KEYPOINT INTELLIGENCE
Buyers Lab

EUROPEAN EDITION

BUYERS LABORATORY
2017
BLI
HIGHLY RECOMMENDED
LAB TESTED

Lab Test Report
A Comprehensive Keypoint Intelligence Laboratory Evaluation

Toshiba e-STUDIO3508LP
35 PPM Monochrome
Print / Scan / Copy / Fax

Reliability	**10.0**
Apps/Onboard Tools	**Not Rated**
Image Quality	**9.0**
Print Quality	9.0
Copy Quality	8.0
Usability	**7.5**
Serviceability/Management	7.0
Walk-up Experience	8.0
Workstation Experience	8.0
Mobility	**Not Rated**
Security	**9.5**
Features	**9.0**
Speed	**6.5**
Print Speed	5.5
Scan Speed	9.5
Copy Speed	5.0
Power Consumption	**Not Rated**

OCTOBER
2017

OUR TAKE

The Toshiba e-STUDIO3508LP has been significantly updated from its e-STUDIO307LP predecessor model to increase its overall value proposition. This eco hybrid model uses an improved erasable blue toner so that text appears darker, while a new embedded self-erase function means users no longer need to invest in a separate erasing unit. Black toner is now integrated with the system, which means higher value documents can be printed in black and more disposable content can be printed in erasable blue toner, all on the one machine. The Toshiba e-STUDIO3508LP proved to be a strong and dependable performer overall in BLI's lab evaluation. The device delivered outstanding reliability with a flawless 210,000-impression durability test. This, combined with simple maintenance procedures and very good overall ease of use, mean users can work efficiently and with minimal downtime on a daily basis. The device, which is rated at 35 ppm for black output and 35 ppm for erasable blue output, also earned high praise for its scan speeds; print and copy productivity were by and large competitive, although its fast job stream speed should boost efficiency in multi-user environments. On the usability front, the large, intuitive touchscreen helps users navigate menus and select settings effortlessly and is highly customizable to suit user preferences. Users can also simplify job programming via the Simple Scan and Simple Copy screens, and create profiles in the drivers and one-touch presets via the control panel to streamline workflows. The Mopria-certified e-STUDIO3508LP provides convenient print from or scan to smartphones and tablets for mobile workers using the e-STUDIO Print & Capture app, and AirPrint is also supported. Another strength is the unit's black print quality, which produced pin sharp text and crisp, consistent fine lines. Overall, the e-STUDIO3508LP's unique status as a standalone eco hybrid model will appeal to many organizations and across many vertical markets that have a strong environmental policy and a commitment to reducing paper waste. Combining all these factors, BLI highly recommends the e-STUDIO3508LP for mid-size workgroups.

Toshiba e-STUDIO3508LP Fast Facts*

SRP	INA
Max Monthly Duty Cycle	210,000
Manufacturer's Recommended Monthly Volume	INA
Rated Speed	35 ppm (black); 35 ppm (erasable blue)
Std Paper Source(s)	Dual drawer, bypass
Std Paper Capacity	550/550 sheets, 100 sheets (bypass)
Paper Weights	60 to 256 gsm black, 64 to 80 gsm erasable blue
Bypass/Paper Weights	100-sheet/60 to 256 gsm black, 64 to 80 gsm erasable blue
Max Paper Capacity	3,200 sheets
System Memory (Std/Max)	4-GB/4-GB
Document Feeder/ Capacity	Opt RADF/100-originals; Opt DSPF/300-originals
PDL/PCL	PCL 5e/c/6, PostScript 3 and XPS compatible
HDD (Std/Max)	320 GB
Scanner Technology/Speed	CCD/73 ipm colour, 73 ipm black (RADF) or 240 ipm colour, 240 ipm black (DSDF)
*At time of publication	

Test Duration: Two months, including a 210,000-impression and 21,000-scan durability test.
The gauges above represent Excellent (9–10), Very Good (7–8.5), Good (4–6.5), Fair (1.5–3.5) and Poor (0–1).
Please visit buyerslab.com/bliQ for more information.

BENEFITS

Maximize uptime thanks to flawless reliability, high-yield toner cartridges, and straightforward procedures for replacing toner, drum, and waste toner

Embedded self-erase feature extends device functionality and reduces waste and paper costs

High quality printed and copied output meets the needs of general office and marketing-intensive environments

Save up to 20 custom profiles in the driver for quick print job programming

Streamline scan and copy workflows with Simple Scan and Simple Copy menus, and one-touch templates to simplify job programming

Save time with support for scanning to Word, Excel and PowerPoint to create fully editable documents without the need to reproduce the originals

Boost scan productivity with fast scan speeds and a 300-sheet duplex single-pass feeder

Multi-station print solution lets users print to one device and release to any other in the organization for added convenience and enhanced security

e-BRIDGE Next Controller allows applications to be embedded on to the MFP to allow convenient scan-to-cloud capability, among others

Print from anywhere convenience with mobile printing support for both Android and Apple devices

ADVANTAGES

Fast job stream speed for efficient job processing during peak usage in multi-user environments

Fast scan speeds keep workflows moving

Higher than average memory allows for faster job processing

Fast scan speeds and small colour scan file sizes keep workflows moving

LIMITATIONS

Below average maximum paper capacity

Scan to email does not support the ability to store common extensions and domains as one-touch keys

RELIABILITY

10.0

Flawless durability performance; no service calls required; no misfeeds

High rated yield for black toner helps to minimize downtime

Impressions Printed	210,000
Scanned Pages	21,000
Misfeeds	0
Misfeed Rate	NA
Service Calls	None

APPS/ONBOARD TOOLS

Not Rated

The device supports Toshiba's e-BRIDGE Next Controller, which lets businesses automate tasks with seamless integration between the device and cloud applications.

Administrators can add applications to the device by using the Applications tab in the web server. Available MFP connectors include Scan to Dropbox, OneDrive, Google Drive, and Google Cloud Print. Once loaded, users can add these applications to the MFP's control panel (user credentials are required in order to access and use the applications).

e-BRIDGE Connector for Google Docs 3 allows the MFP user to scan a document and upload it to Google Docs.

e-BRIDGE Connector for Microsoft Exchange integrates the MFP with the users' email workflow and lets them initiate scanning, with their Outlook folder selected as the email destination address.

e-BRIDGE Re-Rite is a capture solution that integrates with many Toshiba MFPs to enable one-touch automatic OCR and conversion of paper documents into editable digital documents that can be sent to shared network folders, email addresses, or FTP sites.

The optional Multi Station Print Enabler solution, which is essentially secure pull-print release, allows users to print to one device and then release their job at a device of their choosing. It supports up to 10 Toshiba devices and each device needs to be licensed. This feature provides great flexibility in a large enterprise environment and is a productivity boon for workers. In addition, users can swap from black toner to erasable blue toner and vice versa, and change the number of sets and simplex/duplex output at the device without having to resend their job.

IMAGE QUALITY

9.0

	Print Mode	Copy Mode
Text	Excellent	Very Good
Line Art	Excellent	Very Good
Halftone Pattern	Very Good	Very Good
Halftone Range	Excellent	Excellent
Solids	Very Good	Very Good

PRINT QUALITY

9.0

Sharp, dark, and fully formed text; above average smoothness of serifs and curves; characters are clearly legible at the smallest type size.

Crisp fine lines with consistent thickness; smooth circles; diagonal lines showed no breakup or stair-stepping.

No toner overspray or haloing was visible on text and line output, even when viewed under magnification.

Distinct separation between all greyscale levels; dot-fill areas were smooth with minimal banding.

Smooth solid areas with average darkness.

Print Density

	Tested Device	Competitive Average
Black	1.38	1.39

Measurements are based on four readings and correspond to four different solid locations on the output. The higher the reading, the darker the image.

COPY QUALITY

8.0

Well formed, smooth characters, with above average darkness and average sharpness.

Distinct and consistent fine lines, but some slight jaggedness is visible when viewed under magnification; smooth circles and diagonal lines.

No toner overspray or haloing visible on line and text output, even when viewed under magnification.

Clear separation between all halftone levels; dot-fill areas are slightly grainy.

Bold solids with consistent toner coverage.

Copy Density

	Original	Tested Model	Competitive Average
Black	1.73	1.25	1.39

Measurements are based on two readings and correspond to two different solid locations on the output. The higher the reading, the darker the image.

USABILITY

7.5

SERVICEABILITY/MANAGEMENT

7.0

Multiple drivers can be installed simultaneously; no user intervention is required for the configuration of accessories.

The install utility also has built-in test-page printing; plus, there's a remote server connection button for SMTP and LDAP for added convenience.

Easy navigation of TopAccess, the device's embedded web server, helps administrators to manage the device more easily.

LDAP search support from the web utility means users can remotely add and edit destinations from LDAP servers, which is a valuable time saver.

e-BRIDGE CloudConnect is a cloud-based device monitoring service that collects operation data securely via a HTTPS/SSL connection. It automates meter collection and automates supplies delivery, which helps to reduce downtime. In addition, it provides remote diagnostics and device status alerts for consumables and error conditions, firmware updates, and remote data backup.

Toshiba's e-BRIDGE Fleet Management System (eFMS) is a robust network device management utility for companies that need to monitor, manage and gather meter information for their fleet of Toshiba-branded MFPs and printers, plus it can display information on third-party devices. One of its key strengths is its advanced reporting capabilities, which can track usage by device or by department for accurate cost analysis; counter reports can be exported in XML format. The utility is easy to set up and use, and features two levels of email alerts to help IT personnel keep devices running. Alerts about regular typical conditions, such as paper out and drawer open, can be sent to the appropriate administrators, while conditions that require skilled intervention can be sent to IT personnel or an external Toshiba dealer. One further plus is the utility's advanced cloning capabilities. eFMS also allows users to access remotely a device's TopAccess embedded web page.

eFMS, however, requires software to be loaded on each PC where it is to be used, rather than being browser-based as seen with some competitor fleet management utilities. A web-based application would be more convenient as it cuts down on administration time and allows anytime, anywhere access from any device with a web browser.

Additional functionality is available to help administrators to manage this eco hybrid device and ensure organizations will get the best use from its environmentally friendly features. This includes defining the default toner mode for different applications (so that, for example, job lists will print in erasable blue toner rather than in black) via TopAccess; setting up rules via the more advanced Rules Based Printing feature, which will enforce certain green print policies on all users based on the application (so that, for example, emails and content from web browsers will always print in erasable blue toner and in duplex); and restricting and tracking print, scan, and copy usage according to user roles.

