Lab Test Report

A Comprehensive BLI Laboratory Evaluation | JUNE 2014

Sharp MX-M264N*

26 PPM Monochrome
Copier • Printer • Scanner • Fax

Reliability	Excellent
Multitasking	Very Good
Administrative Utilities	Good
Feedback to Workstations	Very Good
Ease of Network Setup	Good
Print Drivers	Very Good
Scan Functions	Good
Print/Copy Quality	Good
Print/Copy Productivity	Good
Ease of Use	Very Good
Feature Set	Good
Security Features	Excellent
Accessibility Features	Not Rated
Environmental Features	Not Rated
Toner Yield	Fair
Value	Good

BLI RECOMMENDATION

Geared to small and medium-size workgroups, the Sharp MX-M264N proved to be a good overall performer in BLI's tests. Based on an engine that proved highly reliable in lab testing, with just four misfeeds and no service required over 100,000 impressions, the 26-ppm monochrome device also earned high marks for its ease of use and drivers, as well as its multitasking and feedback to users at their workstations. Aiding ease of use is its full-color touch-screen display, and the unique and very useful MySharp training Web site, which is customized to the customer's specific configuration. Productivity was competitive overall. Sporting a distinctive design that includes a textured exterior and rounded corners, the device features Sharp OSA (Open Systems Architecture) Technology so that it can be configured to integrate with customers' document management and other types of applications to automate workflow. This competitively priced model also offers a good feature set. BLI recommends the Sharp MX-M264N for environments with monthly volumes of 7,000 impressions.

Test duration: Two months, including a 100,000-impression durability test.

Maximum monthly duty cycle: 100,000 impressions.[1]

Average optimum volume for models in this speed range: Up to 7,000 impressions.[2]

***Reliability, scan, image quality and toner yield results are based on the performance of the Sharp MX-M354N, which uses the same engine.**

[1] The manufacturer's maximum monthly duty cycle is the maximum volume, as specified by the vendor, that the unit is capable of producing in a month; however, it isn't recommended that the unit be run at this volume on a regular basis.

[2] Based on a survey conducted by BLI. When comparing models, note that this optimum volume was instituted in May 2012. Optimum monthly volumes for models tested prior to May 2012 may be higher or lower.

STRENGTHS

- Highly reliable
- Fast first-copy time from the platen
- Print from/scan to USB; standard encrypted printing
- Intuitive print drivers with paper gauge; pop-up error and job-status notifications, as well as icon alerts, notify users of error conditions
- Sharp OSA® enables integration with document management and other applications
- Access to MySharp customized training and support Web site
- Large, full-color touch screen can be customized so that the most commonly used features can be placed on the main screen
- Remote Device Manager's remote front panel feature allows administrators and users to view and control machine operations from a PC workstation
- Smaller than average file size for monochrome documents scanned with compression

WEAKNESSES

- Fair rating for halftone range in print mode
- Below average maximum paper capacity
- Below average paper weights accommodated through the drawers
- Larger than average scan file size for color documents scanned with compression
- No searchable PDF mode
- Low toner yield; tested yield did not meet rated yield
- Below average developer and drum yields
- No reminder for routine maintenance provided on the touch screen when waste toner tank is replaced, such as to clean the main charger for the imaging unit
- The need to manually confirm configured accessories adds 16 click counts for each driver

TEST RESULTS AND OBSERVATIONS

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

RELIABILITY — EXCELLENT

+ The Sharp MX-M264N is based on an engine which, during BLI's two-month, 100,000-impression durability test, experienced just four misfeeds and did not require any service calls.

— Drum and developer yields are lower than average.

MULTITASKING — VERY GOOD

+ The number of copy jobs that can be programmed ahead while another copy job is in progress is limited only by memory capacity.

+ Unlike with most devices tested, users do not have to press a key to program a copy job while one is already in progress.

○ Although there is no delay when running similar types of jobs, when switching from a copy to a print job, there is a delay of approximately 10 seconds.

— The next copy or scan job cannot be programmed ahead while the originals of the current copy or scan job are still being scanned.

+ Print jobs can be downloaded to the device from the network even when the device has experienced a misfeed.

○ The Interrupt key on the display can be used to interrupt either copy or print jobs to perform an immediate copy job. During testing, the device stopped in the middle of the set and after the interrupt job was complete automatically returned to non-interrupted mode almost immediately for a copy or a print job and restarted the job that was interrupted without user intervention.

+ The unit took a total of 43.85 seconds to download 15 print jobs from the print queue.

○ Jobs are handled in the order in which they are received by default. A priority mode cannot be set. In addition, jobs can be moved up in the queue using the Priority key.

