on productivity in scan-intensive environments.

+ The HP T2530 eMFP can perform one function at a time only; it can scan or print, but not at the same time, whereas the Canon T36 scanner is capable of scanning while printing.

+ The Canon scanner offers nine preset document types, including some with background removal, in contrast to just four (Quicksets, Line, Mixed and Image) for the HP scanner. In addition, users can create custom presets on the Canon MFP, and use a wide range of image processing options (Skew, Crop, Brightness, Sharpen, Black Point, White Point, Mirror and Invert); this is not available with the HP scanner.

+ The total capacity of the Canon TX-3000 MFP T36's starter ink cartridges is 970 ml, which is higher than the 269 ml total starter ink volume available with the HP T2530 eMFP.

+ Canon's replacement cartridges come in 160 ml, 330 ml and 700 ml capacities for all colours, whereas the HP model offers only 300 ml for all colours, and as a consequence Canon's inks will need replacing less frequently than with the HP device.

+ As noted above, Canon's ink cartridges are replaceable during operation, which helps reduce operator downtime for Canon users. HP's cartridges cannot be replaced during operation.

+ If the Canon device detects that printhead nozzles are becoming clogged, it automatically starts a cleaning routine when there are no more nozzles available to compensate for the clogged ones. This task would have to be done manually with the HP unit, although Buyers Lab analysts did not encounter any nozzle clogging issues with either model during testing.

O Both units utilise one user-replaceable printhead, taking less than five minutes to replace on both models.

— The HP unit supports a slightly higher maximum cut-sheet media length of 1.676 m compared with 1.6 m for the Canon unit.

+ The Canon model supports a larger diameter of roll paper of 150 mm as opposed to 140 mm with the HP device.

+ The Canon device supports a maximum media thickness of up to 0.8 mm as opposed to a maximum of 0.5 mm for the HP model.

O Both models offer easy and quick roll paper loading with auto paper feed—once the user loads paper on the device, alignment and width adjustments are automatically carried out without further user intervention.

+ The Canon TX-3000 MFP T36 supports borderless printing regardless of what roll media type is being used, whilst the HP T2530 eMFP supports this capability only when photo paper is selected.

O The Canon device includes a media mismatch option, which places on hold jobs that can't be printed due to required media not being loaded, while jobs that can be completed are printed; the queued jobs are printed once the required paper is loaded. In the event of a media mismatch on the HP device, users are provided with a warning directly in the print driver before the job is submitted and a control panel warning after it is submitted. The control panel's "Paper mismatch action" allows users either to put the job on hold or print it; all jobs that are slated for the paper types already loaded will be printed without delay.

– The HP device's web server offers some functionality not matched by the Canon device including: front panel lock, temporary file deletion from the hard drive, email alerts, automatic firmware updates, job submission and job reprinting. Via Canon's Remote UI web server, users can be restricted from viewing job history and printing from a USB flash drive.

O Both models offer both USB 2.0 and Gigabit Ethernet connectivity.

O Both offer a standard, non-upgradeable RAM capacity of 128 GB.

O Both also come with a 500-GB hard drive as standard.

+ The Canon TX-3000 MFP T36 comes with robust security features, including newly added hard drive encryption, and protocol locking to prevent unauthorised access to the device; it also supports SNMP v3 (secure network protocol) and IPsec which provides further security by authenticating and encrypting data over the network. Similar security features are available with the HP T2530 eMFP, but Secure Disk Erase and hard drive encryption features are optional.

+ The Canon TX-3000 MFP T36 is lighter (105 kg versus 112 kg), and has a more compact footprint than the HP unit.

+ The Canon model's rated power consumption is lower than that of the HP unit's while printing—105 watts versus 120 watts for the HP unit.

– However, the Canon TX-3000 MFP T36 has a higher power consumption (3.6 watts versus 1.3 watts for HP) in standby mode (in which they will likely spend more of their time).

– Rated noise emissions are higher for the Canon model (51 dB) compared to the HP device (47 dB) while the devices are printing.

+ However, rated noise emissions are lower with the Canon device in standby mode (35 dB versus 39 dB with the HP model).

Driver Feature Set

+ The Canon TX-3000 MFP T36 has five speed settings (Fast 300, Standard 600, Fast 600, High 600 and High 1200), which are matched by three settings with the HP device (Fast, Normal and Best), although not all speed settings are available with all media types on the Canon model.

O Both the Canon imagePROGRAF Printer Driver and the HP-GL/2 driver provide a useful overview of the settings for predefined profiles.

+ Six predefined profiles are available with the Canon driver, while the HP driver offers a slightly smaller range of five settings.

+ The Canon driver supports multi-up (2 to 16) printing, and a 2 by 2 poster mode, neither of which are available in the HP driver.

– The Canon driver offers page stamping (Date, Time, Name, and Page Number); the HP driver also enables custom stamps to be created in addition to these.

O The Canon imagePROGRAF Printer Driver offers a broad range of built-in adjustments for CMY balance, brightness, and contrast, while the HP T2530's HP-GL/2 driver also offers settings for CMYK balance and brightness adjustments. The Canon driver includes advanced colour-matching capabilities that include that ability to match

ICC profiles and select the rendering intent based on different elements in the document. A wide range of colour management profiles are available when the HP driver and colour management tools (from the Printing Preferences menu) are downloaded from HP's website. Additionally, users can preview images before printing—features which were not included in the Startup driver disk supplied to Buyers Lab with the device.

+ The Canon driver offers the option to apply unidirectional printing, even in Fast mode, which helps to avoid banding across output because the printhead travels in only one direction to create the desired image. The HP driver does not offer this feature.

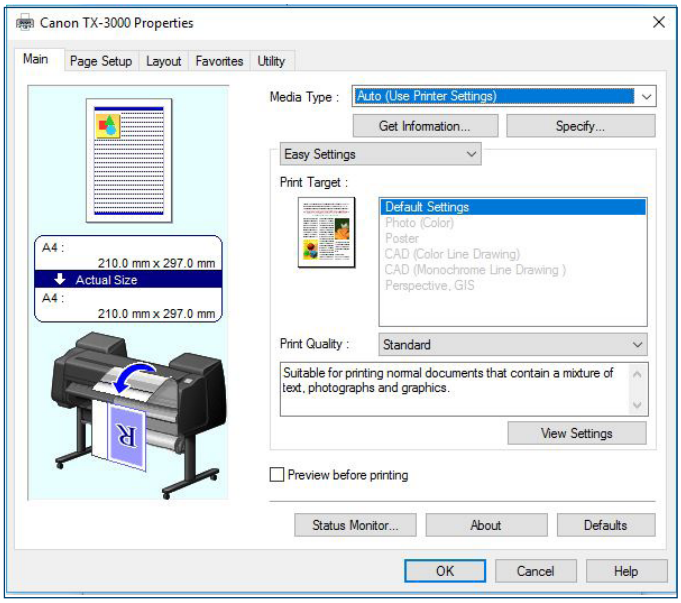
+ The Canon driver includes the Color imageRUNNER Enlargement Copy Mode utility, which enables users to integrate a Canon small-format MFP device with the TX-3000 MFP. Documents scanned by the Canon MFP are automatically routed to a hot folder that is monitored by TX-3000 MFP driver. The image is then resized and printed, offering a fast, easy-to-use poster creation tool for office users. There is no equivalent functionality in the HP driver.

+ The Canon driver also includes a Free Layout nesting tool (available for free download via the Printer Driver Extra Kit) that enables files—even those created with different applications—to be scaled, resized or grouped together as a single job from the printer driver. Images can be dragged and dropped precisely to their desired locations and printed together on a single page, helping to save on paper. The HP unit offers a similar nesting feature which can be activated directly on the control panel and from the print driver utility. However, unlike the Canon tool, it does not allow users to have precise control over the positioning of jobs, rather it will randomly position jobs to print across the width of a page, either in the order jobs were sent or in 'optimized' layout order.