The e-BRIDGE Paper Reuse Report (ePRR) utility is a free separate Windows app that provides valuable information to better inform IT personnel and managers on how much reused and normal virgin paper is being used in the organization and the environmental contribution made as a consequence of using reused paper (CO_2 and cost reduction calculations can be tailored locally to regions). The utility collects counters from the e-STUDIO3508LP for management reporting and tracking purposes, and the data is presented in a highly visual manner which makes it attractive and easy to understand at a glance. Data can be exported as a CSV file while a graphical summary can be saved in PDF format. Data cannot be captured within a data range, as the utility is constantly running. However, if an administrator wants to review a month-by-month snapshot of reused vs new paper usage activity, then one workaround is to take a screenshot at the start of the month, and export data as a CSV file and repeat at the end of the month, so that they will be able to compare the statistics for that particular month. This is a rather inefficient process, and it would be beneficial if this was an automated process.
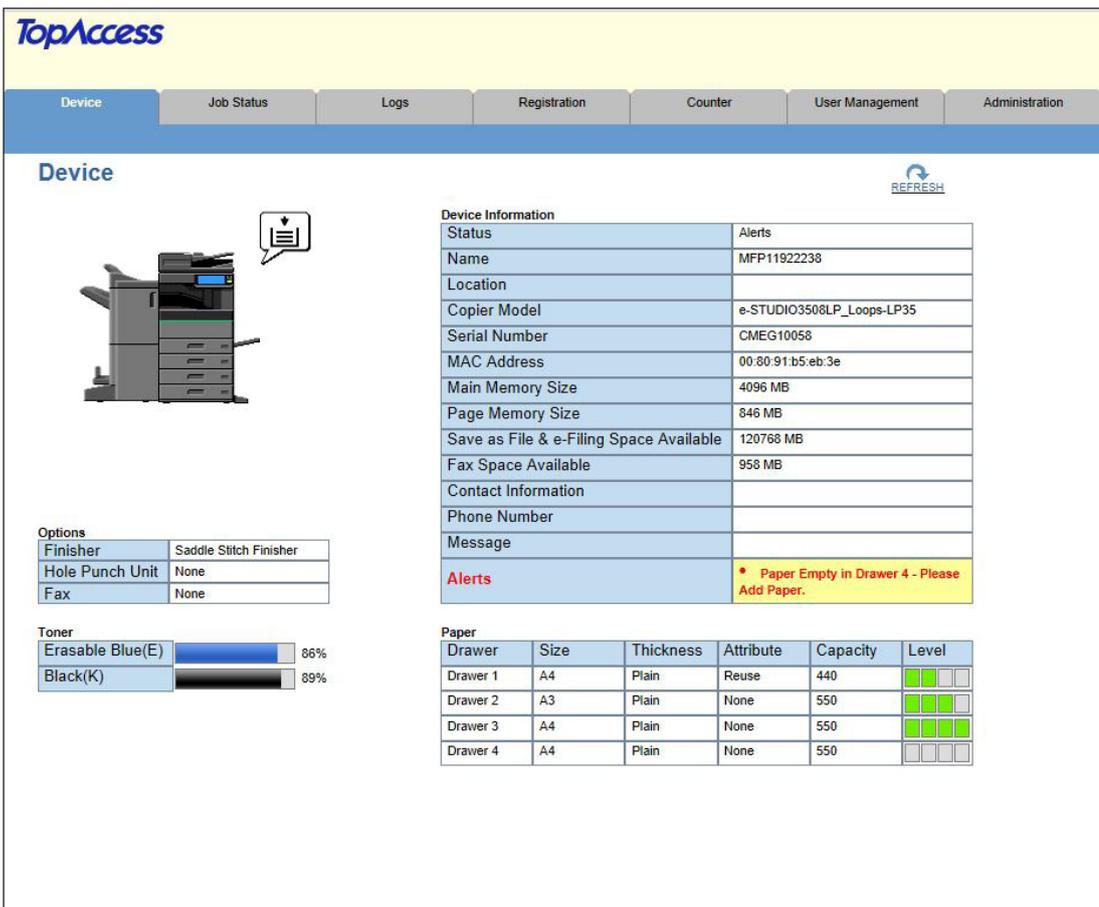
TopAccess

Device	Job Status	Logs	Registration	Counter	User Management	Administration

Device

REFRESH

Device Information

Status	Alerts
Name	MFP11922238
Location	
Copier Model	e-STUDIO3508LP_Loops-LP35
Serial Number	CMEG10058
MAC Address	00:80:91:b5:eb:3e
Main Memory Size	4096 MB
Page Memory Size	846 MB
Save as File & e-Filing Space Available	120768 MB
Fax Space Available	958 MB
Contact Information	
Phone Number	
Message	
Alerts	• **Paper Empty in Drawer 4 - Please Add Paper.**

Options

Finisher	Saddle Stitch Finisher
Hole Punch Unit	None
Fax	None

Toner

Erasable Blue(E)	86%
Black(K)	89%

Paper

Drawer	Size	Thickness	Attribute	Capacity	Level
Drawer 1	A4	Plain	Reuse	440	
Drawer 2	A3	Plain	None	550	
Drawer 3	A4	Plain	None	550	
Drawer 4	A4	Plain	None	550	

TopAccess has a pretty basic UI design, and some of the dropdown menus and icon buttons can be very small (such as those found in the e-Filing screen when printing or emailing files directly from within the utility). However, the web utility's user interface is easy to navigate overall, and has a basic design with a series of tab options running across the top of the screen; functions are clearly labelled and selectable. Consumables statuses are clearly signposted on the main screen with an alert graphic shown near to the device image, and alerts are highlighted in red in the Alert section of the Device Information table. Toner levels are displayed as colour bar gauges and reduce in 1% increments, while paper levels are represented by a gauge split into four blocks.

Device settings can be saved as a clone file to streamline administration.

Users can view detailed job logs for print, copy, and scan operations; job lists can be exported to be viewed in Microsoft Excel, which is useful for job tracking and device monitoring purposes.

Email alerts can be sent to up to three recipients for a whole range of different conditions. They can be sent to the administrator when consumables are depleted and when errors occur, as well as when scan jobs are completed and faxes are received.

Robust security settings mean that user and document names can be hidden on the job status and job log.

Administrators can define the default toner mode setting for specific operations. Job lists can be made to print in erasable blue toner by default, for example.
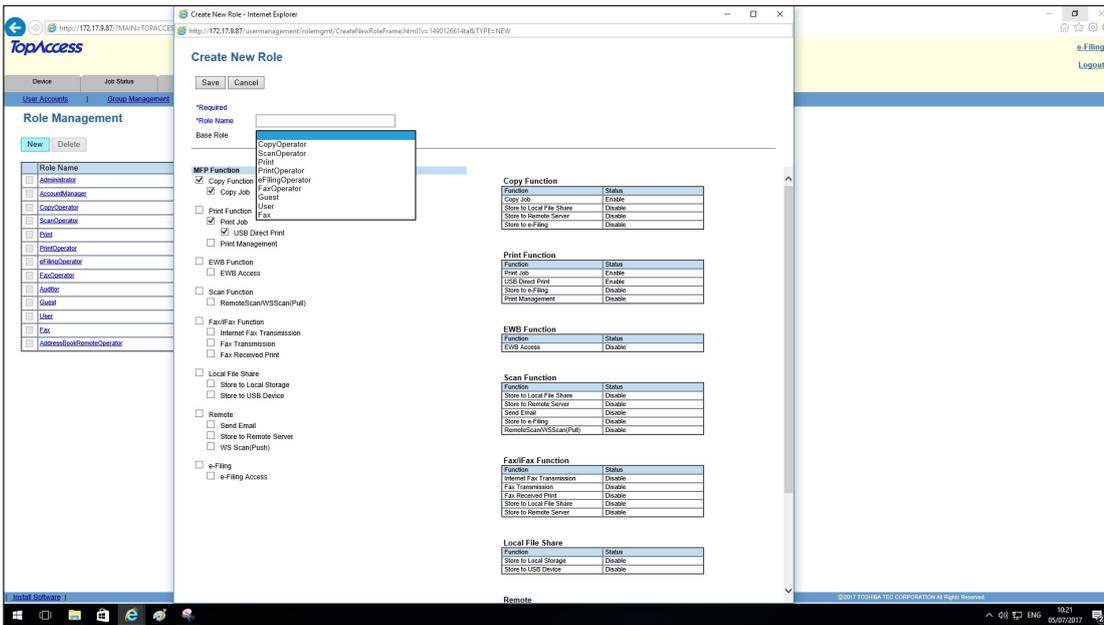
Administrators can set up role-based permissions to manage user access to functions.
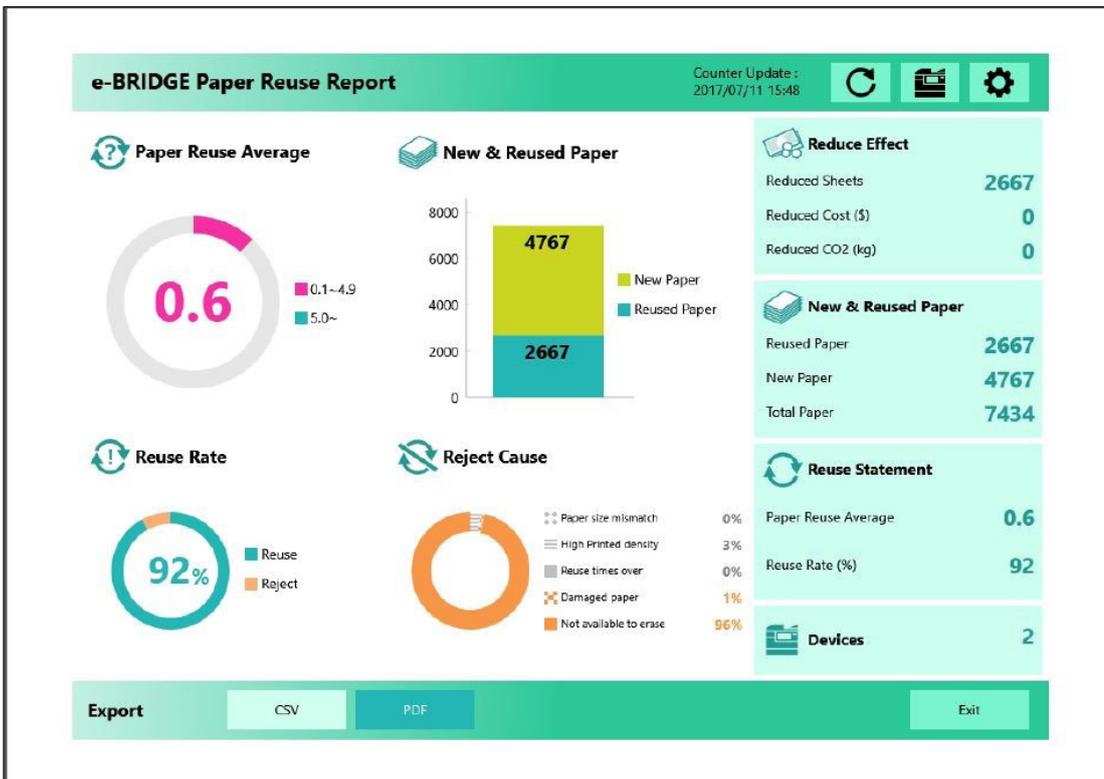
e-BRIDGE Paper Reuse Report is a free utility that provides graphical data on the environmental contribution made by erasing and reusing paper using the eco hybrid MFP. Values for CO_2 and paper costs can be localized.