ADMINISTRATIVE UTILITIES

GOOD

+ Sharp's administrative utility suite includes Sharp Remote Device Manager (formerly Printer Administration Utility), Printer Status Monitor and Web-based management via the MX-M264N's Web page. Remote Device Manager, a free download from Sharp's Web site, enables IT managers to install, configure and monitor multiple networked printers from their desktops regardless of brand, as long as they are SNMP-compliant.

+ The Web page enables administrators to program destinations, set up LDAP settings and edit device settings from their Web browser, as well as access information regarding status, meter count, configuration and management. Users can also program destinations for documents remotely through this utility.

Main page of the Web utility

+ Additional notable features of the Web utility include the capability for an administrator to test SMTP and LDAP connections to verify that correct configuration information has been entered and determine the amount of hard drive space used and available (in percentages), as well as add customized links to outside Web sites (for a local Sharp dealer, for example) to the utility's toolbar.

+ When auditing mode is enabled, a count is kept of the number of pages output by each account. Electronic counters also track copy, print, scan, document feeder, total, staple and duplex usage. Account details can be viewed from the Web utility and at the control panel, and they can also be printed and exported. Up to 1,000 accounts can be established.

+ The job log, which is among the best that BLI has seen to date, provides extensive information, including number of output pages, jobs completed and user name and job ID. The log can be customized and exported in CSV format. However, this information can only be accessed by the administrator. In addition, no status information is provided for current jobs.

+ Each user can be assigned to up to eight different groups, which can restrict usage by type of job that can be performed (for example, just monochrome copy and print, or copy, print, scan and fax to all or only certain types of destinations) or by page limits.

+ The Web utility supports direct printing of PCL, TIFF and JPEG files stored on the device or the network. With the PostScript option, direct printing of PDF and PostScript files is also supported. The optional XPS kit enables direct printing of XPS files. Direct printing of files is also possible via a USB memory device inserted into the MX-M354N's USB port.

+ E-mail alerts for certain error conditions, maintenance and meter read information can be sent to up to three destinations (for example, one or more administrators, as well as an outside Sharp dealer). However, different alerts cannot be specified for different recipients.

+ Administrators can clone device settings from one MX-M264N to others in the organization via the Web utility.

+ The Remote Device Manager's remote front panel feature allows administrators and users to view and control machine operations from a PC workstation.

+ Dealers can remotely upgrade firmware.

△ FEEDBACK TO WORKSTATIONS — VERY GOOD

+ Paper supply information (in 33% increments) is available directly from the print drivers, on the Web page and in Printer Status Monitor, which can monitor multiple Sharp devices and multiple drivers. Pop-ups appear in one window but do not automatically dissolve.

+ Users can also receive pop-up status messages for print and scan (when scanning to a workstation with Sharpdesk installed) jobs, including pop-up job completion notification and error messages.

+ Icon alerts on the taskbar, as well as audible alerts, can be enabled to notify users of error conditions before sending jobs.

+ Status information is also available by opening Printer Status Monitor, Remote Device Manager and/or the Web page.

+ Toner status in 25 percent increments is provided from the Web page and Printer Status Monitor.

○ If service maintenance is required and the user sends a print job, a maintenance pop-up appears; the message disappears once maintenance has been completed.

△ EASE OF NETWORK SETUP — GOOD

+ Network configuration settings can be programmed from both the control panel and the Web utility.

+ Installation of the drivers is simple. The CD, which contains all the drivers, does not auto-launch upon insertion into the drive, but a setup.exe file is situated at the bottom of the list of files, where it is easily found. When selected, it launches an easy-to-follow menu-driven installation routine. The port is created automatically during installation of the drivers.

○ All the drivers may be installed using the standard installation. Using the standard installation to install the PCL 6 and PostScript drivers required 10 clicks of the mouse. Unlike with some competitive machines, the drivers cannot be renamed during the installation, although they are clearly named from install.

— Configured accessories are automatically detected, though the administrator must manually confirm each, which adds 16 clicks to the process for each driver. In addition, users are not even provided with access to the configured accessories screen from the installer.

— Because the device does not support a multi-device installer, operators cannot install more than one device at the same time.

○ The Status Monitor utility, which is contained on the drivers CD, must be installed separately.

+ A custom installation allows setup of SSL (Secure Sockets Layer) encryption for printing to the unit.

