



# BUYERS LABORATORY INC.

## Field Test Report

A Buyers Laboratory Document Imaging Device Assessment

**Toshiba e-STUDIO850**  
**85 PPM Segment 5 Monochrome Device**  
 Copy • Print • Fax • Scan



### Performance Ratings\*

Click ratings for details. Click ▲ to return to ratings.

Overall Rating.....	★★★★★
Value.....	★★★★★
Ease of Use.....	★★★★★
Copy Productivity.....	★★★★★
Print Productivity.....	★★★★★
Image Quality .....	★★★★★
Multitasking.....	Lab Test Report Only
Utilities.....	Lab Test Report Only
Reliability .....	Lab Test Report Only
Feedback to Workstations .....	Lab Test Report Only
Toner Yield/Costs per Page.....	Lab Test Report Only

\*Based upon a five-star rating system where five is the best.

*Suggested retail price:* \$35,995 base unit. (Complete specifications information for this unit, including pricing for accessories and options, is available through bliQ™, at [www.buyerslab.com/bliq](http://www.buyerslab.com/bliq).)

*Testing method:* The unit's copy/print capabilities were tested using a Windows 2000 workstation with a crossover cable, the e-BRIDGE controller and the PostScript 3 print driver (version 9.3). The crossover cable eliminates network traffic, allowing for optimal productivity of the unit.



### Comparative Analysis

Designed for large corporate departments and print-on-demand environments, the Toshiba e-STUDIO850 offers standard standalone copy functionality, as well as optional network print, scan, fax (available later this year) and Internet fax capabilities, for an exceptional price. As one of Toshiba's latest entries in the high-end digital copier market, this 85-page-per-minute (ppm) unit offers a number of improvements over its predecessor, including improved processor speed, image quality, security features, finishing capabilities and a new toner system. In addition, the e-STUDIO850 is one of Toshiba's first products to be offered with the eCopy Open Platform software, an excellent third-party scan solution that helps companies integrate paper documents into their business workflows. (BLI's *eCopy ScanStation OP v3.0 Solutions Report* is available via bliQ™.) The e-STUDIO850 also demonstrated overall copy and print productivity that is competitive for the group and a first-print time for the Adobe Photoshop TIFF file that is among the fastest.

The e-STUDIO850 is equipped with Toshiba's e-BRIDGE controller, an all-in-one controller architecture that ships with every unit, including those with only standalone copy functionality, and makes this unit "Internet ready, mobile wireless ready and solution ready," as advertised by Toshiba. It contains an IBM PowerPC 600 MHz processor, one of Toshiba's fastest. The e-BRIDGE controller is completely proprietary (including processor, board and memory), which no other manufacturer can claim, according to Toshiba.

For a copy of  
 BLI's upcoming  
 Toshiba  
 e-STUDIO850  
 Lab Test Report,  
 contact BLI at  
 (201) 488-0404  
[info@buyerslab.com](mailto:info@buyerslab.com)  
[www.buyerslab.com](http://www.buyerslab.com)





Because functionality is built into the controller, no additional hardware needs to be installed, making the process for adding print or scan capabilities easy and minimizing downtime. USB keys enable print only, scan only or combined print and scan functionality. According to Toshiba, the single-board architecture of the e-BRIDGE controller (an additional board is required for fax) helps reduce processing time because the system can process a job and prepare it for printing faster than it could if a separate controller had to feed the copier's processor, which prepares the job for printing.

### Advantages

- Good overall ease of use from the control panel. For example, the control panel is large and easy to read and navigate.
- The PostScript 3 and PCL 6 print drivers are identical in appearance and layout. Further, all of the selections required for a typical print job are available on the first tab of the print drivers, and advanced features such as Scheduled Print, Private Print, Proof Print and Store to e-Filing are available. PCL 6 and PostScript 3 are both standard with the optional e-BRIDGE controller.
- Very good overall ease of use in relation to loading paper and adding toner. For example, users can change toner while the device is running, as the cartridge is housed in a separate compartment.
- Built-in e-BRIDGE controller makes upgrading to a connected device simple with minimal downtime.
- The unit's job build functionality allows users to "build" a job that may have different settings, such as simplex copies that contain photos or duplex copies. The job build feature also enables users to copy documents that exceed the capacity of the document feeder.
- One of the highest finishing output capacities in the industry, including a stapling capacity of 100 sheets. Further, legal-size saddle-stitching is available.
- PM schedule and toner yield are among the highest for similarly equipped models available, leading to less service and user intervention, respectively.

### Shortcomings

- All of the selections required for programming a typical copy job are not available on the Basic tab of the control panel. Further, the control panel does not offer an adjustable tilt.
- No point-and-click interface or consumables feedback via the PostScript 3 or PCL 6 print drivers.
- More cumbersome procedures for adjusting paper size than in some other units BLI has tested.
- When a finisher is installed, the misfeeds are not dynamically displayed on the control panel's display. As a result, the user would not know if all misfeeds were removed and, therefore, would have to separate the finisher from the main unit, possibly several times, to clear all the misfeeds.
- More user intervention than some competitive models tested due to below-average standard (2,000 sheets) and maximum (6,100 sheets) paper capacities.





The e-STUDIO850 offers optional wireless capabilities, using the industry-standard 802.11g specification. This standard for wireless local area networks (WLANs) offers transmission speeds over relatively short distances at up to 54 Mbps, compared with the 11 Mbps with the earlier 802.11b standard. The user's wireless-enabled PC is able to communicate with the unit via a wireless access point on the network. The Bluetooth wireless capability is an industry specification for wireless personal area networks (PANs) that provides a way to connect and exchange information between devices like personal digital assistants (PDAs) and printers via secure, low-cost, globally available, short-range radio frequency. The Bluetooth interface on the e-STUDIO850 supports Hard Cable Replacement Protocol (HCRP), which eliminates the risks typically associated with wireless printing, according to Toshiba.