Adjusting the paper drawers for different-sized media is very easy; users simply press the locking clips in and slide to the required size. In addition, paper limit indicators are easy to see which reduces the risk of users overloading the drawers. Administrators can also lock down the size settings for any of the paper drawers so that a user cannot change the size, which helps to prevent errors and misfeeds.
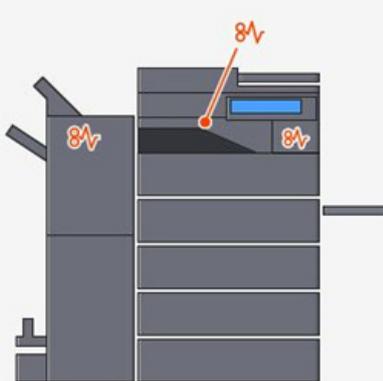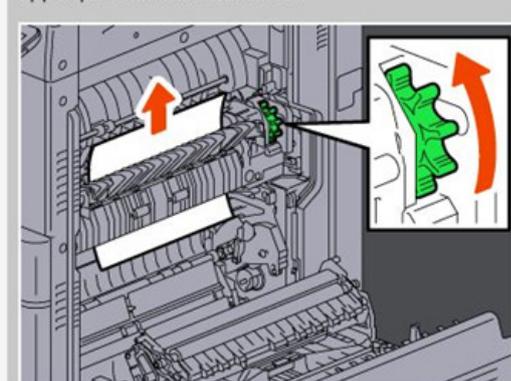
Step-by-step text, graphical, and animated instructions are provided for clearing misfeeds, making it very straight-forward to accomplish. Misfeed areas include five at the front of the device (which includes the paper drawers), three on the right-hand side of the device, and another five on the left-hand side (all located in the finisher unit, if installed).

All misfeed areas allow for easy access, and all user access handles are clearly marked in green for easy identification.

The process for replacing black and erasable blue toner is simple and clean, but toner cannot be replaced on the fly. The device's waste toner container is also user-replaceable.

CONSUMABLE RATED YIELDS

USER- REPLACEABLE	Competitive Average	Tested Model
Black Toner	32,609	38,400
Erasable Blue Toner	NA	21,500
SERVICE- REPLACEABLE	Competitive Average	Tested Model
Black Photoconductor	167,414	210,000
Erasable Blue Photoconductor	NA	210,000
Black Developer	241,136	210,000
Erasable Blue Developer	NA	210,000

WALK-UP EXPERIENCE

8.0

The e-STUDIO3508LP model has an attractive piano black design, and this 'eco hybrid' model has green paper cassette indicators and a green-based touchscreen UI to accentuate the strong environmental credentials of this model.

In addition to the main Copy and Scan menus, which have all the typical settings a user is likely to need when programming a job, Simple Scan and Simple Copy menu screens are also available for more streamlined programming.

Users can save and add up to 64 shortcut panel buttons to streamline the workflow of commonly run jobs. In addition, up to 12,060 templates can be stored to enable one-touch access to frequently used settings for not only copy but also scan and fax jobs. These templates can be saved in up to 201 groups on the device; groups can be personalized and password protected, or there's a public template group to share useful templates with other users. Touch keys for storage and templating are located at the top of every control panel screen for easy access.

The touchscreen's QWERTY keyboard has large, comfortably spaced keys, which makes it very easy for users to input scan destinations manually. Conveniently, dedicated "@" and "." keys are also on the main keyboard screen. However, there's no ability to store common extensions (.com, .net), or typical domains (@gmail.com, @yahoo.com) as one-touch keys. Scanned documents can be sent to any combination of two destinations from the following options at a time: e-Filing, Email, Web Services Scan, USB, and File.

Via the scan preview, users can delete, replace, or insert pages, and zoom in and out with pinch and enlarge. Scan settings that can be changed while in preview mode include resolution, mode (Text, Text/Photo) and original size.

Print from and Scan to USB menus auto-populate upon insertion of a USB flash drive, and support sub-folder storage and creation of folders via e-BRIDGE Plus for USB Storage.

Scanning to USB is an intuitive process as the layout of the menu is the same as the scan to email menu, making it easy for users who use both. Supported scan formats include: TIFF, XPS, PDF/A, and PDF (multi- or single-page); scan files can be named.

If PDF is selected as the scan file format, users can specify certain security settings such as encryption levels, password-protection, and user access permissions. However, printing of 128-bit AES protected PDFs is not supported, despite the fact that users can scan to USB using this level of encryption. Print from USB does support printing of 40-bit RC4 and 128-bit RC4 protected PDFs.

Optional embedded OCR supports scanning to Word, Excel, and PowerPoint. This is a productivity boost for workers as it's a big time saver, eliminating the need to reproduce or search for the original electronic document to reuse. In addition, users can edit and add information to a digital version of a hard copy document. While the embedded OCR will offer very good accuracy for simple text documents, Toshiba's Re-Rite OCR application is a more robust server-based option for more complex files.

BLI did not find the process of setting up a scan to network folder intuitive. Administrators accomplish this multi-step task using TopAccess, and they must set up and register templates first in order to specify up to two remote or network folder destinations.

Jobs can be prioritized one slot at a time; limitless job reservation will queue up to as many as 1,000 multiple copy or print jobs so users can send jobs whenever they wish. However, only quantity can be modified for jobs in queue.

Both the job queue and the copy screen count down the number of sets left to complete which is a very useful feature for a user tracking when their job will be finished.

Users should be mindful of the fact that anything loaded into the paper tray designated as the Erasable drawer will be erased in one go if the Erase function is initiated on the device.