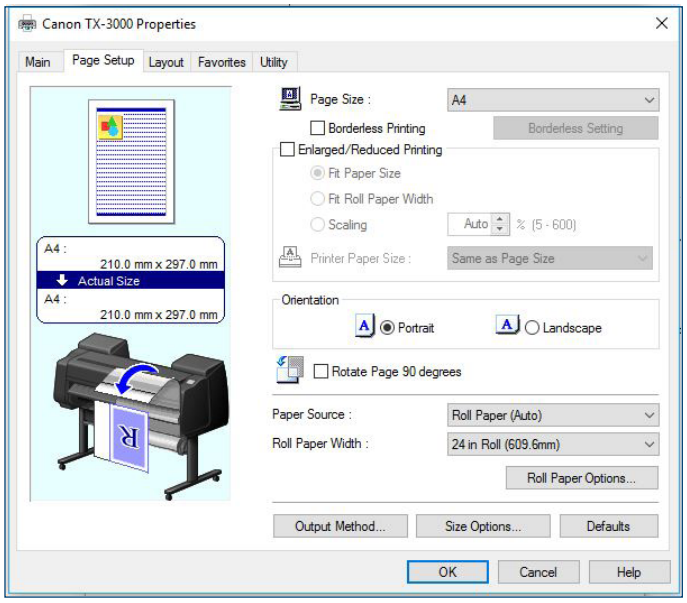
+ The Canon model also offers a plug-in for printing from Microsoft Office applications, which includes useful tools for automatic media resizing, nesting and borderless printing. No such plug-in is available to HP users.

O Canon's Accounting Manager, accessed via the Status Monitor, offers comprehensive accounting management for all print jobs. Users enter the actual costs for individual inks and media types, and the cost per job is calculated automatically and displayed. For each job, the media type, area, ink used and total print time are listed, and more detailed cost and consumption information can be obtained by double-clicking on an individual job name or by highlighting a range of different jobs. Job cost information can then be saved in .CSV format and opened in Excel. HP offers similar accounting management and tracking capabilities via the Accounting tab on its embedded web server, or via the HP DesignJet Excel Accounting tool, which is available as a free download.

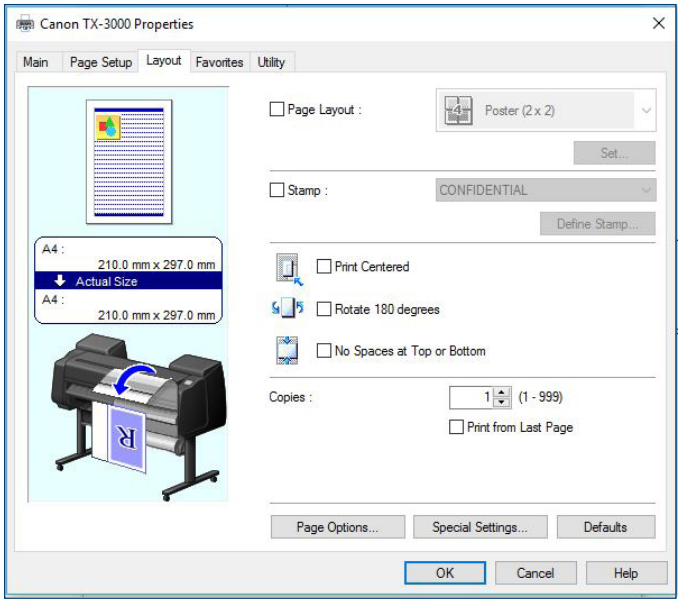
Test Models' Print Driver Screenshots



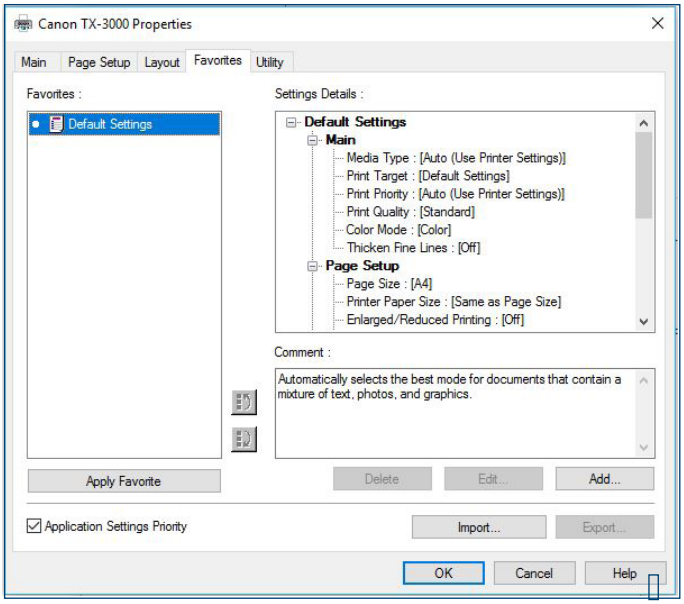
Canon imagePROGRAF TX-3000 MFP Print Driver Main Tab



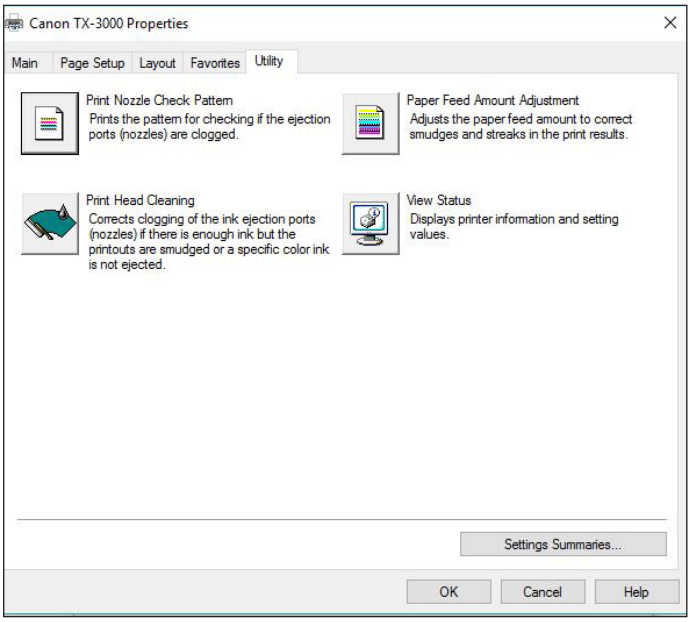
Canon imagePROGRAF TX-3000 MFP Print Driver Page Setup Tab



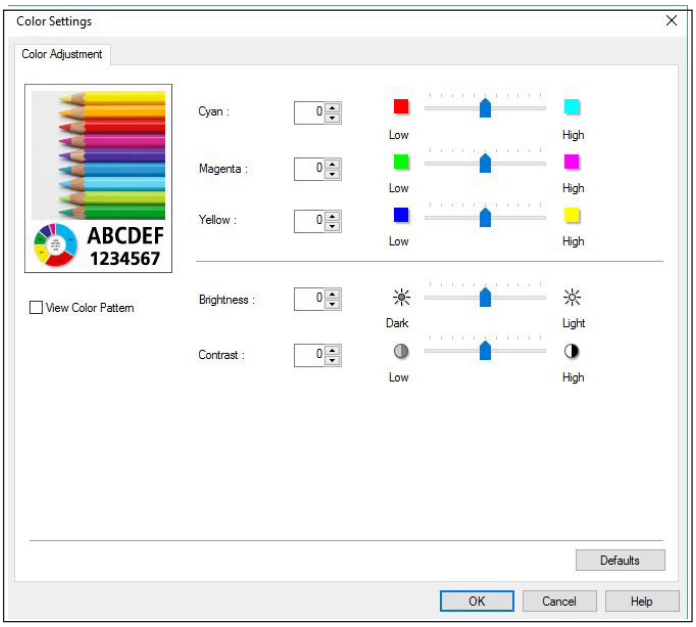
Canon imagePROGRAF TX-3000 MFP Print Driver Layout Tab



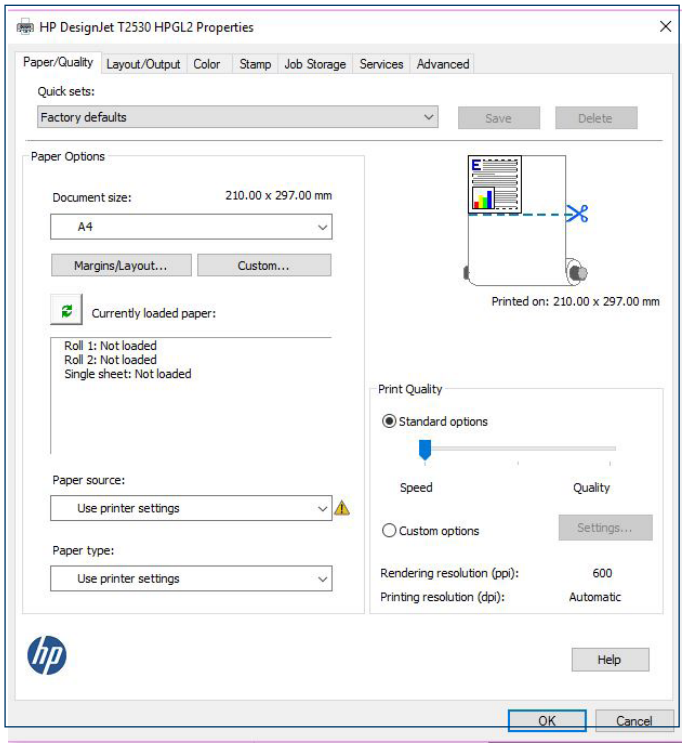
Canon imagePROGRAF TX-3000 MFP Print Driver Favourites Tab