△▽ PRINT DRIVERS — VERY GOOD

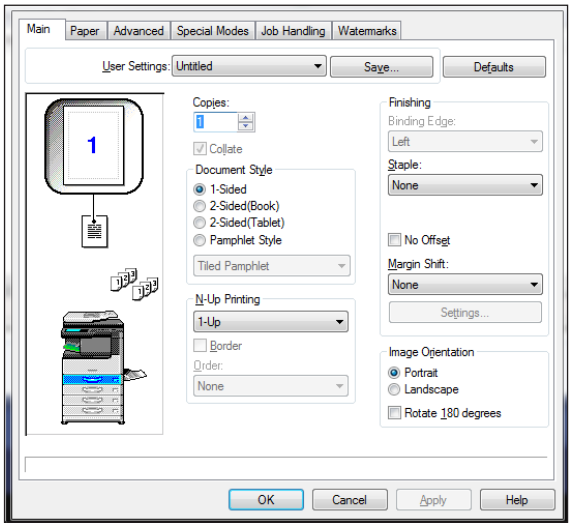
○ The MX-M264N ships with PCL 6; a PostScript driver is available as an option. The drivers support various Windows and Mac operating systems, as well as Linux and UNIX.

+ Also included is a full PPD driver, which is unusual. It's beneficial because rather than a user having to navigate the CD for the correct PPD for each particular application that may require use of a PPD and storing it in a specific location, a process that can require many mouse clicks, the PPD driver can be loaded on users' PCs and simply selected whenever such an application is used.

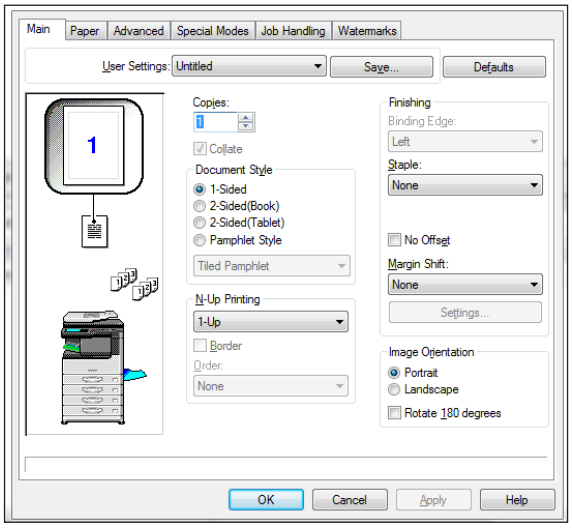
+ All of the features used for typical print jobs, including number of copies, simplex/duplex, pamphlet, N-up, finishing options and imaging orientation, are accessible on the main screen, eliminating the need to navigate many tabs.

○ The printer expansion kit option adds such features as pamphlet print, tandem print, carbon copy mode, tab printing and interleave.

+ The layout of the drivers is similar for PCL and PostScript, which makes use easier for those who switch between them.



PostScript Driver Main Tab



PCL Driver Main Tab

+ The well-designed drivers are graphical, enabling point-and-click selection of paper drawers.

+ Clicking on one of the drawers on the graphical representation of the device shows the size and type of paper loaded in that drawer. Clicking on the Tray Status button shows real-time paper-supply status (in 33% increments) for all the configured drawers.

+ Other driver features include the ability to save the settings for frequently used jobs; secure print; proof print; poster print; recycled paper mode; watermarks; and the ability to select stock from up to five paper sources for a single job.

+ Users can program exception page programming tasks, including incorporating simplex/duplex, media type, paper size and front and back covers. All five media sources are available. In addition, these settings can be saved. BLI technicians noted that the editing capability of this feature requires more steps than with other devices tested. For example, users cannot select a range of pages but rather must select each page individually.

○ Exception programming does not support subset finishing or image quality adjustments.

+ The drivers' Advanced tab lets users select print mode, enable graphics mode (PCL only) and bitmap compression, designate overlays and set parameters for printing on tab paper.

+ The unit offers simultaneous RIP and print, with printing beginning while pages are still being processed.

+ File size remained the same when printing sets of a multiple page document, regardless of whether “collate” was selected from the properties screen of the driver or from the print screen within an application.

○ The drivers are Microsoft certified.

+ Users can release secure print jobs while the device is printing and copying (although users must wait for the document feeder to finish scanning originals) but not while scanning. Although multiple secure print jobs cannot be released simultaneously, users can change settings, such as simplex/duplex and number of sets, prior to releasing jobs, which is uncommon. If a user enters a four-digit PIN number to access a secure print job, a message, “Check Password,” appears but does not explain that a minimum of five digits is required.

○ As with most models, while secure print jobs cannot be printed unless a PIN is entered, they are in plain sight within the queue so care should be taken in naming files. After a job is released, users can delete jobs without entry of a passcode.

○ Users can print directly from a USB device. File types supported include PDF, TIFF and JPEG and users can specify duplex printing but not finishing features or paper source. When users plug the device into the port, the window does not automatically open, unlike with some other devices tested. Users cannot print multiple files.