The 229mm tablet-style touchscreen control panel tilts up and down freely and is bright at its default settings. The touchscreen is highly responsive; the user interface (Home screen is shown above) is fresh and appealing, with clear icons and text options, and menus are logically organized and highly intuitive to navigate.
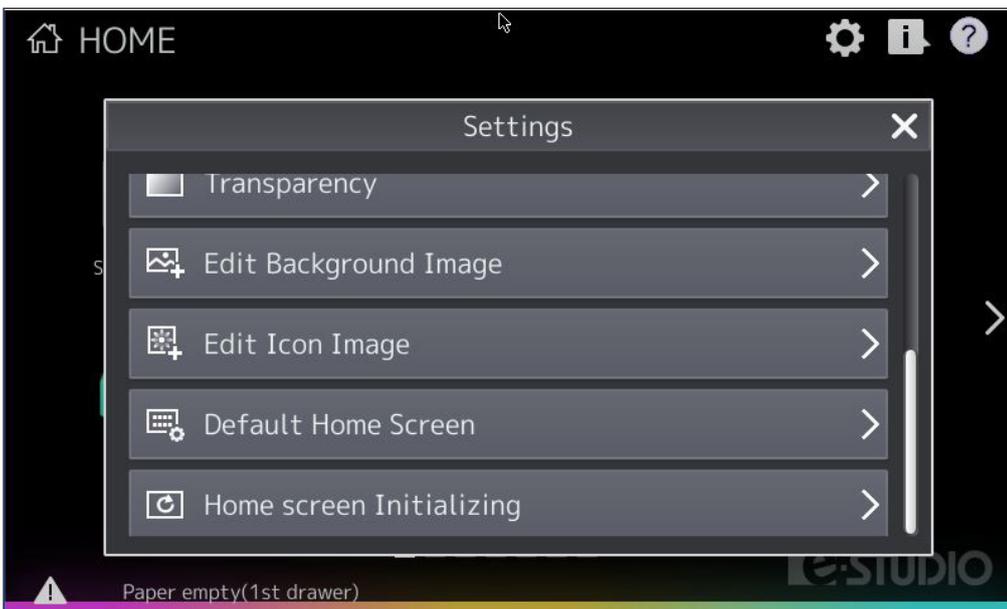
The touchscreen is highly customizable to suit end-users' preferences and needs; the background image, Home screen icons, layout, and language can all be changed, and shortcuts and job profiles can be added.
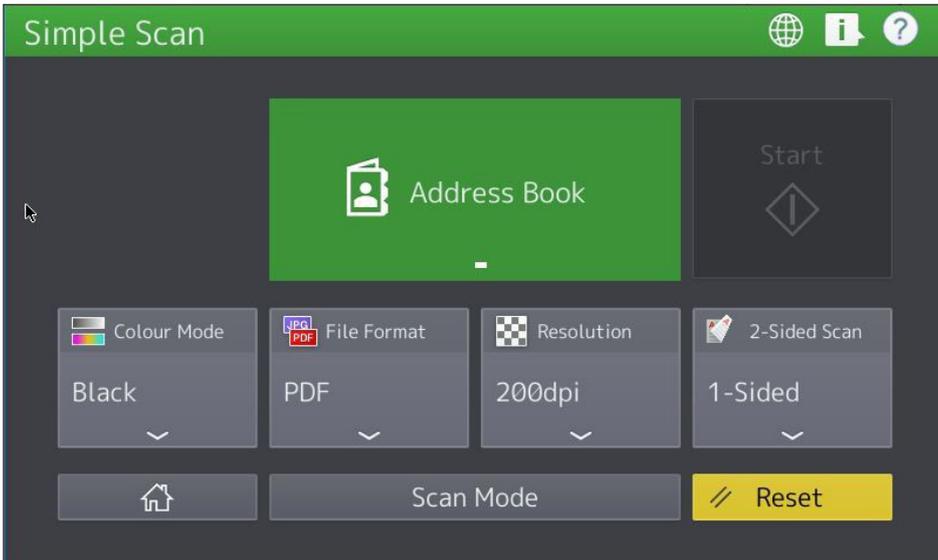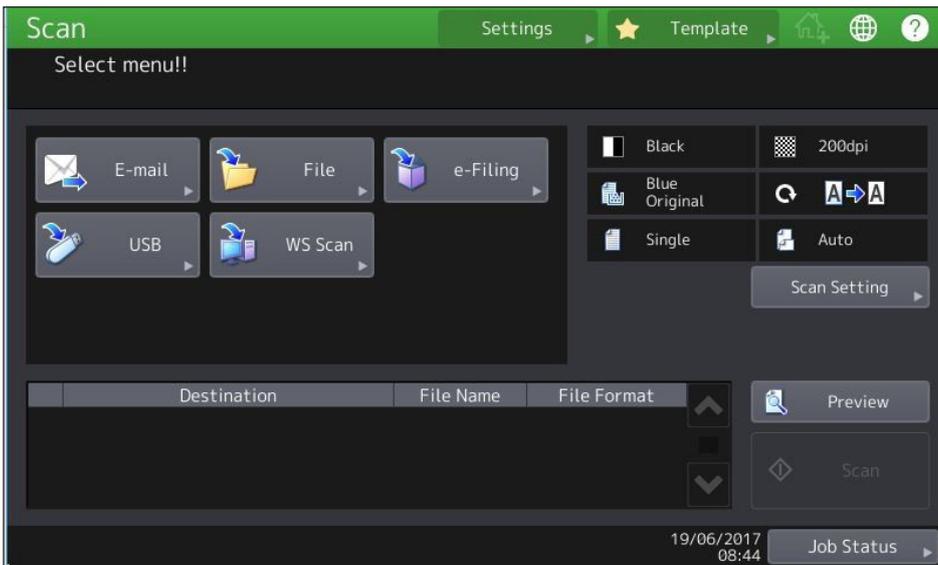
Users can easily switch between the main Scan and Simple Scan screens for more streamlined programming.
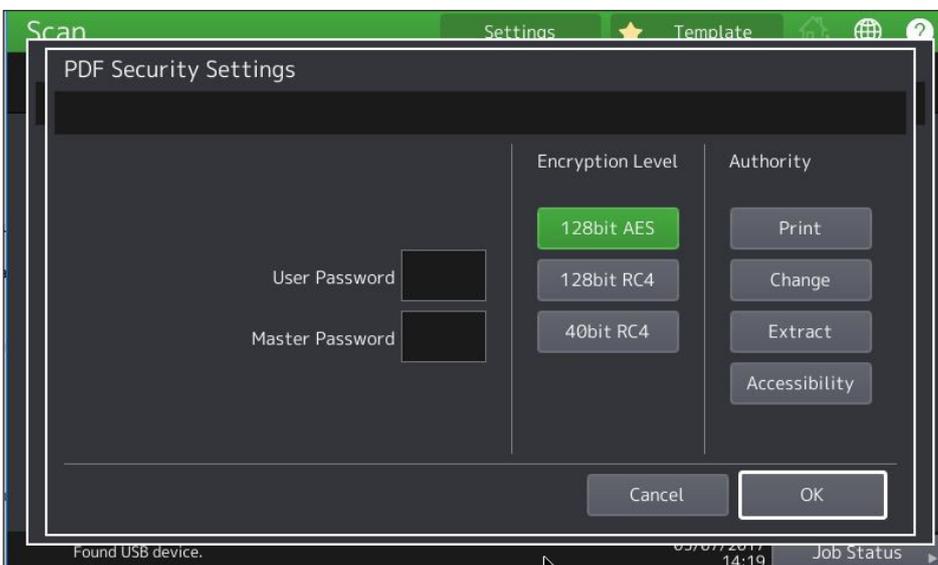
Users can set the level of encryption, which BLI found quite unusual as typically the administrator would be expected to set this and user access permissions when scanning to PDF format via the web utility.
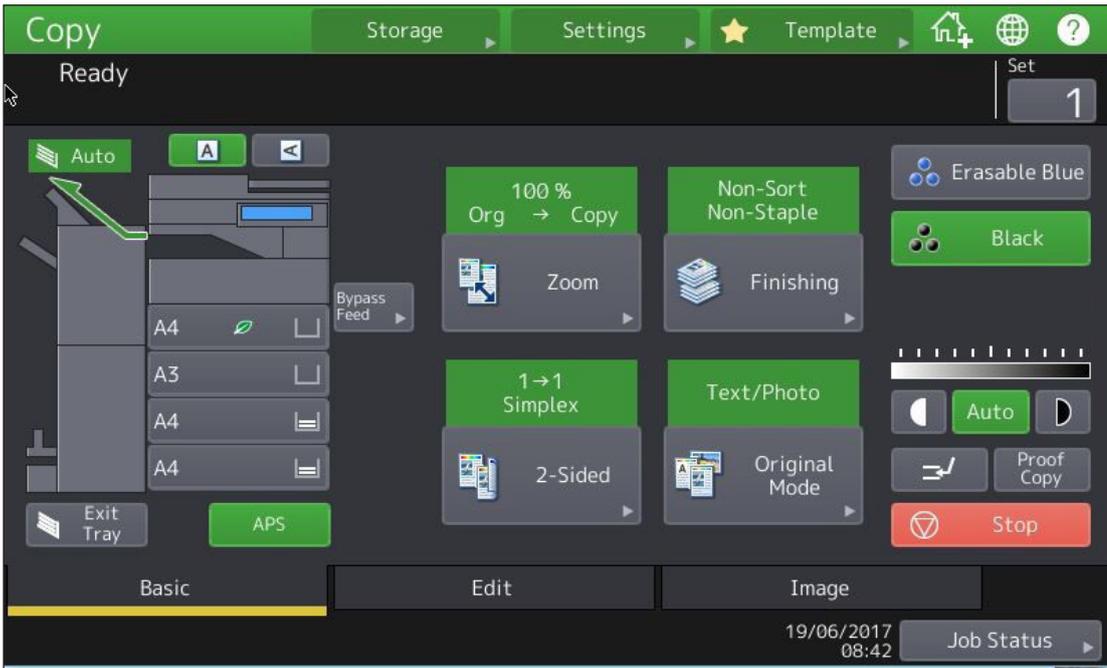
Most of the selections for a typical copy job are accessible, but not programmable, from the Basic tab on the main Copy screen. When a function is selected, a sub-menu opens within the main screen to let the user program settings, and is easily closed to take the user back to the Basic tab screen. Paper source and exit tray can be conveniently selected directly from the graphic of the device. The Settings button at the top of the screen provides a handy at-a-glance record of all currently selected settings for the job being programmed. Shortcuts to each of the menus in which a setting is currently selected are also provided, so that users can easily and quickly make changes, if desired. A template can be easily created by pressing the Home Plus button located top right of the screen once the desired settings have been programmed.
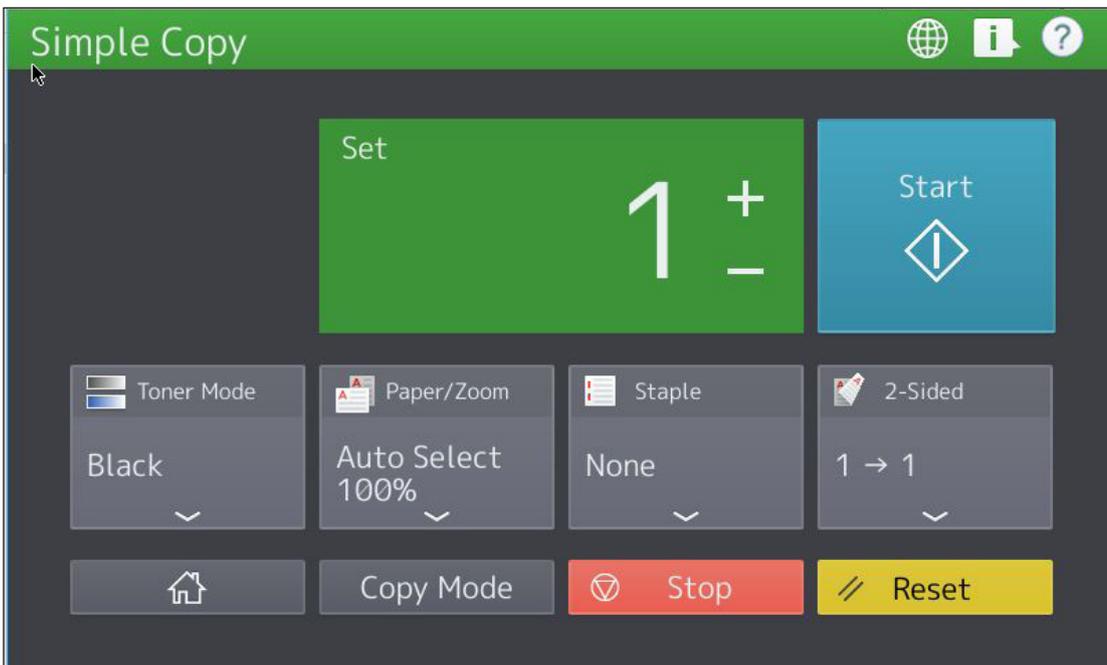
An alternate Simple Copy screen can be easily switched to, based on user preference.
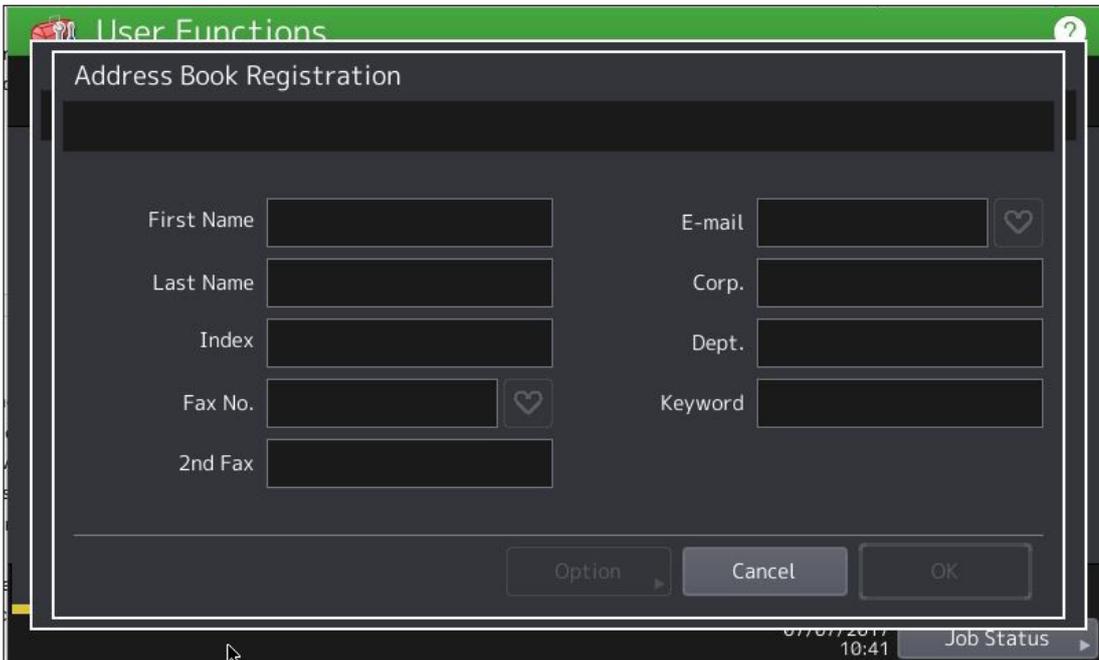
Manually entered addresses can be stored to the local address book but not through the scan screen. Instead, users must go to the address book feature via User Functions. It would be preferable if users had the ability to store addresses to the address book from the scan menu to make it more seamless.
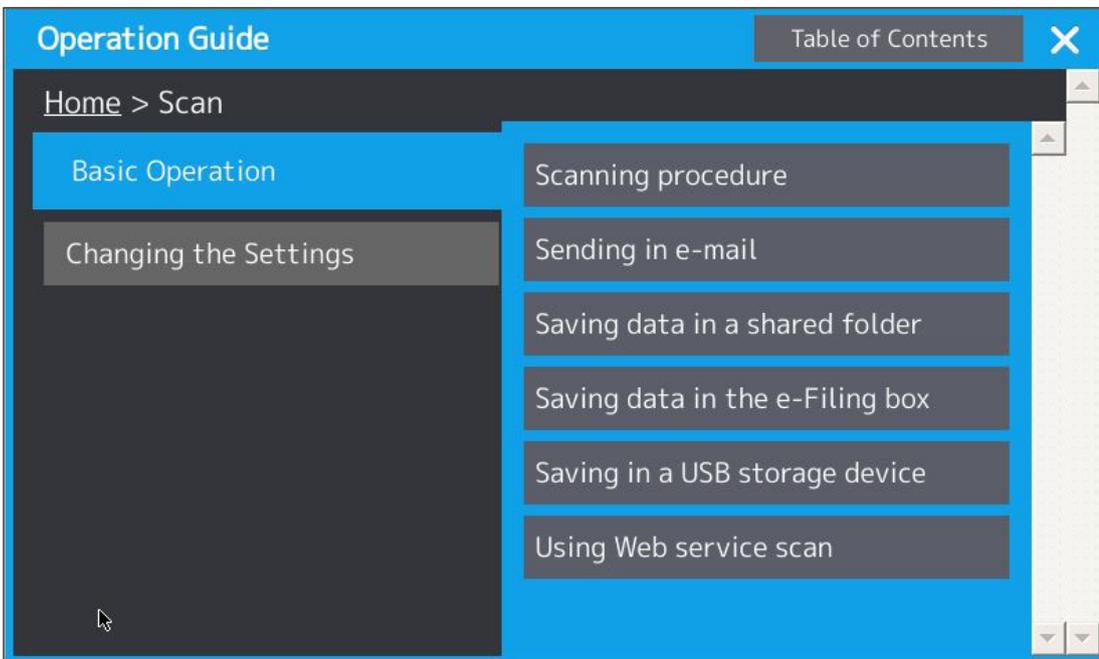
Help is provided on the control panel; users simply click the "?" icon that appears at the top right-hand corner of the screen to open the Operation Guide, which provides extensive guidance covering the device's features and functions. But help is not contextual or dynamic when programming within screens.