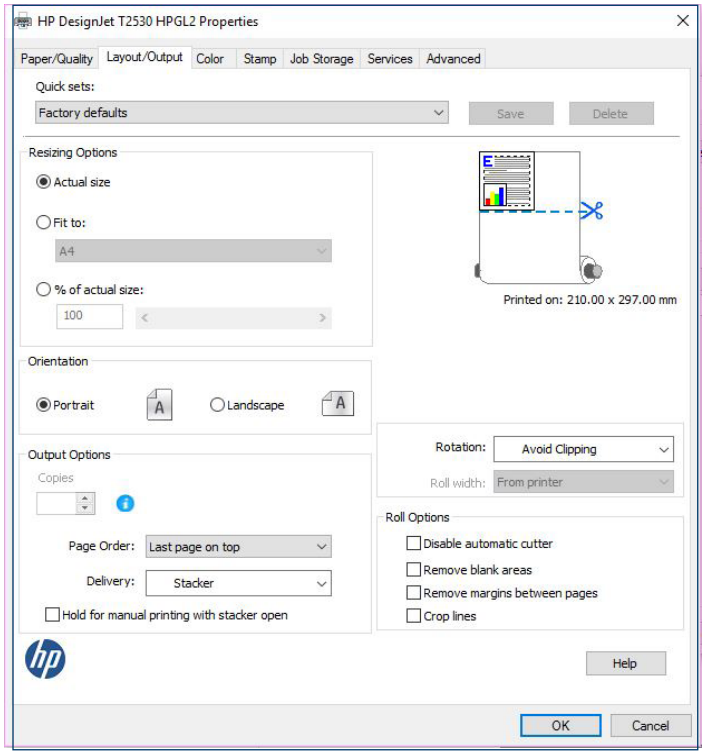
Canon imagePROGRAF TX-3000 MFP Print Driver Utility Tab



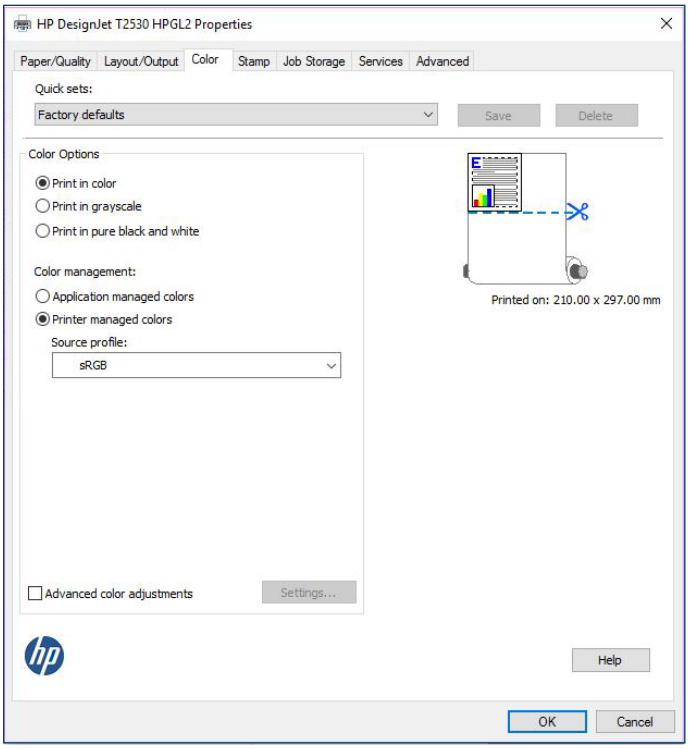
Canon imagePROGRAF TX-3000 MFP Print Driver Colour Adjustment Tab



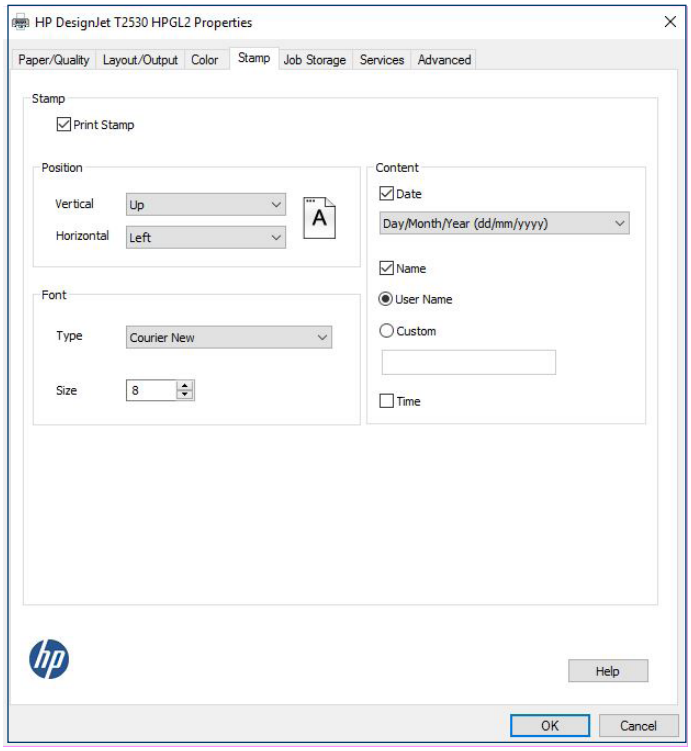
HP DesignJet T2530 eMFP HP-GL/2 Paper/Quality Tab



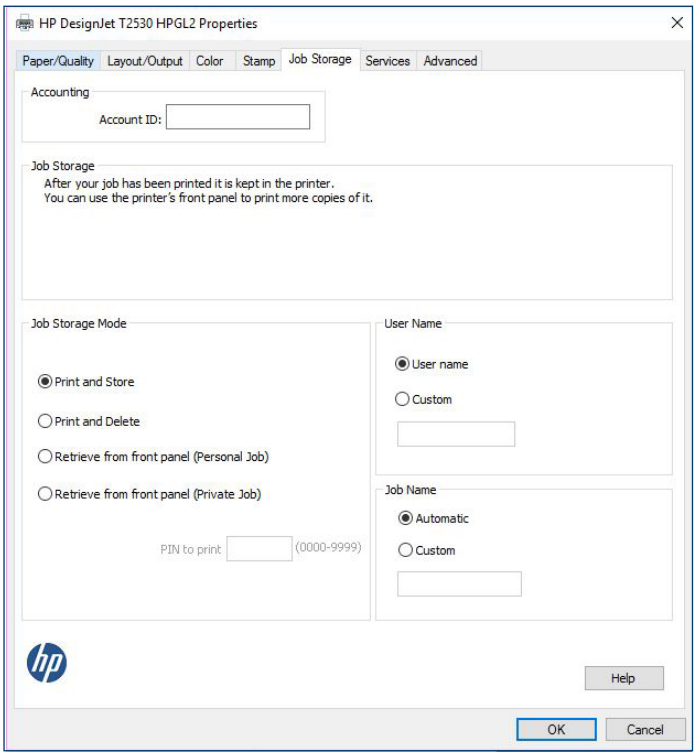
HP DesignJet T2530 eMFP HP-GL/2 Layout/Output Tab



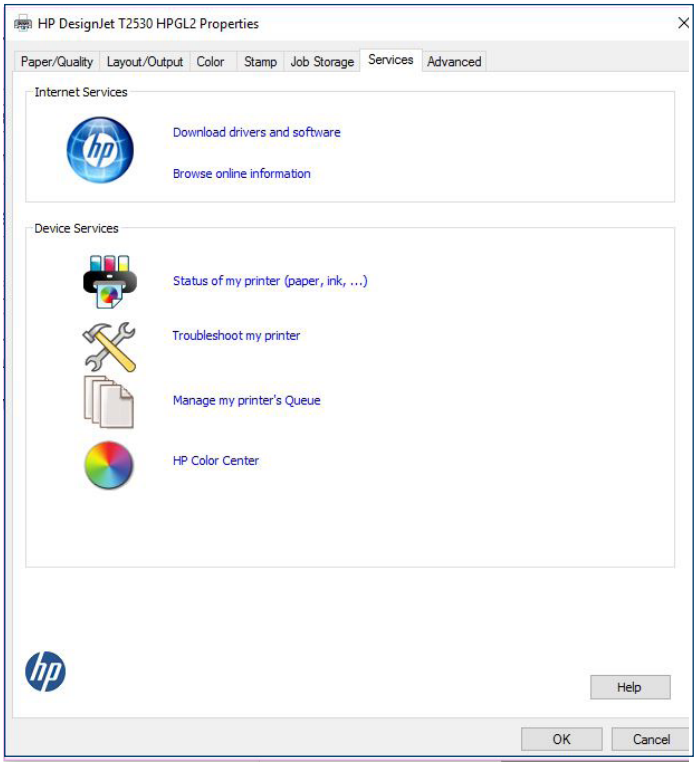
HP DesignJet T2530 eMFP HP-GL/2 Colour Tab