SCAN FUNCTIONS

GOOD

+ The MX-M264N includes a 600-dpi color scanner that is capable of scanning in monochrome to TIFF, PDF, XPS, encrypted PDF and PDF/A formats; and in color to TIFF, JPG, PDF, XPS, encrypted PDF and PDF/A formats.

+ As for scan destinations, the MX-M264N comes standard with Sharp’s very easy-to-use ImageSEND function, which enables users to scan to the device’s hard drive, e-mail, network folders (SMB), FTP servers, a PC attached to the network, and an attached USB memory device standard. Optional scan-destination support includes scan to Internet fax and scan to Super G3 fax.

+ The device’s Send to Group mode enables users to send a broadcast to a mixed group of different types of destinations (such as e-mail addresses, fax numbers and Internet faxes) in a single operation. Many competing models have separate keys for various types of sending operations, which creates duplicate work for users who need to send a single job to multiple types of destinations.

+ The MX-M264N enables users to access destinations on up to five LDAP servers from the control panel. The device also supports Sharp’s Unique File Naming feature, which lets users enter and store specific file names with custom subject fields for easy recall for subsequent jobs.

+ The unit's on-screen keyboard features small but comfortably spaced keys, which makes it fairly easy to enter scan destinations manually. There is a dedicated "@" key for use in e-mail addresses, as well as suffixes such as ".com" and ".net". An optional keyboard is supported to further simplify the process of entering e-mail destinations.

+ A one-user license for Sharpdesk is standard. Sharpdesk features include Receive (receive, open and save scans); Manage (store, organize and manage documents from a PC desktop using an intuitive thumbnail image display); Search (retrieve electronic files using search and index capabilities); Output (drag-and-drop print, fax, e-mail and applications access); View (view files in more than 200 file types in native formats); Compose (combine files created in different applications into a single document); and OCR (convert hard copy documents, images and PDF files into searchable, editable format). Additional Sharpdesk licenses are available as options.

○ Compared with other devices BLI has tested in its speed class, the MX-M264N's speeds for scanning were competitive in color and black simplex and duplex modes.

+ The MX-M264N's tested scan file size for monochrome documents (with compression) was smaller than the average for devices tested to date.

— Scan file size for color documents when tested in compact PDF mode is larger than that of most models tested.

○ Sending a 300-dpi PDF scan job to one e-mail destination via an LDAP search required 13 keystrokes. Sending to two e-mail destinations increased the number of keystrokes to 15.

+ LDAP destinations can be programmed via the Web utility.

— When an e-mail address is entered incorrectly when scanning a document, scan status information at the control panel erroneously indicates scans have been sent.

+ Users can preview a scan job at the control panel before sending.

+ Additional scan features include mixed-size originals and edge erase. Background suppression and blank-page removal are also supported.

+ The MX-M264N supports Sharp OSA (Open Systems Architecture) Technology, which lets businesses automate tasks with seamless integration between the device and network applications accessed directly from the control panel. When equipped with the optional application communication module, the unit can communicate with various document management applications. This capability is bidirectional; documents can be scanned from a Sharp MFP to a document management application along with index fields, and users are able to pull data from a network-connected PC to the MFP.

+ Users can scan to USB in PDF, PDF/A, encrypted PDF, TIFF, XPS and JPEG (color only) file formats. The USB port is conveniently located at the front of the device. The menu is not automatically populated when a USB device is inserted into the unit, requiring users

to navigate through several menus to locate the USB printing capabilities. Users can browse into subfolders.

— The unit does not support a compact or searchable PDF mode, which would make it easier for users to locate needed information in scanned documents.

PRINT/COPY QUALITY

GOOD

○ Text in print mode was rated good overall. It was rated above average for sharpness and average for darkness, smoothness and fully formed characters. No toner overspray was visible, even when output was viewed under magnification.

+ Line art in print mode was rated very good overall, with an above average rating for consistency of line thickness, separation of closely spaced fine lines and fully formed circles. Again, no toner overspray was visible, even when output was viewed under magnification.

○ Halftone pattern in print mode was rated good, with average smoothness and minimal banding.

— Halftone range in print mode, which was rated fair, was visible from 10% (the minimum coverage level on the original) to 100%, with distinct separation between most levels. BLI technicians observed a shadow on the lead edge of all images evaluated, particularly halftone images and fine lines, which affected the overall image quality in copy and print modes.

○ Solids in print mode, which were good overall, were rated average for consistency of coverage and darkness.

○ Text and line art in copy mode were good overall, with no toner overspray. Text was rated above average for smoothness of curves and serifs and average for darkness, sharpness and fully formed characters. Line art exhibited an above average amount of stair-stepping in diagonal lines; output was also rated average for the separation of closely spaced fine lines and consistency of line thickness.