WORKSTATION EXPERIENCE

8.0

Users can streamline complex workflows via the ability to save and edit up to 20 profiles, which are conveniently accessible on every tab of the driver.

Additional customization is available via the Templates tab, which has five presets (B/W, Duplex, Staple and 2 in 1; Colour Booklet; Duplex and Staple; Duplex, Staple and 2 in 1 Colour; Duplex, Staple, and Punch), plus one open template.

Standard drivers share an identical layout, making it easier for users to switch between them for different jobs. Users can select which tab they want to open first by default.

A job review for currently programmed settings is available in both graphical and text form.

In addition to standard tandem printing, users can choose from a variety of time-saving, function-adding plug-ins for the driver. Among these are Job Replicator, for multi-part form replacement; Job Separator, to perform batch printing using any Windows app; and Job Build, which lets users print different document types all together as a single job.

Direct print capabilities are available, but only for printing documents stored in e-Filing on the device.

The process for secure print is intuitive, and secure print file names and usernames can be configured to invisible status; a PIN is required to delete secure print jobs; rules-based printing features are available from the driver.

Due to the eco-hybrid features of the e-STUDIO3508LP, users will need to be mindful of what they can print and to which drawer. Incompatible settings aren't selectable, the driver will automatically select/deselect a setting based on the job; for example, erasable blue toner is automatically selected if the reusable tray is selected in the driver. Setting changes can be viewed in the print preview, which should help to eliminate any mistakes prior to submitting the job to print.
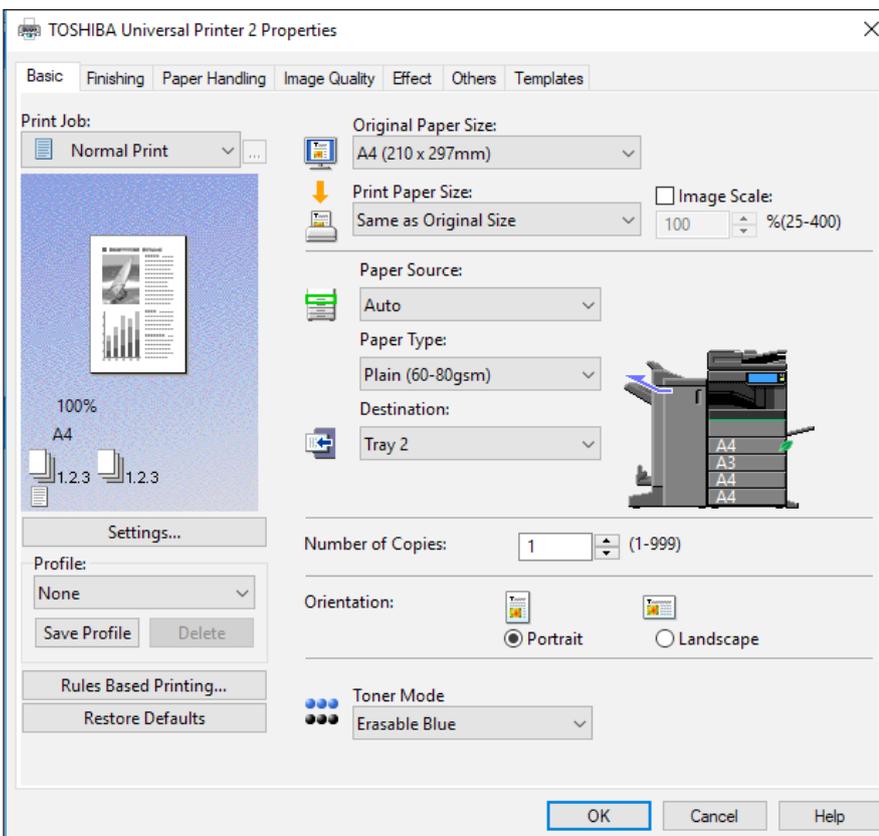
In addition to the most commonly used functions, the Basic tab of the Universal driver supports point-and-click for convenient selection of paper source and output tray. Incompatible settings are either greyed out or changed to correct settings with a dialogue that manual operation is necessary. In addition, the setting changes are viewable in the print preview, which helps to prevent any miscues prior to the user submitting the job to print.
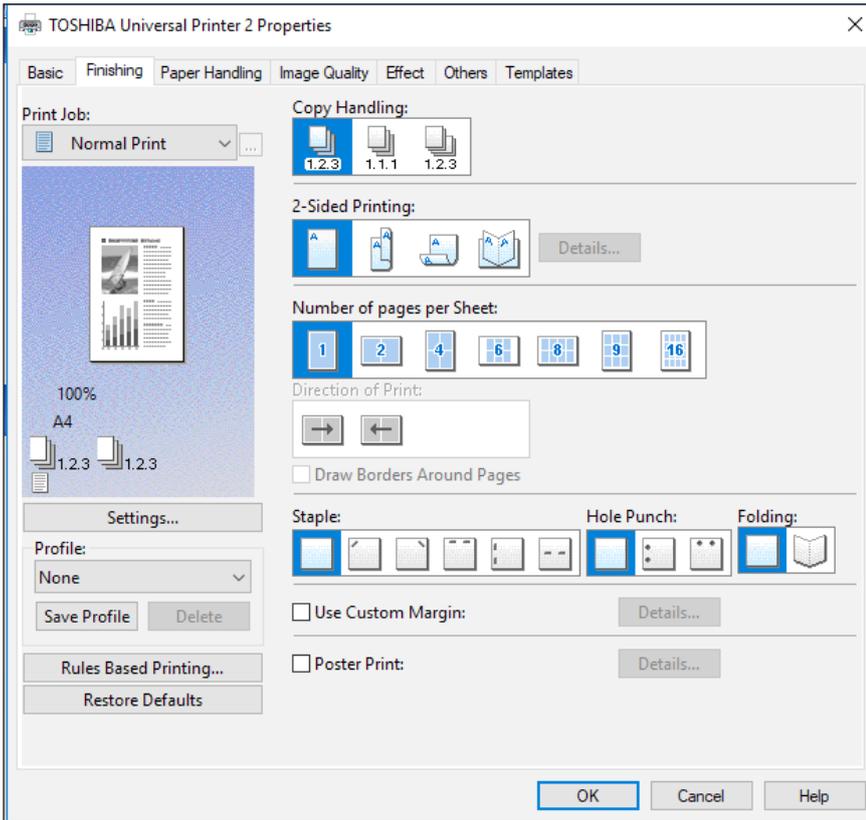
Text and icons clearly indicate selections for duplex and finishing from the Finishing tab.
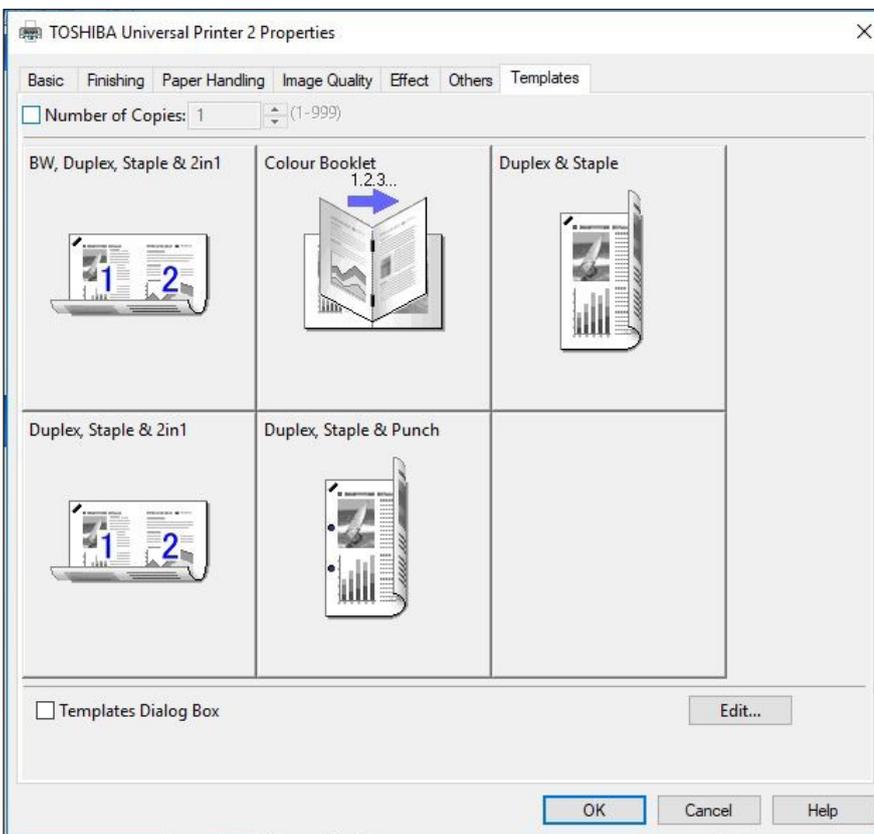
The settings of each template on the Templates tab can be changed and renamed for quick programming of commonly run workflows.