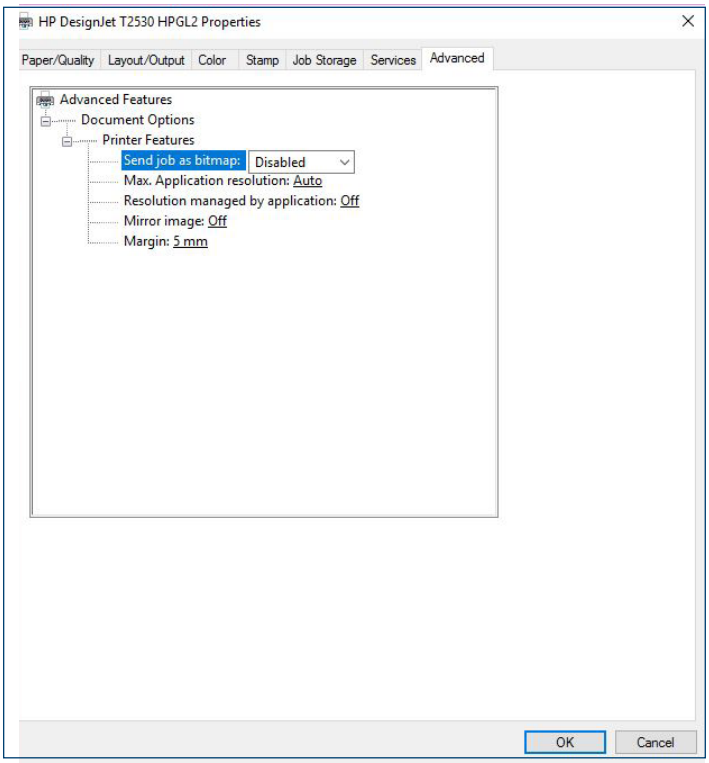
HP DesignJet T2530 eMFP HP-GL/2 Stamp Tab



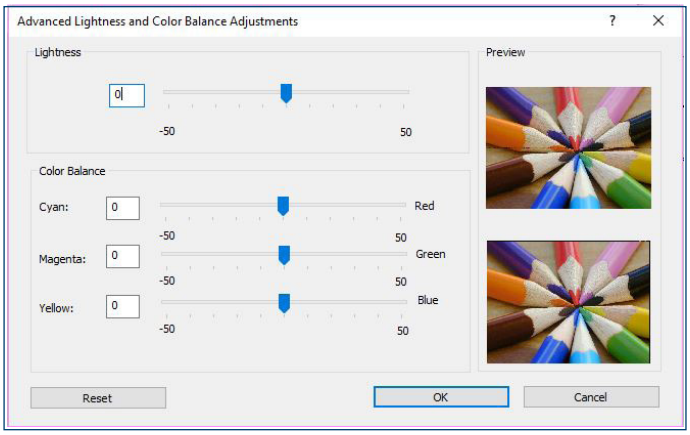
HP DesignJet T2530 eMFP HP-GL/2 Job Storage Tab



HP DesignJet T2530 eMFP HP-GL/2 Services Tab



HP DesignJet T2530 eMFP HP-GL/2 Advanced Tab



HP DesignJet T2530 eMFP HP-GL/2 Advanced Lightness and Colour Balance Adjustments

SUPPORTING TEST DATA

Print Productivity

Job Stream Productivity (in Seconds)

Mixed File Types, Same Size, Single Roll

Canon imagePROGRAF TX-3000 MFP T36		HP DesignJet T2530 eMFP		Canon % Faster/ Slower (-) than HP
Fast	616.09	Fast	705.94	12.7%
Standard	1,054.74	Normal	1,609.37	34.5%
High	1,897.28	Best	4,039.12	53.0%

Buyers Lab's job stream consists of nine files, including PDF, TIFF and DWF files totalling 19 pages, all at Arch D-size, ensuring the files are set to fit to page. This test replicates the type of traffic a typical wide-format device might experience in a real-world, multi-user environment. All of the files are submitted to the controller in a specific order and sent to the printer as a group, at which time the stopwatch begins; timing ends when the last page of the last file exits the device. Both devices were loaded with 914 mm rolls, with each file set to auto-rotate to save media.

Mixed File Types, Same Size, Dual Roll

Canon imagePROGRAF TX-3000 MFP T36		HP DesignJet T2530 eMFP		Canon % Faster/ Slower (-) than HP
Fast	789.94	Fast	866.30	8.8%

Buyers Lab's dual-roll job stream consists of nine files, including TIFF and DWF files totalling 19 pages, all at Arch D-size, ensuring the files are set to fit to page. All of the files are submitted to the controller in a specific order and sent to the printer as a group, sending alternate jobs to different rolls, at which time the stopwatch begins; timing ends when the last page of the last file exits the device. Both devices were loaded with 914 mm rolls, with alternate jobs sent to different media rolls.

Colour Productivity (in Seconds)

Canon imagePROGRAF TX-3000 MFP T36		HP DesignJet T2530 eMFP	
Fast	373.70	Fast	405.44
Standard	690.28	Normal	1,087.57
High	1,231.69	Best	2,651.99

The 12-page DWF test file was printed using the device driver set to the plain paper/colour setting. Both devices were loaded with 914-mm rolls. The actual time indicated is the time it took to RIP, image and deliver all pages of the test document to the collection bin.

Monochrome Productivity (in Seconds)

Canon imagePROGRAF TX-3000 MFP T36		HP DesignJet T2530 eMFP	
Fast	373.01	Fast	407.03
Standard	687.69	Normal	1,028.13
High	1,227.85	Best	2,641.95

The 12-page DWF test file was printed using the device driver set to the plain paper/monochrome setting, and the HP driver set to plain paper, greyscale, black ink only. Both devices were loaded with 914-mm rolls. The actual time indicated is the time it took to RIP, image and deliver all pages of the test document to the collection bin.

First-Page-Out Productivity after a Weekend of Non-Use (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP	Canon % Faster/ Slower (-) than HP
Time Before Printing Commences	62.25	101.56	38.7%
First Page Out	86.28	126.41	31.7%

First-Page-Out Productivity from Ready State (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP	Canon % Faster/ Slower (-) than HP
Time Before Printing Commences	22.53	18.47	-22.0%
First Page Out	45.53	89.69	49.2%

First-page-out times are achieved by sending an Arch D-size PDF file to print, timed from release to page out with the Canon driver set to the plain paper/monochrome setting and the HP driver set to plain paper, greyscale, black ink only. Both devices were loaded with 914-mm rolls.

A0 First-Page-Out and Throughput Productivity (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP	Canon % Faster/ Slower (-) than HP
First Page Out	114.10	146.44	22.1%
Five Pages Out	497.09	710.98	30.1%
Speed per page without processing	95.75	141.13	32.2%

First-page-out times are obtained by sending an Arch D-size PDF file to print, timed from release to page out with the Canon driver set to the plain paper/monochrome setting and the HP driver set to plain paper, greyscale, black ink only. Both devices were loaded with 914-mm rolls.

Copy Productivity

A1 (Landscape) First-Copy-Out Productivity: Fast mode (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Mono	43.70	43.00
Greyscale	44.84	42.30
Colour	55.89	50.50

The single-page A1 (L) document was set to copy at 300-dpi scan resolution with copy settings left in default mode, with the exception of document size, which was set to A1 (Landscape). Print settings were set to Fast mode. Times were recorded from scan initiation to page exiting.

A1 (Landscape) First-Copy-Out Productivity: Standard/Normal mode (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Mono	64.60	54.00
Greyscale	71.81	59.70
Colour	81.45	71.10

The single-page A1 (L) document was set to copy at 300-dpi scan resolution with copy settings left in default mode, with the exception of document size, which was set to A1 (Landscape). Print settings were set to Standard/Normal mode. Times were recorded from scan initiation to page exiting.