Toshiba claims that the e-STUDIO850's image quality is significantly improved over its predecessor because the unit uses Toshiba's new Serial Filter, which improves image quality by sharpening the definition of text and line art. The improved image quality is also attributable to a new 8-bit scanner unit, which replaces its predecessor's single-bit design. In addition, Toshiba claims that as paper proceeds on its path within the unit, its movement is slowed down when it goes through the drum assembly, thereby contributing to the improved image quality. Also, the e-STUDIO850 allows users to change the toner cartridge while the machine is running. BLI field test technicians found the unit's image quality to be competitive overall with some outstanding areas in copy mode.

As a member of Toshiba's new generation of devices, the e-STUDIO850 offers standard features such as e-Filing and templates. The unit's e-Filing capability allows users to scan, copy or print into electronic mailboxes, which can later be accessed by walk-up users or via PCs on the network. e-Filing also enables users to merge documents from various applications (Excel and PowerPoint, for example) into one file, which can then be exported as a PDF or TIFF file and sent as an e-mail attachment. The e-STUDIO850's 12,060 templates allow users to program commonly used job settings for future jobs, including finishing features, from the control panel and the print drivers.

The e-STUDIO850's security features help ensure that the unit safeguards potentially sensitive documents. For example, the optional Disk Data Overwrite feature overwrites all data on the device's hard disk drive (HDD) multiple times. Service technicians can deactivate e-Filing and scanning to the device's hard drive to meet the requirements of the Health Insurance Portability and Accountability Act (HIPAA). A Scrambler Board encrypts data with 128-bit encryption as it is written to the HDD.

In addition to the security features, the e-STUDIO850 offers tools to help administrators manage the device. The administrator can assign up to 1,000 Department Codes and 10,000 User Codes to limit access to the unit's functions. Also available for the e-STUDIO850 is a Notification feature, which enables the unit to send e-mails to either notify a dealer or administrator that service is required or to send meter counts to determine the costs for leasing the unit. The unit comes equipped with a network interface card (NIC) that enables administrators to send e-mails over the network for service purposes without requiring the optional network printing or scanning kits. Also, the e-STUDIO850 is a Windows Hardware Quality Lab (WHQL)—certified product. WHQL certification is required for those vendors who wish to use the "Designed for Windows" logo on their products. When administrators configure the unit for network printing in a Windows networking environment, for example, the certified drivers offered with the unit will prevent incompatibility issues with Windows operating systems.





Three finishing options are available for the e-STUDIO850: the Multi-Position Stapling Finisher (50-sheet stapling) and two Multi-Position Stapling Finishers with Saddle-Stitch (50- and 100-sheet stapling). The three finishers available for the e-STUDIO850 offer maximum 4,000-sheet stacking capacities (among the highest in the industry) and optional two- or three-hole punching. In addition to multi-position stapling and hole punching, both saddle-stitch finishers provide V-folding and saddle-stitching of up to 15 sheets to create 60-page booklets. Also, unlike previous Toshiba finishers, the two saddle-stitch finishers can produce legal-size booklets in addition to letter- and ledger-size booklets. The unit is also equipped with a post-sheet inserter, which allows users to insert pre-printed color covers or inserts into documents. According to Toshiba, the unit can automatically invert back covers drawn from the post-sheet inserter. In addition, the PostScript 3 drivers that are available with the unit provide users support for pre-imposed booklets. Within the Setup tab of the print driver, users choose from the Staple drop-down menu the Center Double option, and from the 2-Sided Printing drop-down menu the Book option.

Toshiba also offers five service modules (drum, developer, transfer belt, charge corona wire and fuser unit) for this unit, which are replaced by a service technician when preventive maintenance is performed. This is beneficial for users because it results in less downtime, as spent modules can be replaced easily. In addition, the modules guarantee a level of service that is universal throughout Toshiba's dealer channels. Although the unit's drum life is below average (600,000 impressions), it coincides with the above-average PM schedule and developer yield (600,000 impressions each), thus more service intervention is not necessarily required.

### ▲ Value Analysis (★★★★)

The e-STUDIO850, configured as a copier/printer with PostScript 3 printing, saddle-stitch finishing and a reversing automatic document feeder (RADF), has a suggested retail price (SRP) that is among the lowest for competitive models available. In addition to performing well during the field test, the unit offers the highest preventive maintenance schedule (600,000 impressions) for the group, as well as a competitive toner yield (60,100 impressions), document feeder capacity (100 sheets) and bypass tray capacity (100 sheets). BLI rates value by evaluating a unit's SRP in relation to its overall performance, paper handling, and user and service intervention (see Advantages/Shortcomings).

### ▲ Summary

Because of its excellent price point and copy quality, as well as its competitive overall copy and print productivity and good ease of use, BLI gives the e-STUDIO850 an overall Field Tested Rating\*\* **Four Stars**.

*\*\*Note: The data presented in this Field Test Report was obtained from testing performed by BLI outside of our 10,000 sq. ft. test lab. BLI's Lab Test Reports contain the results of BLI's extensive in-house testing for reliability, multitasking, toner yield/cost per page and performance of additional functions and on additional platforms. Please contact BLI (phone 201-488-0404, or e-mail [info@buyerslab.com](mailto:info@buyerslab.com)) for information regarding when the Lab Test Report for this product will be available.*

(This report has been reprinted with the written permission of Buyers Laboratory Inc.)