The print driver enables users to specify up to 10 rules which will then dictate how jobs created in certain applications will print, with toner mode being at the nub of the feature. More transient content (such as emails and web pages) can be directed to be printed in erasable blue toner automatically, which reduces waste. Each driver tab offers a Rules-Based Printing button, and the resulting dialog box menu is pretty straightforward to navigate. Note, in order to activate a rule, users must first set up a print profile to then apply to an application, which is a pretty straightforward process to accomplish.

Via TopAccess, users can access stored documents in e-Filing on the device and print them directly. Users can output multiple jobs, change quantity, change toner mode, change simplex/duplex, select paper size and source, apply corner stapling, and insert cover sheets, among others. However, direct print capability does not extend to allowing users to upload documents from their PC to print on the device, unlike with some brands BLI has seen.
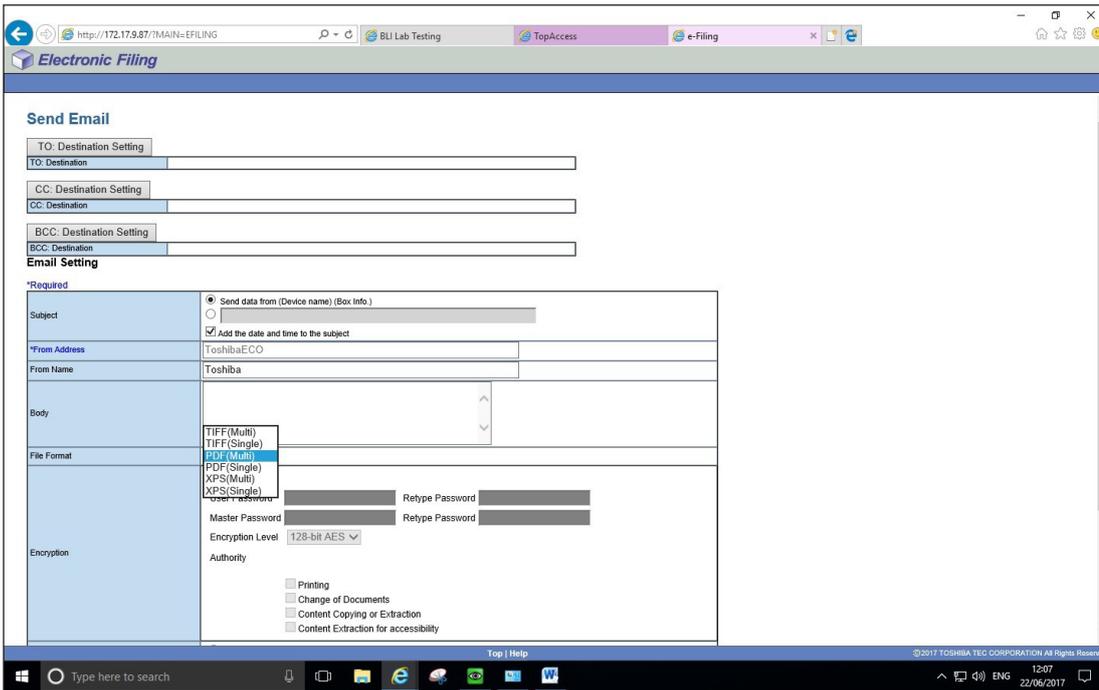
Users can also email documents stored in e-Filing directly within TopAccess; they can personalize the email body text and subject header, edit the file name, select the file format, and specify security settings such as password protection, encryption, and user access rights.

MOBILITY

Not Rated

This Mopria-certified device supports Bluetooth connectivity and mobile and cloud printing via AirPrint and Toshiba's e-BRIDGE Print & Capture mobile app. The app allows users to print, scan, and save documents directly from and to the device via their smartphones and tablets and has been updated to support the erasable blue features of the device, such as scanning in Blue Original mode.

SECURITY FEATURES

9.5

Standard encrypted secure print and encrypted PDF mode

Standard hard drive encryption and optional hard drive overwrite (up to 15 times)

Optional ID card authentication methods

Administrators can limit or restrict access to toner mode by application, the control panel, and USB

Meets ISO 15408 and IEEE 2600.2 security standards

SECURITY FEATURES

AUTHENTICATION	
Network user authentication at control panel	Standard (up to 16 servers)
Windows	Yes
Novell NetWare NDPS	No
LDAP	Yes
Kerberos	Yes
802.1x wireless	Yes
SMTP	Yes
POP before SMTP	Yes
Biometric	No
ID Card	Optional
HID	Yes
Common Access	Via third party
Other	Include: Sony FeliCa; LEGICAdvant; LEGICPrime; MIFAREDESFireEV1; MIFAREPlu;, MIFARESmartMX; my-d move; PayPass; MIFAREClassic EV1; MIFAREUltralight EV1; MIFAREUltralightC; NTAG2xx; HIDiCLASS
Registered department or user ID codes	Standard
Number	1,000 departments / 10,000 users

ACCESS CONTROL	
Restrict colour	NA
Control panel lock/disablement	Standard
Restrict access to address book	Standard
Restrict USB port	Standard
Restrict direct printing	Standard
Restrict other	Print, FAX, Scan, Auditor, e-Filing, AccountManager

HARD DRIVE	
Encryption	Standard
Maximum level	256-bit AES
Overwrite	Optional Data Overwrite Enabler
Method	Simple, Low, Medium, High
Maximum number after a job	15 times
Maximum number at end of lease	15 times
Lock	NA
Removable	NA
Password-protected mailboxes	Standard
Data auto-deletion in mailboxes	Standard

JOB TRACKING	
Job logs	Standard
Digital signature	No
Verify document came from device	NA
Verify document came from specific user	NA

JOB PROTECTION	
Encrypted secure print	Standard
Secure print	Standard
Encrypted scanning	Standard
Maximum level	AES128bit
For scan to USB	Yes
Unauthorised scan/copy protection block (watermark)	Standard/Optional
Compatible with same-brand devices	Yes
Compatible with third-party devices	No
NETWORK SECURITY/PROTOCOLS	
Protocol disablement	Standard
Port disablement	Standard
IP address filtering	Standard
MAC address filtering	Standard
HTTPS	Standard
Self-signed certificate	Yes
Certificate signing request	Yes
IPsec	Optional
IPv6	Standard
Secure Sockets Layer (SSL)	Standard (only available on TLS)
S/MIME encryption	No
SNMPv3 support	Standard
Transport Layer Security (TLS)	Standard
Trusted Platform Module (TPM)	No
CERTIFICATIONS	
Common Criteria	Yes
EAL level	EAL2+ with optional Data Overwrite Enabler
Capabilities certified	Entire security suite
FIPS 140-2	Yes
Level	CMVP (Level2)
IEEE 2600	Yes (IEEE2600.2)
OTHER	
Administrator password length	Up to 64 characters
Password-protected web server	By default
Additional features	Security Stamp; image log; Role-Based access control; Confidentiality Setting for user name, document name; Restriction of Destination Selection only by Local Address Book for Scan to Email; High Security Mode
Third-party features	PaperCut MF™; Nuance Equitrac; Nuance Autostore; Gespage; DocuWare

INA: The vendor declined to provide this information
NA: Not applicable

FEATURES

9.0

Higher-than-average memory allows for faster processing of jobs

Competitive hard drive capacity

Standard and maximum paper capacities are competitive and below average, respectively

The optional duplex single-pass document feeder supports an above average capacity of 300 sheets

Competitive bypass tray capacity

Media weight support via the trays and bypass is competitive for black output

A range of optional finishers allow for more complex output and brings the device in line with the colour engine e-STU-DIO5005AC series. The optional inner finisher has two trays (100/500 sheets), while the multi-position finisher has a 2,000-sheet tray and a 250-sheet stationery tray. An optional saddle-stitch finisher handles 3,250 sheets and features V-folding and saddle-stitching of up to 15 sheets to create 60-page booklets. Hole punching is available for each finisher. Offline stapling on demand for up to 50 sheets is supported on the multi-position stapler finisher. The paper feed-pedestal adds one 550-sheet drawer; an additional 550-sheet drawer or envelope feeder cassette can hold a stack of envelopes approximately 64 mm in height (in thickness), and this can be added to the paper-feed pedestal. A 2,000-sheet large capacity tray can handle letter/A4-sized paper, while banner-sized paper can be handled via the bypass tray. Note that finishing options are not available when printing with the blue erasable toner, with the exception of magazine sort, due to the necessity of preserving the optimum quality and condition of paper to be reused.

The system comes with embedded self-erase functionality which means customers no longer need to invest in a separate erasing unit, thereby saving on hardware costs and reducing its office footprint. The MFP can render content printed with erasable blue toner transparent so that paper can be reused over and over again. Toshiba says that paper printed with erasable blue toner can be reused up to five times, depending on the condition of the paper. An improved erasable blue toner, which is now darker, means legibility is enhanced.

The RD301 standalone unit is a supplemental option for environments in need of a high volume erasing solution but, unlike the MFP, it is not a full printing solution. Like the e-STUDIO3508LP, it renders content printed with erasable blue toner transparent so that paper can be reused on the MFP again, but at a faster rated speed of 30ppm versus 17.5ppm (for A4 from the MFP's paper tray). It has three operational modes: Erase, Erase and Sort, and Scan Erase Sort (SES). Erase Sort mode means the unit will erase and sort paper into reusable and non-reusable, with each selection placed into separate trays for easy identification. Sensitivity levels for sorting criteria can be adjusted via the embedded web utility. In theory, paper can be reused up to five times before feeding reliability is compromised, reducing consumable costs. Two paper drawers are included: a 400-sheet upper drawer for holding erased reusable paper and a 100-sheet lower drawer for holding rejected, non-reusable paper.

The RD301 unit is equipped with a 125-sheet-capacity ADF so that when operating in SES mode, documents are digitized and saved to either a USB flash drive or a network folder before being erased.

SPEED

6.5

PRINT SPEED

5.5

Productivity when printing single and multiple sets was by and large competitive. Job stream performance, which simulates usage in a real-world, multi-user environment, was slightly above average. Recovery times, however, were much slower than average.

Recovery Times (in Seconds)

	Tested Model	Competitive Average
Daytime Sleep	30.46	22.28
Energy Save	34.44	22.25
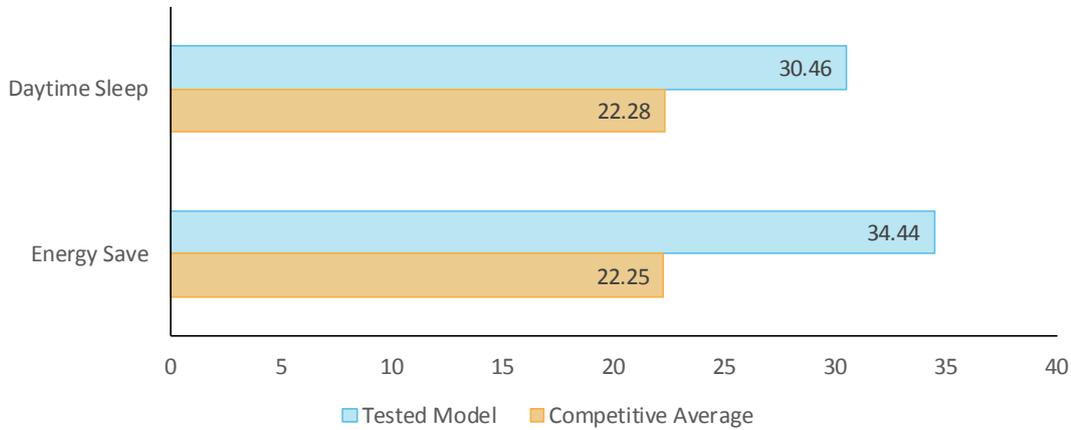
Recovery time in seconds indicates the time it took to warm up, process the image, and deliver a single-page test document to the output tray. The unit was tested with the PCL driver.