A1 (Landscape) First-Copy-Out Productivity: High/Best mode (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Mono	114.27	222.30
Greyscale	115.22	218.10
Colour	127.18	260.10

The single-page A1 (L) document was set to copy at 300-dpi scan resolution with copy settings left in default mode, with the exception of document size, which was set to A1 (Landscape). Print settings were set to High/Best mode. Times were recorded from scan initiation to page exiting.

A0 First-Copy-Out Productivity: Fast mode (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Mono	78.62	77.00
Greyscale	74.91	71.70
Colour	89.87	90.00

The single-page A0 document was set to copy at 300-dpi scan resolution with copy settings left in default mode, with the exception of document size, which was set to A0. Print settings were set to Fast mode. Times were recorded from scan initiation to page exiting.

A0 First-Copy-Out Productivity: Standard/Normal mode (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Mono	134.22	104.50
Greyscale	125.14	97.80
Colour	141.98	128.10

The single-page A0 document was set to copy at 300-dpi scan resolution with copy settings left in default mode, with the exception of document size, which was set to A0. Print settings were set to Standard/Normal mode. Times were recorded from scan initiation to page exiting.

A0 First-Copy-Out Productivity: High/Best mode (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Mono	240.58	423.50
Greyscale	211.88	448.90
Colour	234.72	447.10

The single-page A0 document was set to copy at 300-dpi scan resolution with copy settings left in default mode, with the exception of document size, which was set to A0. Print settings were set to High/Best mode. Times were recorded from scan initiation to page exiting.

Scan Productivity

Batch Scanning Productivity

Batch Throughput Speed A1 (Landscape) Time in seconds to scan 10 pages

	Canon imagePROGRAF TX-3000 MFP T36		HP DesignJet T2530 eMFP	
	Scan Time (seconds)	A1 (L) Pages/Hour	Scan Time (seconds)	A1 (L) Pages/Hour
Black 200 dpi	94.9	379.3	NA*	NA*
Black 300 dpi	107.2	335.7	NA*	NA*
Grey 200 dpi	106.0	339.5	NA*	NA*
Grey 300 dpi	120.5	298.7	NA*	NA*
Full Colour 200 dpi	189.3	190.1	NA*	NA*
Full Colour 300 dpi	257.6	139.7	NA*	NA*

* Batch Scanning is not supported by the HP device.

The 10-page A1 (L) document was scanned in batch mode with the Canon device left in default mode, with the exception of document size, which was set to A1 (Landscape) and colour mode and resolution option changes as reflected in the table above. Applications were set to save jobs as TIFFs on the test PC with auto-naming enabled. Timing was taken from initiation to final page exiting scanner.

A1 Single-Page Scanning Productivity (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP	Canon % Faster/ Slower (-) than HP
Black 200 dpi	2.8	5.4	47.5%
Black 300 dpi	3.7	7.1	47.3%
Grey 200 dpi	2.8	5.3	46.4%
Grey 300 dpi	3.9	7.4	47.9%
Full Colour 200 dpi	9.9	12.4	20.6%
Full Colour 300 dpi	16.9	17.4	6.4%

The single-page A1 document was scanned with document size set to A1 (Landscape) and colour mode and resolution option changes as reflected in the table above. Applications were set to save jobs as TIFFs on the test PC with auto-naming enabled. Each test was conducted twice and an average reading reported. Timing was taken from initiation to when the page exited the scanner.

A1 Single Page Scan to Desktop Productivity (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP	Canon % Faster /Slower (-) than HP
Black 200 dpi	5.7	21.5	73.7%
Black 300 dpi	7.4	36.5	79.8%
Grey 200 dpi	5.8	19.4	70.3%
Grey 300 dpi	7.4	33.6	77.9%
Full Colour 200 dpi	10.4	36.4	71.5%
Full Colour 300 dpi	18.6	68.4	72.9%

The single-page A1 document was scanned with document size set to A1 (Landscape) and colour mode and resolution option changes as reflected in the table above. Applications were set to save jobs as TIFFs on the test PC with auto-naming enabled. Each test was conducted twice and an average reading reported. Timing taken from initiation to the page being accessible at the desktop.

A0 Single-Page Scanning Productivity (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP	Canon % Faster /Slower (-) than HP
Black 200 dpi	4.7	8.2	43.3%
Black 300 dpi	11.4	12.1	6.0%
Grey 200 dpi	4.7	8.1	41.7%
Grey 300 dpi	11.4	12.0	4.9%
Full Colour 200 dpi	17.5	21.7	19.2%
Full Colour 300 dpi	29.8	31.2	4.4%

The single-page A0 document was scanned with document size set to A0 and colour mode and resolution option changes as reflected in the table above. Applications were set to save jobs as TIFFs on the test PC with auto-naming enabled. Each test was conducted twice and an average reading reported. Timing was taken from initiation to the page exiting the scanner.

A0 Single Page Scan to Desktop Productivity (in Seconds)

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP	Canon % Faster /Slower (-) than HP
Black 200 dpi	8.9	32.7	72.7%
Black 300 dpi	13.9	60.7	77.2%
Grey 200 dpi	8.9	29.3	69.5%
Grey 300 dpi	13.4	58.1	77.0%
Full Colour 200 dpi	18.1	62.1	70.9%
Full Colour 300 dpi	33.3	129.0	74.2%

The single-page A0 document was scanned with document size set to A0 and colour mode and resolution option changes as reflected in the table above. Applications were set to save jobs as TIFFs on the test PC with auto-naming enabled. Each test was conducted twice and an average reading reported. Timing was taken from initiation to the page being accessible at the desktop.

Colour Print Quality

Colour Optical Density Evaluation

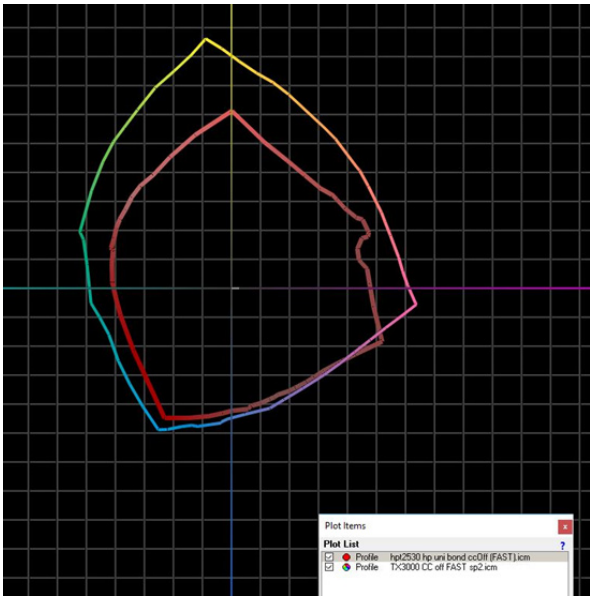
Canon imagePROGRAF TX-3000 MFP T36						
	Fast		Standard		High	
	50%	100%	50%	100%	50%	100%
Cyan	0.46	1.03	0.53	1.28	0.54	1.32
Magenta	0.39	0.87	0.45	1.18	0.45	1.20
Yellow	0.41	0.85	0.46	1.05	0.48	1.08
Black	0.47	1.51	0.55	1.49	0.56	1.44

HP DesignJet T2530 eMFP						
	Fast		Normal		Best	
	50%	100%	50%	100%	50%	100%
Cyan	0.52	0.84	0.63	1.11	0.60	1.16
Magenta	0.46	0.82	0.53	1.08	0.48	1.10
Yellow	0.47	0.66	0.58	0.89	0.48	0.89
Black	0.40	1.29	0.61	1.48	0.59	1.39

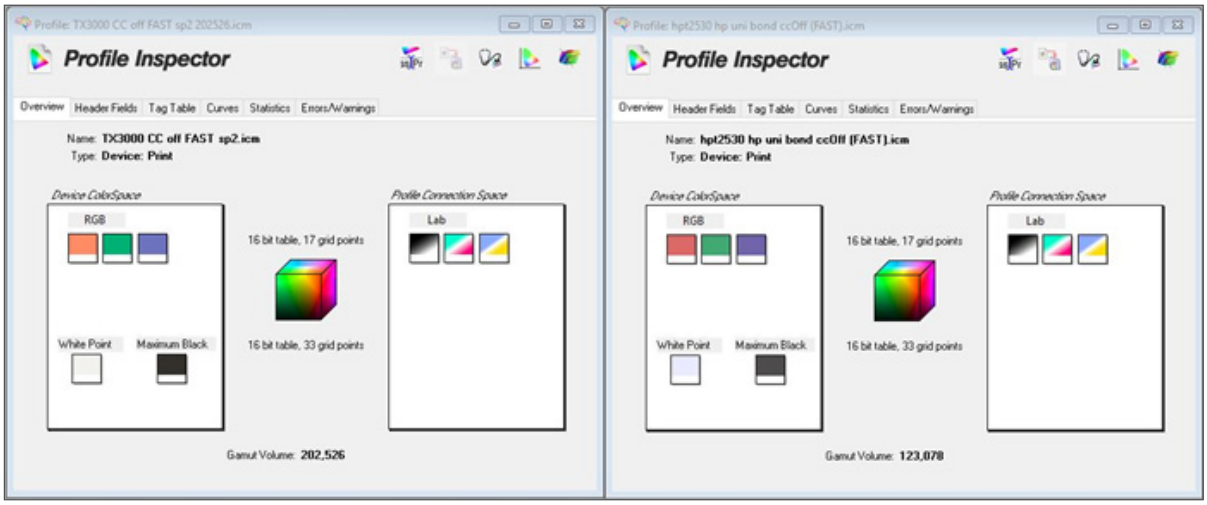
Note: Colour density readings were assessed by printing a Buyers Lab proprietary PDF test target file on Canon Standard Plain Paper 2 and HP Universal Bond in default colour settings at all quality settings available, and measuring the density of 100% dot fill and 50% dot fill using an XRite exact^{Xp} densitometer.