○ Copied halftones were visible from 29% (15% is the minimum coverage level on the original) to 100%, with distinct separation between most levels. Halftone output displayed minimal banding and was rated average for smoothness.

○ Solids in copy mode were rated good; darkness and consistency of coverage were average.

PRINT/COPY PRODUCTIVITY

GOOD

○ When using the PCL driver to print BLI's job stream, the device's productivity was competitive with the group.

○ Tested speed is competitive with the group when printing BLI's job stream with the PostScript driver, while efficiency (percentage of rated speed at which it ran) was below average.

○ When printing sets in simplex and duplex modes, the device's productivity was competitive with the group.

○ When copying sets, productivity was competitive with the group in all modes tested.

\+ First-copy time was the fastest of the group from the platen, and competitive from the document feeder.

EASE OF USE

VERY GOOD

\+ The MX-M264N's control panel features a full-color touch screen that provides ample room for menu choices.

Sharp MX-M264N control panel

— While the screen is large, BLI technicians noted some shortcomings. The screen does not pivot or tilt to accommodate a user in a wheelchair. Also, the brightness icon in the lower right corner of the touch screen seems mis-programmed: Pressing the "+" key makes the display darker, while pressing the "-" key makes it brighter.

\+ The control panel also features dedicated Home, System Settings and Job Status keys, as well as a numeric keypad. Although there is no Help key, users are prompted to select the "I" (Information) key that appears on the display when there is a misfeed, for example.

+ The main screen of the user interface shows paper-supply information for the configured drawers.

+ Though not all of the features (such as duplex, finishing, exposure, paper drawers and reduction and enlargement) required for typical copy jobs can be programmed from the main screen, they are selectable from the main screen and, when selected, bring the user to another screen where the settings can be programmed. The keys are well-labeled and BLI technicians found the menu system easy to navigate.

+ The touch screen can be customized so that the most commonly used features can be placed on the main screen, including three for copy, three for scan and three for the USB memory device.

+ Users can be assigned to any of up to eight groups, which could each have different features/functions selectable from the main screen of the control panel.

+ The MX-M264N's sub-menus include several time-saving shortcuts for users. For example, pressing the Exposure button not only presents buttons to increase/decrease the exposure level, but also presets based on the type of document being printed (text, text and photo, printed photo, photo, map and light original). Similarly, the Copy Ratio button allows the user to set a zoom level (from 25% to 400%, in 1% increments) or, more conveniently, choose from several preset size conversions, such as from 11" x 17" to 8.5" x 11" (which is equal to 64% reduction) and 8.5" x 11" to 11" x 17" (129% enlargement).

+ Pressing and holding the Copy tab on the touch screen brings up a screen showing device statistics, such as the total number of pages produced to date and the approximate amount of toner remaining.

+ Device statistic information is also accessible from a menu option available via the System Settings key; accessing it this way allows the user to print the data, and the printout includes the device's serial number.

○ By default, the Proof Copy key is located on a sub-menu, requiring three presses to access, which is an inconvenience given that the purpose of the key is to quickly make one set to check for accuracy and then proceed with the job. However, the Proof Copy key can be added as a Favorite so that it appears on the main copy screen.

+ Scanning to an attached USB memory device is easy, with self-explanatory menu choices and directions available under the USB Memory Scan menu choice on the Image Send tab.

○ With USB memory devices inserted in the MFP's USB port, walk-up users can print XPS, TIFF and PDF files in monochrome and grayscale modes.

— Users can program a copy job while the machine is warming up after being in sleep mode, but jobs can't be initiated (i.e., the start key can't be pressed) until the device is fully warmed up, which takes about 20 seconds. Other devices allow users to begin programming and scanning jobs even if the engine is not ready to go.

○ The job build function was simple to use, but it simply allows for the feeding of an original that exceeds the document feeder capacity in batches. It does not allow for different sections of a job to have different features or use different paper sizes or sources.

○ Pressing the Job Status key presents a list of the jobs currently in the queue and their status. The Detail button on the touch screen shows job information, such as the number of pages and the user who sent it. The Priority key lets a walk-up user move a pending job to the top of the queue.

+ Loading paper into the drawers is easy. The drawers are user-adjustable with length and width guides that slide. While the standard drawer does not automatically detect changes in paper size, requiring users to change the paper size at the control panel, the other drawers automatically detect paper size.

+ Toner cartridges are accessible from the front and slide out easily. The large waste toner container is also very easy to replace. Instructions explaining the toner-changing procedures are provided on the box.

+ Graphical help indicating the location of misfeeds, along with text instructions, is accessible on the control panel display by pressing the "I" key. The user presses the Next key to view more instructions.