First-Page Print Time From Ready Mode by File Type (in Seconds)

	Tested Model	Competitive Average
Word DOC	9.87	8.54
PowerPoint PPT	9.95	9.11
Acrobat PDF	8.35	8.63
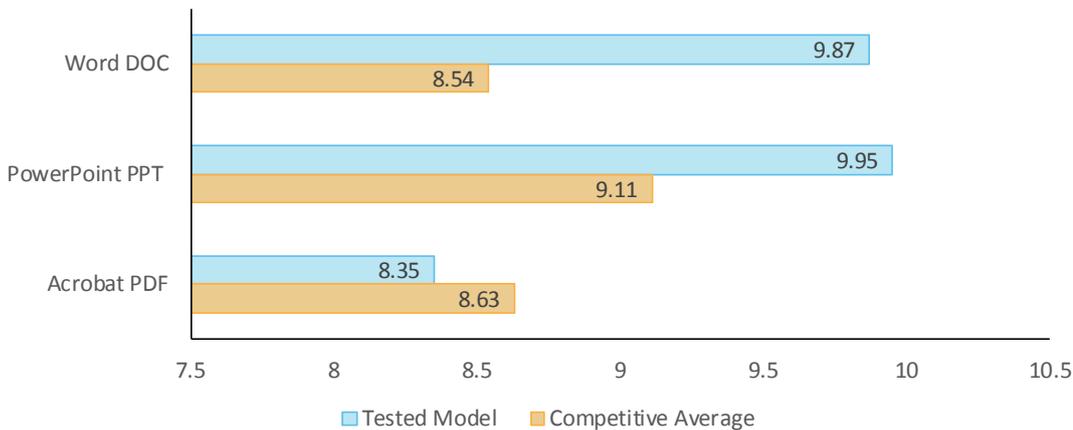
First-print time indicates the time it took to process the image and deliver a single-page test document to the output tray. The unit was tested using the PCL driver.

First-Set Print Speed (Single Set; in PPM)
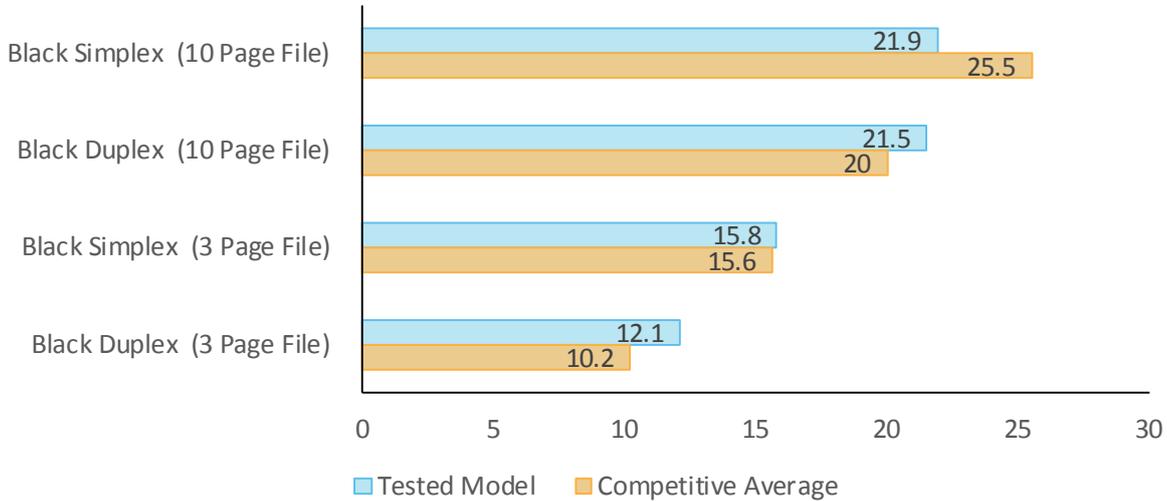
Single-set speed is tested using a BLI's proprietary 3-page and a 10-page testing document. The unit was tested using the universal PCL driver.

Job Stream Test
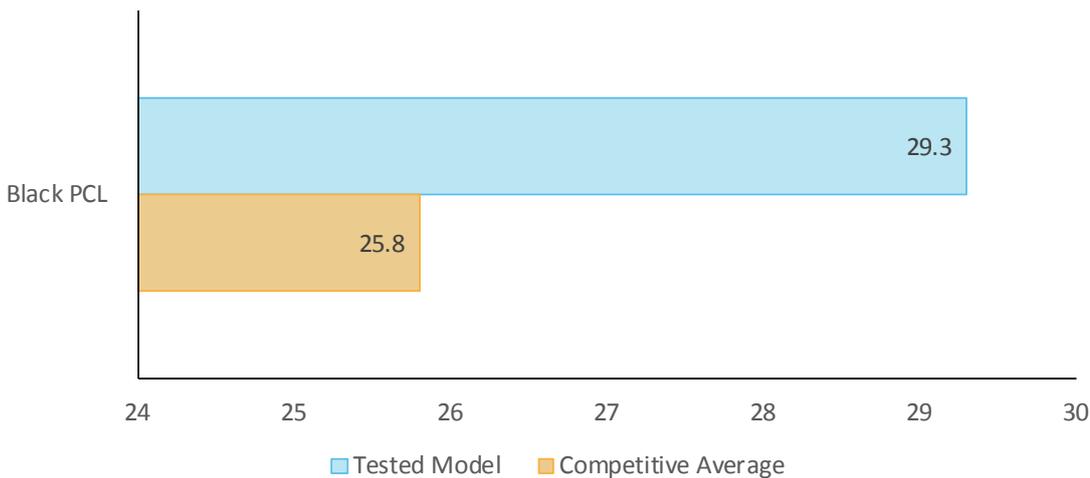
BLI's job stream includes Word documents, Outlook email messages, Excel spreadsheets, and PowerPoint, HTML, and Acrobat PDF files, totalling 19 pages. This test simulates the type of traffic a typical device might experience in a real-world, multi-user environment. All of the files are sent to the device as a group at which time the stopwatch begins; timing ends when the last page of the last file exits the device.

Average Print Speed (Multi-Set; in PPM)

Test	Tested Model	Competitive Average
Black Simplex (10 Page File)	30.2	32.4
Black Duplex (10 Page File)	29.2	29.6
Black Simplex (3 Page File)	27.2	27.3
Black Duplex (3 Page File)	17.1	17.3

■ Tested Model ■ Competitive Average
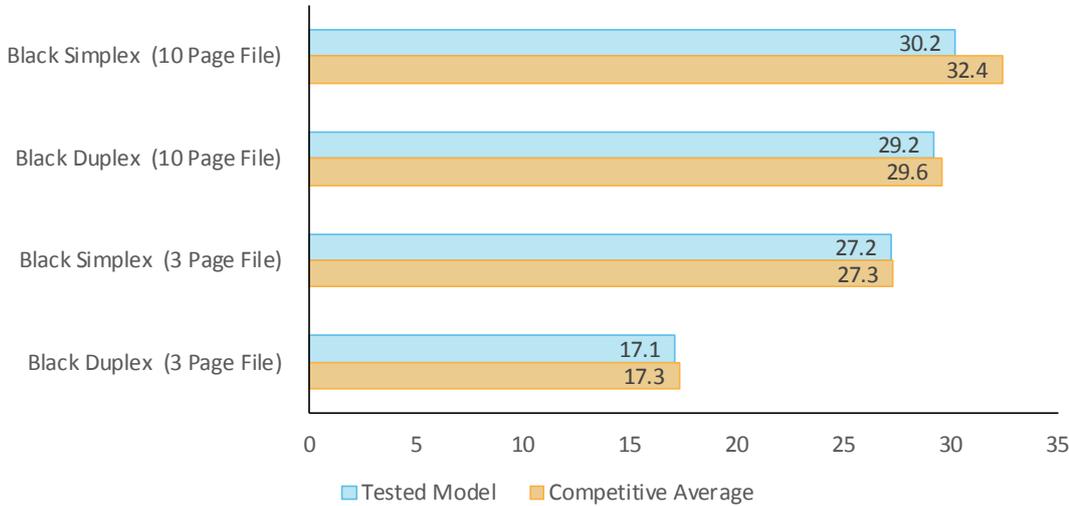
Speed is tested using BLI's proprietary 3-page and 10-page testing document. BLI obtains the overall speed by averaging the tested speed for each run length (1, 5, 10, and 20 sets). The unit was tested using the universal PCL driver.

SCAN SPEED

9.5

In BLI's scan tests, the unit was either the fastest or second fastest model in its class. Compressed colour file size was smaller than average. Compression is not available in black, but file size is still much smaller than the average of other non-compressed files.

Scan Speed (in IPM)

Test	Tested Model	Competitive Average
Full-Colour Simplex	87.1	66.8
Full-Colour Duplex	151.7	99.6
Black Simplex	86.8	65
Black Duplex	154	101.3

■ Tested Model ■ Competitive Average
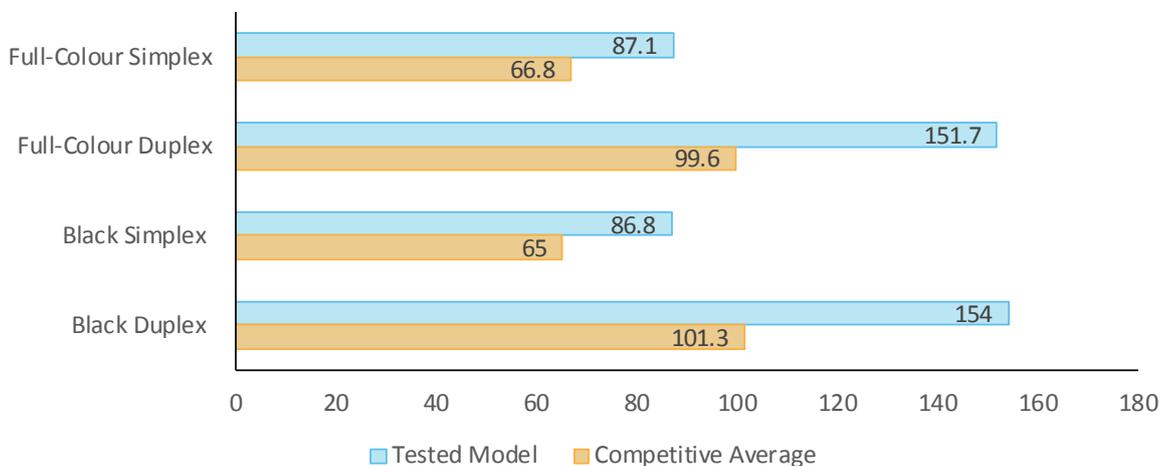
Testing is conducted with a 10-page file scanned in default mode at 300 dpi in PDF format.