Colour Gamut Comparisons

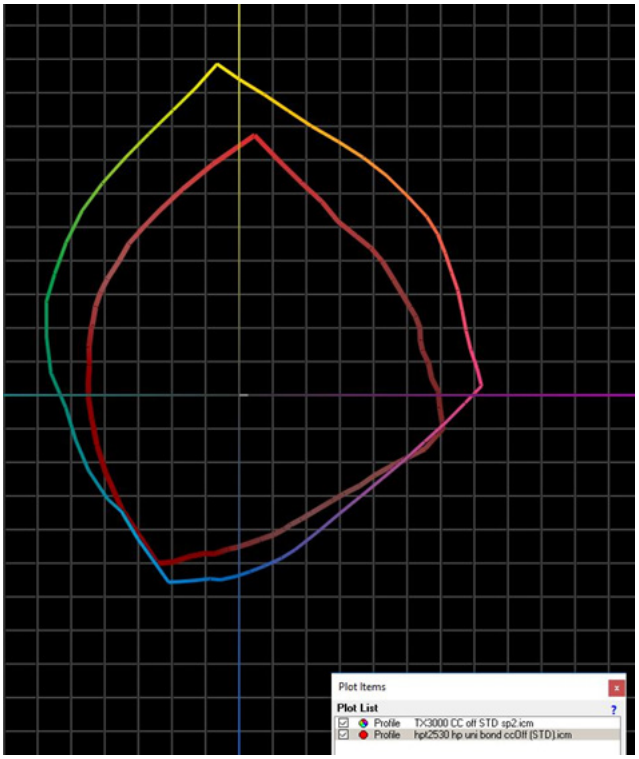
Media Type/Quality Settings	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP	Canon % Larger/ Smaller (-) than HP
Plain Paper Fast	202,526	123,078	64.6%
Plain Paper Standard/Normal	340,724	182,877	86.3%
Plain Paper High/Best	348,280	202,010	72.4%
Matte Coated High/Best	402,815	304,174	32.4%



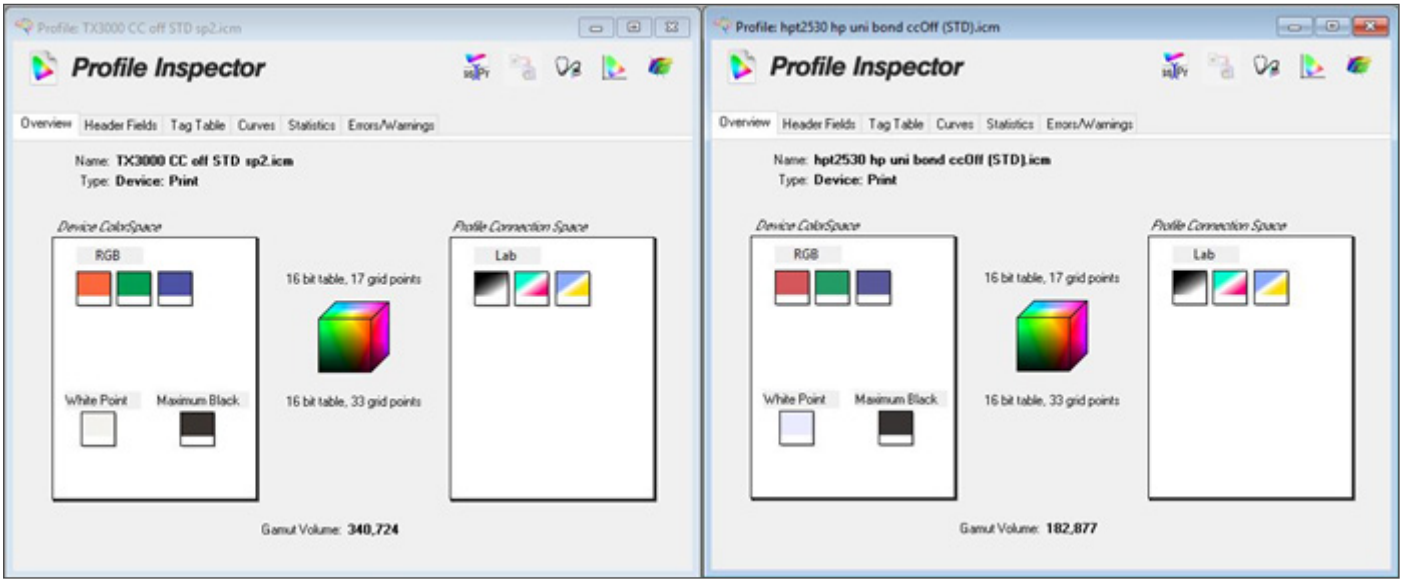
Canon imagePROGRAF TX-3000 MFP colour gamut on Canon Standard Plain Paper 2 in Fast mode (shown chromatically) versus HP DesignJet T2530 eMFP colour gamut (shown in red) on HP Universal Bond paper in Fast mode.



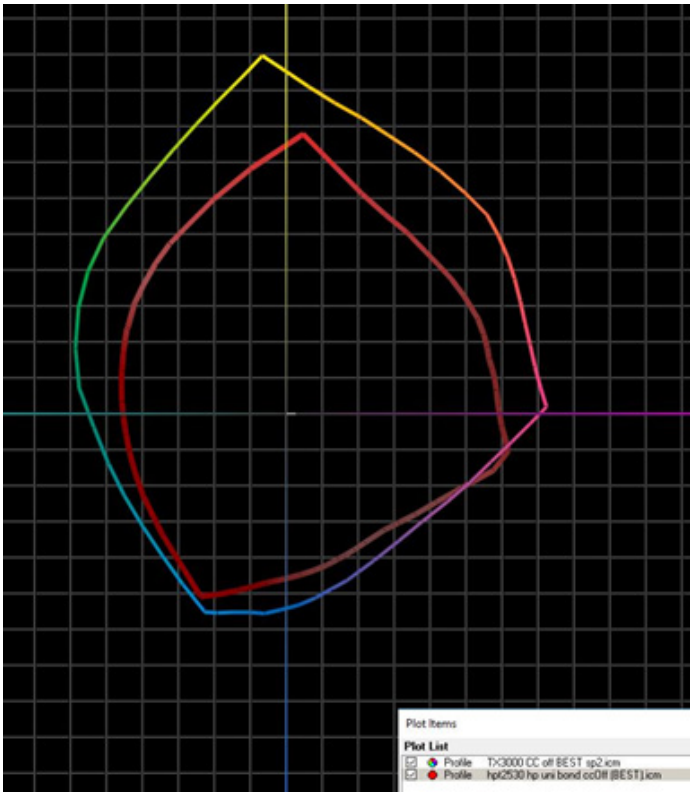
Colour gamut profile for Canon imagePROGRAF TX-3000 MFP (left) and HP DesignJet T2530 eMFP (right) in Fast mode.