+ Customers have access to MySharp, a unique and very useful training Web site customized to the customer's specific configuration, which enables end users to access information on how to use certain features at any time.

△ FEATURE SET

GOOD

— While the unit's standard paper capacity (1,000 sheets) is competitive, its maximum paper capacity (2,100 sheets) is below average for the group.

○ The unit's bypass tray capacity of 100 sheets is competitive.

○ The unit's non-upgradable memory capacity of 2 GB is above average and competitive, respectively, when compared with the standard and maximum memory capacities of the group.

○ The 160-GB capacity of the unit's optional hard drive is competitive with the standard and maximum hard drive capacities of competitive models.

— While the paper weights that can be accommodated through the bypass (110-lb. index) and document feeder (34-lb. bond) are competitive, paper weight that can be accommodated through the drawers (28-lb. bond) is below average.

○ The unit's standard reversing automatic document feeder has a capacity that, at 100 sheets, is competitive for models in this range.

+ The MX-M264N offers card shot, which makes it easy to copy both sides of an ID card onto a single page.

○ Finishing options include an inner finisher with one 500-sheet tray that can staple up to 50 sheets in one position.

○ Optional fax features include a 33.6-Kbps modem with up to JBIG compression, up to 1 GB of dedicated fax memory, battery backup, mailboxes, smoothing, timers, broadcasting to 500 destinations, 1,000 speed-dial destinations and inbound routing to e-mail.

+ The Application Communication Module (MX-AMX2) is a general license for document management applications that makes the device "OSA®-ready." This module enables users to integrate their document management solutions with the MX-M264N.

+ The Application Integration Module (MX-AMX1) enables users to add information fields to index scanned documents from the device control panel. The documents and indexed information are then routed to an integrated application on the user's network.

+ The unit features a front-mounted USB port for convenient printing from and scanning to USB memory devices.

+ The MX-M264N's copy features include mixed-size original copying, mirror image, image centering, proof copy, edge erase, stamping, 1,000 copy control codes and tandem copy, which enables output to two devices simultaneously, effectively doubling throughput speed.

△ SECURITY FEATURES

EXCELLENT

Security Features	
Administrator password length (characters)	5 to 32
Authentication	
Network user authentication	Yes
Windows	Yes
Novell NetWare NDPS	No
LDAP authentication	Yes
Kerberos protocol support	Yes
Authentication via department or user ID codes that are registered on the machine	Yes
Number of codes	1,000
Restrict usage of color	Yes
Restrict usage of other features	Yes
802.1x wireless authentication	Yes
Authenticated printing	Standard
Common Criteria Certification	Yes, EAL3
Control panel lock/disablement	Yes

Security Features	
Digital user signature	Yes
Encrypted PDF mode/encrypted scanning	Standard
Encrypted secure print	Standard
Hard drive encryption	Standard
Hard drive lock	INA
Hard drive overwrite	Standard
Max number of overwrites after every job	7
Overwrite method	0s and 1s
IP address filtering	Yes
IPsec	Yes
Job logs (e.g., activity monitoring, compliance auditing)	Yes
MAC address filtering	Yes
Password-protected mailboxes	Yes
Password-protected Web page	Yes
Port disablement	Yes
Protocol disablement	Yes
Removable hard drive	No
Secure fax	
Encrypted TX/RX	Yes
Fax forwarding	Yes
Fax line access prevention	Yes
Fax memory lock	Yes
Confidential mailbox	Yes
Secure print	Yes
Secure Sockets Layer (SSL)	Yes
SNMPv3 support	Yes
Third-party security features	Equitrac and Sharp OSA® Partners
Transport layer security	Yes
Unauthorized copy prevention (secure watermark)	Standard
USB block	Standard
Additional security features	256-bit data encryption; end of lease feature; job log data

△ ACCESSIBILITY FEATURES

NOT RATED

Accessibility handle	Standard
Braille label kit	Optional (no cost to user)
Enlarged display mode	Yes
Remote operator software	Yes
Tilting control panel	No
Voice guidance (audible instructions)	No
Voice operation (responds to voice commands)	No