Scan File Size (in KB)

	Tested Model	Competitive Average
Full-colour (Default Compression)	1,390	917
Full-colour (Best Compression)	101	346
Black (Default Compression)	33	62
Black (Best Compression)	NA	NA

Testing is conducted with single-page files scanned at 300 dpi in PDF format.

COPY SPEED

5.0

Copy productivity was by and large competitive for both short-run and long-run jobs in nearly every mode evaluated, as well as for first-copy times in black mode.

First-copy time is measured as the time it takes for a single copy to completely exit the device when a copy is made from an original placed in the document feeder and on the platen.

First-Copy Times (in Seconds)

Platen (Black): Tested Model 6.14, Competitive Average 5.76
Document Feeder (Black): Tested Model 7.16, Competitive Average 7.15

☐ Tested Model ☐ Competitive Average

Single-set copy speed is tested using BLI's proprietary 10-page testing document. Timing begins as the start button is pressed, pages are scanned through the document feeder and timing ends when the last page of a single-set of the document exits the device.

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Copy Speed (Single-Set; in CPM)
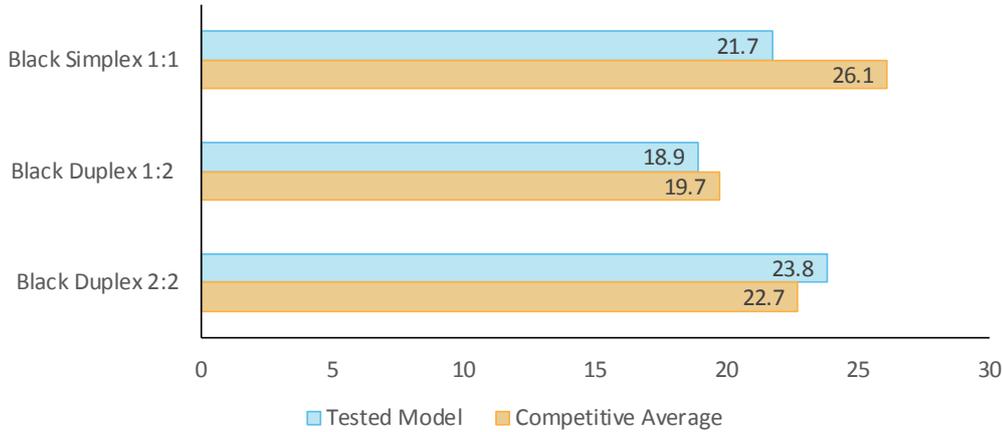
Single-set copy speed is tested using BLI's proprietary 10-page testing document. Timing begins as the start button is pressed, pages are scanned through the document feeder and timing ends when the last page of a single set of the document exits the device.
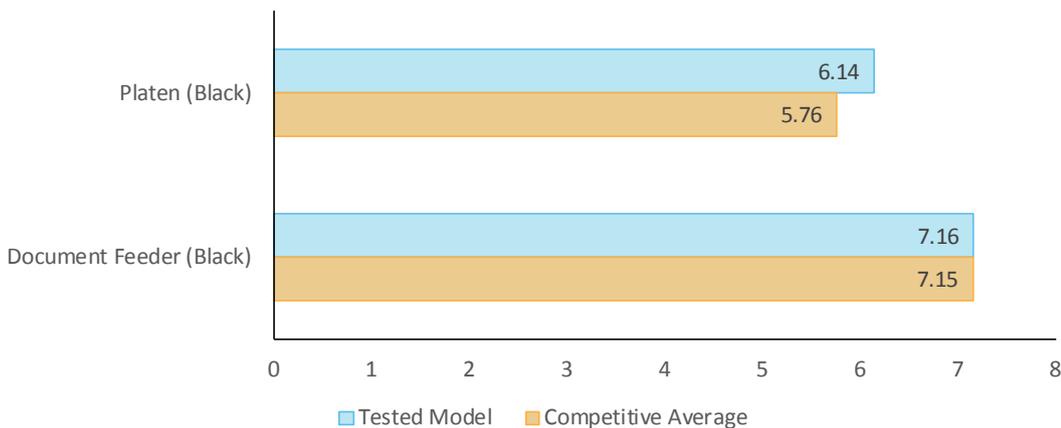
Average Copy Speed (Multi-Set; in CPM)
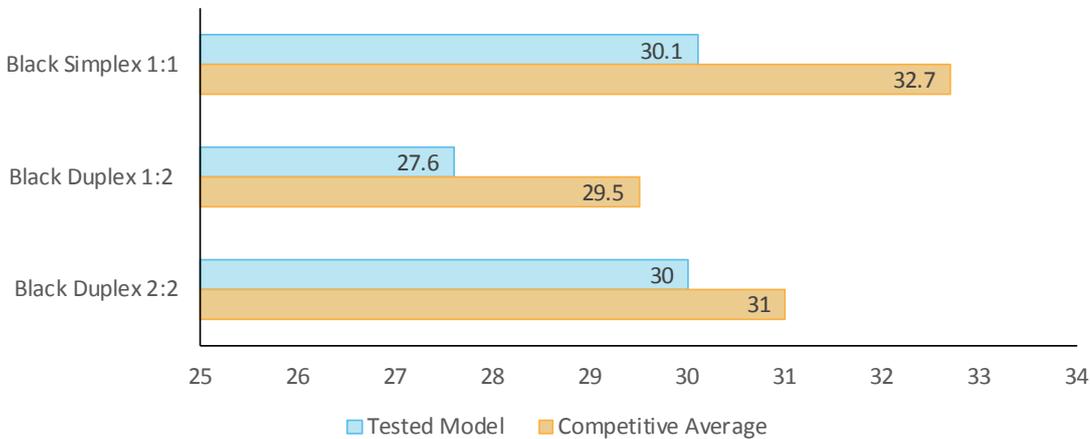
Copy speed is tested using BLI's proprietary 10-page testing document. BLI obtains the overall speed by averaging the tested speed for each run length (1, 5, 10 and 20 sets).

POWER CONSUMPTION

Projected Annual Energy Consumption (in kWh)

Total Annual Energy Consumed	94.6312
Competitive Average	88.5377

Calculations based on printing BLI's job stream test suite over a four-hour period, with the machine set to go into its energy-save and/or sleep modes at the shortest intervals possible. Total yearly energy consumption is calculated based on the total energy used during a typical workday, plus overnight and weekend sleep energy. Total number of pages run is based on a BLI survey of average monthly volumes by speed range.

Pages Printed: 174 total - Ten files (or one jobstream), comprising 29 pages, are submitted six times
Test Documents Used: DOC, XLS, PPT, HTML, PDF, Outlook email messages
Output Modes: 50% simplex, 50% duplex

Environmental Features

Specified capable of running recycled paper (30%/50%/100% post-consumer content)	Yes
Instant/Quick Fusing	Yes
Duplexing	Yes
Toner-save mode	Yes
RoHS compliant	Yes
Toner cartridge recycling program for this product	Yes
Ability to program features such as duplexing and auto shut-off over entire fleet	Yes
What tool can be used to do this?	Universal print driver, TopAccess, via User Interface
Eco-Label Certifications	
ENERGY STAR	Yes
Other	ECMA-370/The Eco Declaration, Germany Blue Angel, Japan Eco Mark, EPEAT Gold rated, China Energy Label (Nordic Swan Label, Singapore Green Label, Thai Green Label - all planned)

INA: The vendor declined to provide this information
NA: Not applicable

Supporting Test Data

Test Environment: This product was tested in BLI's environmentally controlled US test lab, which replicates typical office conditions.

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

Test Duration: A single product is tested for two months, five weeks of which consists of a durability test during which the product is run at its manufacturer-rated maximum monthly duty cycle, with 25 percent of the test volume comprised of copy jobs and 75 percent comprised of print jobs. BLI's daily test usage is designed to replicate real-world use over an eight-hour workday, and as such includes a mix of various-size documents, simplex and duplex modes, and a mix of short, moderate and long run lengths, and on/off cycles, throughout the day. The durability evaluation also includes testing of the document feeder/scanner in simplex and duplex modes for an additional 10 percent of the monthly maximum volume, evenly divided over the course of the test.

Tested Configuration: Toshiba e-STUDIO3508LP base unit (UK) plus saddle-stitch finisher.

Test Procedures: BLI's lab testing includes both BLI proprietary and industry-standard test procedures and documents. The reliability test is conducted using Georgia Pacific and Boise paper in the US, and UPM, Data Copy and Mondi paper in the UK. In both labs, 30 percent of the paper is recycled. The media used for image quality testing is Georgia Pacific Printing Paper (24 lb., 96 brightness) in the US and UPM Future ImageTech 100 gsm in the UK.

Competitive Average Model Group: The analysis in this report compares the tested device to a group of all other currently available like models (e.g., colour vs. colour, copied-based vs. copier-based) in the same speed range (5 ppm up and down from the speed of the tested device) with support for the same media size. For test performance categories, the results are compared with those of currently available tested models in the group, whereas for feature set and pricing, the comparison is made against all currently available models in the group, whether tested or not. The pricing analysis is for devices comparably configured with accessories and the most common options.

Note: This report is based on BLI testing one representative test sample at a specific point in time. BLI is not responsible for differences in performance that may be the result of lot-to-lot variation, changes in production and machine modifications implemented by the manufacturer, service issues or any other reason beyond BLI's control. Test unit serial #: CMEG10058.

About Buyers Laboratory: Buyers Laboratory (BLI) is the world's leading independent provider of analytical information and testing services to the document management industry. For over 50 years, buyers have relied on BLI to help them differentiate products' strengths and weaknesses and make the best purchasing decisions, while industry sales, marketing and product professionals have turned to BLI for insightful competitive intelligence and valued guidance on product development, competitive positioning and sales channel and marketing support. BLI also offers private, for-hire testing services that help manufacturers develop and market better products and consumables.

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CERTIFICATE OF RELIABILITY

Awarded to

TOSHIBA TEC CORPORATION

for the performance of the

Toshiba e-STUDIO3508LP

in BLI's in-house durability test

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RELIABILITY CERTIFIED
LAB TESTED

Gerry Stoia, CEO

OCTOBER 2017

DATE

This is to certify that when subjected to a 210,000 impression and 21,000 scan Buyers Lab durability test, the Toshiba e-STUDIO3508LP proved to be a highly reliable product.

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