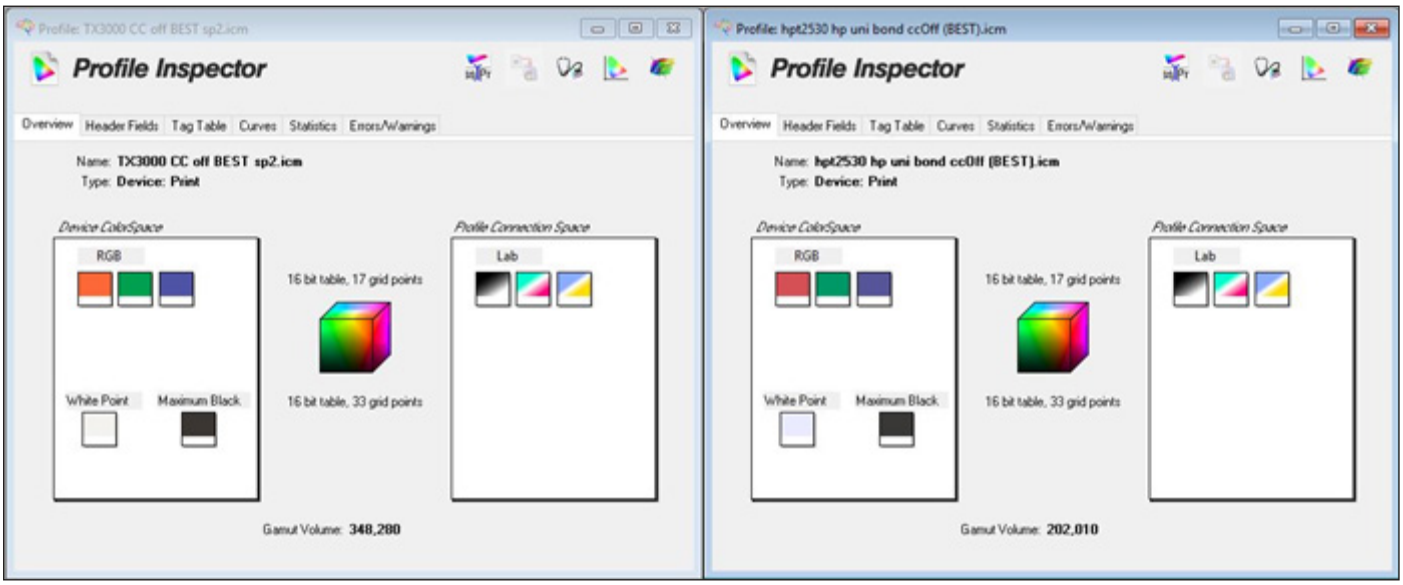
Canon imagePROGRAF TX-3000 MFP colour gamut on Canon Standard Plain Paper 2 in Standard mode (shown chromatically) versus HP DesignJet T2530 eMFP colour gamut (shown in red) on HP Universal Bond paper in Normal mode.



Colour gamut profile for Canon imagePROGRAF TX-3000 MFP (left) and HP DesignJet T2530 eMFP (right) in Standard/Normal mode.

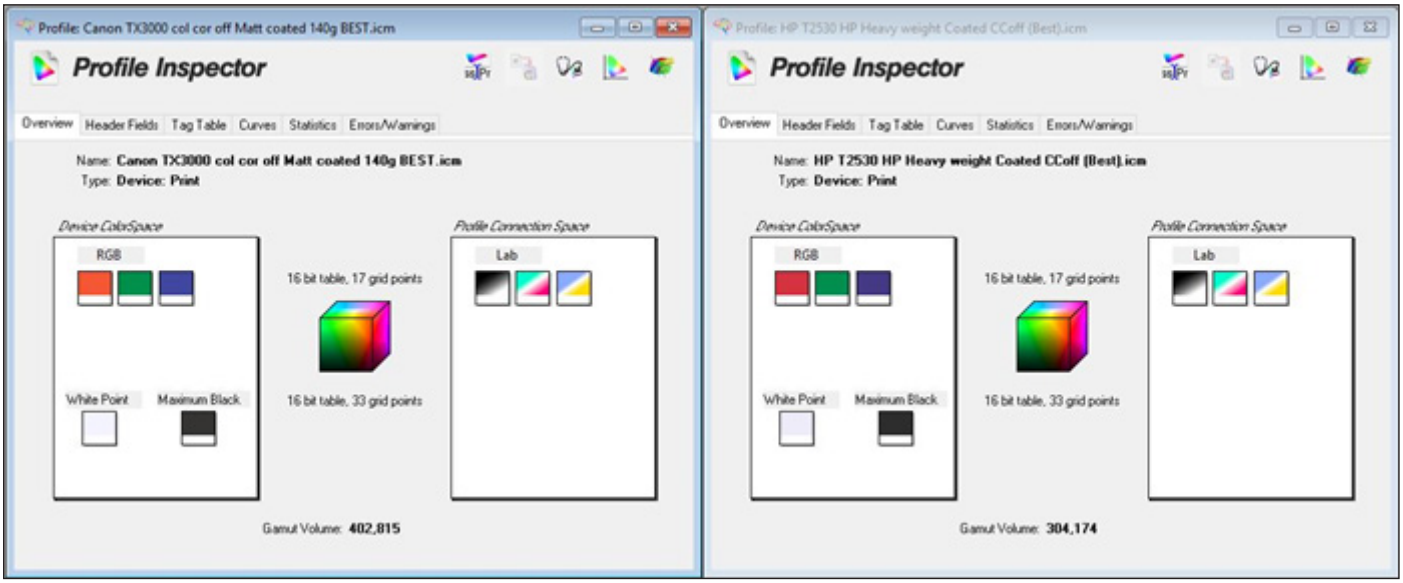


Canon imagePROGRAF TX-3000 MFP colour gamut on Canon Standard Plain Paper 2 in High quality mode (shown chromatically) versus HP DesignJet T2530 eMFP colour gamut (shown in red) on HP Universal Bond paper in Best quality mode.



Colour gamut profile for Canon imagePROGRAF TX-3000 MFP (left) and HP DesignJet T2530 eMFP (right) in High/ Best mode.

Canon imagePROGRAF TX-3000 MFP colour gamut on matte coated paper in High quality mode (shown chromatically) versus HP DesignJet T2530 eMFP colour gamut (shown in red) on matte coated paper in Best quality mode.



Colour gamut profile for Canon imagePROGRAF TX-3000 MFP (left) and HP DesignJet T2530 eMFP (right) on matte coated paper in High/Best mode.

Black Print Quality

Solid Density

	Canon imagePROGRAF TX-3000 MFP T36			HP DesignJet T2530 eMFP		
Density Block						
	Fast	Standard	High	Fast	Normal	Best
1	1.53	1.49	1.44	1.38	1.32	1.40
2	1.51	1.47	1.45	1.36	1.32	1.40
3	1.49	1.49	1.47	1.35	1.32	1.40
4	1.50	1.51	1.46	1.38	1.32	1.42

Note: Solid black density measurements are based on four readings taken from a Buyers Lab proprietary PDF test target file corresponding to four different 100% solid black locations on the output. The output was assessed at all quality settings available, with the Canon driver set to plain paper/monochrome setting and the HP driver set to plain paper, greyscale, black ink only. Density was measured using an XRite exact^{Xp} densitometer.

Copy Quality

Solid Density

	Original Target	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Cyan	1.30	0.72	1.00
Magenta	1.36	0.89	1.08
Yellow	0.89	0.80	0.76
Black	1.78	1.41	1.22

Note: Solid density measurements in normal/colour copy mode based on copying a Katun test original containing blocks of all solid colours (based on an average of two readings for each colour) printed on plain paper. Density was measured using an XRite 508 densitometer and an XRite exact^{Xp} densitometer.

Colour Fidelity

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
McDonalds	7.0	10.1
Coca Cola Red	11.6	22.2
FedEx Blue	14.2	15.6
FedEx Green	5.7	5.8
Microsoft	6.2	4.4
Sun Microsystems	8.8	6.6
Ikea Blue	11.0	11.6

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Ikea Yellow	6.2	19.3
Time Fortune 500	11.9	16.7
Quark	4.6	5.8
Versonic	13.8	16.8
T-Mobile Red	8.2	12.0
AVERAGE	**9.1**	**12.2**

Buyers Lab's Pantone test chart was used for Image Quality testing, with High/Best quality settings using 24-bit colour in the case of both models. Delta E measurements recorded the accuracy with which 12 Pantone colours were reproduced.

Dimensional Accuracy

	Canon imagePROGRAF TX-3000 MFP T36	HP DesignJet T2530 eMFP
Variation in line length in mm (scanned in landscape)	0.1	0.1
Variation in line length in mm (scanned in portrait)	0.2	0.2

Dimensional Accuracy was determined using the Applied Images QA-1 Test Chart (150 mm line length) and the Adobe Photoshop Measuring Tool. Charts were scanned in both Portrait and Landscape mode using the highest resolution available (1200 for the Canon and 600 dpi for the HP) with both devices set to Line, B&W mode, and saved as TIFF files.