ENVIRONMENTAL FEATURES

NOT RATED

Specified capable of running 30% post-consumer recycled paper	Yes
Specified capable of running 50% post-consumer recycled paper	Yes
Specified capable of running100% post-consumer recycled paper	Yes
Instant/Quick Fusing	Yes
Duplexing	Yes
Toner-save mode	Yes
RoHS-compliant	Yes
Percent of product made from recycled materials (%)	INA
Percent of product made from post-consumer materials (%)	INA
Percent of product made from pre-consumer materials (%)	INA
Percent of product made from bio-based materials(%)	Yes, amount not available
Product designed for recycling (easily disassembled, no binding agents)	Yes
Please list types of items that can be recycled.	Plastic frame components, covers, toner and developer system components, fuser components, steel frame, glass
Hardware remanufacturing program for this product	INA
Toner cartridge recycling program for this product	Yes
Pre-paid label for return of toner cartridges/bottles for this unit	Yes
Toner recycling system	INA
Ability to program features such as duplexing and auto shut-off, over entire fleet	Yes
What tool can be used to do this?	INA
Green packaging materials for the product	Yes
Green packaging materials for its consumables	Yes
Packaging materials used:	Cardboard, polyethylene bag
Typically, who is responsible for getting rid of packaging materials after products are shipped to the customer location (e.g., customers, dealers, shippers)?	Dealers and shippers
Eco-Label Certifications	
ENERGY STAR	Yes
Other	Canada EcoLogo, Environmental Choice Australia, Environmental Choice New Zealand, Germany Blue Angel, Japan Eco Mark, Nordic Swan Label, Singapore Green Label, Taiwan Green Mark
Tested energy consumption levels of the device (in watts):	
Ready/Idle	INA
Energy-save	INA
Sleep mode	INA
During Printing	INA
How fast can this product be programmed to go into the following modes	
Ready/Idle	INA
Energy-Save	1 minute
Sleep mode	1 minute
Can the above settings be programmed by a walk-up user	Yes
How long does it take for this product to print one page after being in sleep mode	10 seconds

Emissions output from this device for the following substances (in mg/h):	
Ozone	1.5
Styrene	1.0
Benzene	0.05
TVOC	10
Dust	4.0

INA – Information not available

△ TONER YIELD — FAIR

— Tested toner yield is below average for models in this group and did not meet the manufacturer's rated yield.

△ VALUE — GOOD

○ The Sharp MX-M264N is priced competitively with the average for comparably configured models.

SUPPORTING TEST DATA

Test Environment: This product was tested in BLI's 10,000-square-foot U.S. test lab, in an environment monitored by an Extech RH S20 Digital RH/Temperature Recorder and Honeywell Model 61 Seven-Day Temperature/Relative Humidity Chart Recorder. All products lab tested by BLI are powered by dedicated circuits that are protected by ESP (Electronic Systems Protection, Inc.) surge protectors to prevent transient power and communication disturbances from affecting equipment under test.

Test Equipment: BLI's dedicated test network, consisting of Windows 2003 and Microsoft Exchange servers, Windows 7 and XP workstations, 10BaseT/100BaseTX network switches and CAT5 cabling.

Test Duration: Products are 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% of the test volume comprised of copy jobs and 75% 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 20% of the monthly maximum volume, evenly divided over the course of the test. Imaging media includes 20-lb. virgin letter, legal and ledger multi-use paper with up to 80% of the volume generated on letter, 10% on legal and 10% on ledger. Recycled multi-use paper comprised of 30%, 50% and 100% post-consumer waste is also tested for up to 10% usage of each of the recycled media types.

Tested Configuration: Base unit, plus optional 2 x 500-sheet paper feed unit, PostScript 3 kit and internal finisher.

Test Procedures: The test methods and procedures employed by BLI in its lab testing include BLI's proprietary procedures and industry-standard test procedures, including a BLI-developed variation of ASTM's 1318-90 Test Method for Determination of Productivity using Electrostatic Copy Machines. In addition to a number of proprietary test documents, BLI uses an industry-standard KATUN test original for evaluating black image quality and test suites from Quality Logic to evaluate applications compatibility. Besides a visual observation, color print quality is tested using the ANSI standard IT8 Color Test Target, which is read using the Minolta CM503I Spectrophotometer, and samples are analyzed using the CIE XY Chromaticity Diagram. Furthermore, density of black and color output is measured using an X-Rite 428 Densitometer. Georgia-Pacific Spectrum Multi-Use 20-lb. bond is used in the tests, 30% of which is recycled paper containing 30%, 50% and 100% post-consumer content. Image quality is tested using Georgia-Pacific Printing Paper (95 brightness, 22-lb. bond). Units are tested for compatibility on Windows 7 with Microsoft Office Suite 2010, as well as Adobe Acrobat Reader 10.0.

RELIABILITY

Test Duration	100,000 impressions and 25,000 scans
Service Calls/PMs	0/0
Misfeeds	4
Misfeed Rate	1/25,000 impressions

IMAGE QUALITY

Print Quality

Text	Good
Line Art	Very Good
Halftone Pattern	Good
Halftone Range	Fair
Solids	Good

Print Density

Sharp MX-M264N	1.46 to 1.48
Average density for devices in this class tested to date	1.47

Halftone range:

Halftone output was visible from the 10% (the minimum coverage level on the original) to 100% dot-fill levels, with distinct transitions between most levels.