Device Feature Set

	Canon imagePROGRAF TX-3000 MFP T36	Advantage		HP DesignJet T2530 eMFP
User Interface	15.6" Touchscreen LCD	✔		4.3" Touchscreen LCD
Scanner Features				
Maximum optical resolution (dpi)	1200	✔		600
Scanning resolution (dpi)	100, 200, 300, 400, 600, 800, 1000, 1200	✔		200, 300, 600
Colour Scanning Speed	7.62 cm (3")/sec. (200 dpi/24-bit)	✔		6.35 cm (2.5")/ sec. (200 dpi)
Black Scanning Speed	33.0 cm (13")/sec. (200 dpi/8-bit)	✔		19.05 cm (7.5")/sec. (200 dpi) Greyscale
Scanning Mode	24-bit RGB Colour, 8-bit Greyscale, 1-bit Black & White			24-bit RGB Colour, 8-bit Greyscale, 1-bit Black & White
Max. Document Size	965 mm x 15,200 mm			914 mm x 15,000 mm (TIFF)
Max. Scanning Width	914 mm (36")			914 mm (36")

	Canon imagePROGRAF TX-3000 MFP T36	Advantage		HP DesignJet T2530 eMFP
Max. Thickness of Paper (mm)	2.0 (with operator support to guide paper as it enters and exits scanner)	✔		0.8
Paper Path	Front (straight); Rear exit (front eject via Document Return Guide)			Rear exit
File Save Formats	TIFF, JPEG, PDF; PDF/A (optional), multi-page PDF (optional)	✔		TIFF, JPEG (PDF only with PostScript sister model)
File Saving Area	Network folder, USB memory, HDD (controller PC)			Network folder, USB memory
Preset Document Types	Colour Photo, Colour Graphics, Colour Lines, Grey Photo, Grey Graphics, Grey Lines, B&W Clean, B&W Dirty, B&W Very Dirty	✔		Line, Mixed, Image
Ability to Save Custom Presets	Yes	✔		No
Background Removal	Yes (in Preview edits)			Yes
Preview Scaling	Yes (Linear)	✔		No preview
Deskew	Yes (in Preview edits)			Yes (Auto)
Preview Editing	Yes (Skew, Crop, Brightness, Sharpen, Black Point, White Point, Mirror, Invert)	✔		No
Scan Speed Adjustment	Yes	✔		No
Batch Scanning	Yes	✔		No
Scan to Email	No		✔	Yes
Scan to Cloud	Yes (via Canon imagePROGRAF Direct Print & Share)	✔		No
Auto Paper Size Detection	Yes			Yes
Rename and Save	Yes			Yes
Printer Features				
Max. image resolution	2400 x 1200 dpi			2400 x 1200 dpi
Number of inks	5		✔	6
Ink tanks replaceable during operation	Yes	✔		No
Ink-drop size	5 picoliter	✔		6 picoliter (CMY, PK, G); 9 picoliter (MBK)
Ink cartridge capacity	160/330/700 ml (CMYK, MBK)	✔		MBK: 69 ml/300 ml; CMY, PK, G: 40 ml/130 ml
Starter ink (total)	970 ml (330 ml MBk; 160 ml CMYK)	✔		269 ml (40 ml x 5, 69 x 1)
Number of nozzles	MBK: 5,120 nozzles, Other colours: 2,560 nozzles each; 15,360 in total	✔		9,632 in total
Number of printheads	1 (User-replaceable)			1 (User-replaceable)
Max. paper width	914 mm (36")			914 mm (36")
Line accuracy	+/-0.1%			+/-0.1%
Minimum line width	0.02 mm			0.02 mm
Minimum print margins	3 mm			3 mm
Borderless (0 mm) printing	Yes (Roll only)	✔		Yes (Photo paper only)
Roll paper	Optional Multifunction Roll System (with Auto Take Up)			Dual roll
Maximum outside diameter of roll paper	170 mm	✔		140 mm

	Canon imagePROGRAF TX-3000 MFP T36	Advantage		HP DesignJet T2530 eMFP
Maximum cut-sheet media length	1.6 m		✔	1.676 m
Maximum media thickness	0.8 mm	✔		0.5 mm
Media loading	Top and Front Loading Slot for Sheet Paper			Front
Optional media handling	Roll holder set			Core adapter
High-capacity stacker	100 sheets	✔		50 sheets
Standard RAM	128 GB			128 GB
Maximum RAM	128 GB			128 GB
Hard drive	500 GB			500 GB
Interface	Hi-Speed USB; 10/100/1000Base-T/TX Ethernet; USB 2.0			10/100/1000Base-T Ethernet, USB 2.0
PDL	HP-GL/2, HP RTL		✔	HP-GL/2, HP RTL, TIFF, JPEG, CALS G4, HP PCL 3, GUI, URF
Net weight (unpacked)	105 kg	✔		112 kg
Power consumption when in standby	3.6 W		✔	< 1.3 W
Power consumption when active	105 W	✔		120 W
Acoustic pressure, active	51 dB(A)		✔	47 dB(A)
Acoustic pressure, standby	35 dB(A)	✔		39 dB(A)

Driver Feature Set

	Canon imagePROGRAF TX-3000 MFP T36	Advantage		HP DesignJet T2530 eMFP
Speed settings	5 (Fast 300, Fast 600, Standard 600, High 600 and High 1200)	✔		3 (Fast, Normal, Best)
Economy mode	Yes			Yes
Predefined profiles	6 (Default, Photo (colour), Poster, CAD (colour line drawing), CAD (mono line drawing) and Perspective GIS)	✔		5 (Default, CAD, GIS, Photo, B/W Photo)
Overview of profile settings provided	Yes			Yes
Media profiles	53 + 10 user customizable special options	✔		33
IQ optimized for print profiles	Yes			Yes
Watermark	Yes	✔		No
Sharpen text	Yes			Yes (Max. detail setting)
Thicken fine lines	Yes			Yes (Max. detail setting)
Mirror image	Yes			Yes
Multi-up printing	Yes, 2 to 16	✔		No

	Canon imagePROGRAF TX-3000 MFP T36	Advantage		HP DesignJet T2530 eMFP
Poster print mode	Yes (2 by 2)	✔		No
Page stamping	Yes (Date, Time, Name, Page Number)		✔	Yes (Date, Time and Name (Windows username or custom name))
Image rotation	Yes – auto 90 or 180 degrees	✔		Yes – auto 90 degrees
Option to preview before print	Yes			Yes
CMY balance adjustment	Yes			Yes
PANTONE Emulation	No		✔	Yes
Brightness adjustment	Yes			Yes
Contrast adjustment	Yes			Yes
Saturation adjustment	No			No
Advanced colour management options	Yes			Yes
Enlargement Copy Mode	Yes	✔		No
Free Layout Capability	Yes (flexible placement)	✔		Yes (automatic placement)
MS Office Plug-in	Yes			Yes
Accounting Capability	Yes			Yes
Disable automatic cutter	Yes			Yes
Unidirectional printing	Yes	✔		No
Integration with MFP	Yes			Yes

The Canon imagePROGRAF TX-3000 MFP T36 comes bundled with PosterArtist Lite.

Test Environment

Products were tested in Buyers Lab's environmentally controlled UK test lab, which replicates typical office conditions.

Test Equipment

Buyers Lab's dedicated test network, consisting of Windows 2008 and Microsoft Exchange servers, Windows 10 workstations, 10/100/1000BaseTX network switches and CAT6 cabling.

Test Procedures

The test methods and procedures employed by Buyers Lab in its lab testing include Buyers Lab's proprietary procedures and industry-standard test procedures. In addition to a number of proprietary test documents, Buyers Lab uses industry standard files including a Buyers Lab test file and an ASTM monochrome test document for evaluating black image quality. In addition to a visual observation, colour print quality and gamut size are evaluated using XRite i1 profile software and an i1 Pro colour spectrophotometer, and analysed using XRite i1i0 Advanced Scanning Table. Density of black and colour output was measured using an XRite exact^{Xp} densitometer.

About Keypoint Intelligence - Buyers Lab

Keypoint Intelligence is a one-stop shop for the digital imaging industry. With our unparalleled tools and unmatched depth of knowledge, we cut through the noise of data to offer clients the unbiased insights and responsive tools they need in those mission-critical moments that define their products and empower their sales.

For over 50 years, Buyers Lab has been the global document imaging industry's resource for unbiased and reliable information, test data, and competitive selling tools. What started out as a consumer-based publication about office equipment has become an all-encompassing industry resource. Buyers Lab evolves in tandem with the ever-changing landscape of document imaging solutions, constantly updating our methods, expanding our offerings, and tracking cutting-edge developments.

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