Copy Quality

Text	Good
Line Art	Good
Halftone Pattern	Good
Halftone Range	Good
Solids	Good

Copy Density

Original	1.79 to 1.79
Sharp MX-M264N	1.36 to 1.38
Average density for devices in this class tested to date	1.37

Measurements are based on eight readings corresponding to eight different solid black locations on the output. The higher the density reading, the darker the image.

Visible Halftone Range

Sharp MX-M264N	29% to 100%
Halftone increments on test original	15, 29, 53, 77, 83, 91, 95, 100%

PRODUCTIVITY

Print Productivity

Average Print Productivity | Competitive Average

	SPEED IN PPM		PERCENT OF RATED SPEED	
1:1	**22.0**	21.6	**84.5**	84.9
1:2	**18.7**	19.1	**72.0**	74.6

Efficiency is tested using a 10-page black document. BLI obtains the overall efficiency for each mode by averaging the efficiency ratings (derived by dividing the tested speed of the device by the rated speed and then multiplying by 100) for each run length (1 and 5 sets). The unit's efficiency was tested using the PCL driver.

Job Stream | Competitive Average

	SPEED IN PPM		PERCENT OF RATED SPEED	
PostScript	**17.3**	19.1	**66.7**	73.7
PCL	**22.0**	20.9	**84.7**	81.9

BLI's job stream includes Word documents, Outlook e-mail messages, Excel spreadsheets, PowerPoint, HTML and Acrobat PDF files, totaling 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. Job stream efficiency is determined by the percentage of the rated speed at which the device operates when producing real-world jobs. The closer the rate is to 100%, or if it exceeds 100%, the more efficient the device.

COPY PRODUCTIVITY

Average Copy Productivity | Competitive Average

	SPEED IN PPM		PERCENT OF RATED SPEED	
1:1	**23.1**	22.0	**88.6**	86.1
1:2	**19.0**	18.3	**73.0**	71.6
2:2	**18.3**	17.9	**70.4**	70.0

Efficiency is tested using a 10-page black document. BLI obtains the overall efficiency for each mode by averaging the efficiency ratings (derived by dividing the tested speed of the device by the rated speed and then multiplying by 100) for each run length (1 and 5 sets). The unit's efficiency was tested using the PCL driver.

First-Copy Time in Seconds | Competitive Average

Platen	**4.77**	6.56
Document Feeder	**7.44**	7.79

SCAN FUNCTIONS

Tested Scan Speed in IPM | Competitive Average

AUTO COLOR		
1:1	**43.8**	40.9
2:2	**20.0**	25.1
BLACK		
1:1	**43.8**	45.7
2:2	**20.0**	27.8

Files are scanned at 300 dpi in PDF format. Competitive averages represent the average scan speed for devices in this speed range tested to date.

Scan-File Size in KB | Competitive Average

Full Color (default compression)	**1,310.7**	1,105
Full Color (compact PDF)	**838**	358.4
Black	**1,024**	323.4
Black (compact PDF)	**43.2**	50.6

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

PRINT DRIVERS

Sharp MX-M264N Print Driver Features

	PCL 6	PostScript 3
Auto Feature/Device Detection	Yes	Yes
Booklet Printing	Yes	Yes
Collate	Yes	Yes
Max Paper Sources per Job	5	5
N-up Printing	Yes (2 to 16)	Yes (2 to 16)
Overlay	Yes	Yes
Paper Gauge	Yes	Yes
Consumables Gauge	No	No
Delayed Print	No	No
Print and Hold	Yes	Yes
Proof Print	Yes	Yes
Quantity Selection	Up to 999	Up to 999
Reduction/Enlargement	25% to 400%	25% to 400%
Resolution Modes (dpi)	600 dpi	600 dpi
Save Settings	Yes	Yes
Secure Print	Yes	Yes
Watermarks/Custom Watermarks	Yes/Yes	Yes/Yes

TONER YIELD

Tested Toner Yield | Competitive Average

Tested Impressions	**18,759**	23,840
Rated Toner Yield	**25,000**	19,216
Rated Drum Yield	**75,000**	89,375

Based on an average of two cartridges using BLI's toner yield test original with 6% page coverage.

Certificate of Reliability

Awarded to

SHARP IMAGING AND INFORMATION COMPANY OF AMERICA

for the performance of the

Sharp MX-M264N*

in BLI's in-house durability test.

Anthony F. Polifrone
Managing Director

June 2014
Date

This is to certify that when subjected to a 100,000-impression Buyers Lab durability test, the Sharp MX-M264N proved to be a highly reliable product.

*Reliability is based on the performance of the Sharp MX-M354N, which uses the same engine.

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