Welcome to the Lexmark

Universal Driver version 1.4

LEXMARK

Contents

Introduction

This document introduces the Lexmark™ *Universal Print Driver* (UPD), describes its capabilities, and provides an overview of the devices it supports. This edition applies to the Lexmark Universal Print Drivers for Windows, version 1.4.

What are the Lexmark Universal Print Drivers?

The Lexmark Universal Print Drivers provide users and administrators with a standardized, one-driver solution for their printing needs. Instead of installing and managing individual drivers for each printer model, administrators can install the Lexmark Universal Print Drivers for use with a variety of both mono and color laser printers.

Benefits

Allows versatility

The Lexmark Universal Drivers are available in 19 languages, supporting more than 100 printer models whether attached locally or over a network. All packages have been tested in cluster server environments, Microsoft Terminal Server and Citrix Presentation Server environments, and are Microsoft WHQL certified (digitally signed). PCL 5 emulation and PostScript 3 emulations are available for Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP, and Windows 2000, in both 32- and 64-bit versions.

Enables bidirectional communication

Bidirectional capability automatically detects and updates the installed options both at install time and upon user request. This allows the driver to adapt to the various capabilities of our different printers, but unlike other universal print drivers, the network traffic is minimal.

Reduces cost for IT support

With only one package to manage, testing and internal certification of print drivers is simplified by the use of the Lexmark Universal Driver packages. Time spent on installation, both on servers and workstations, is greatly reduced, and hard drive space formerly occupied by many product-specific drivers is now diminished significantly.

Enables increased user efficiency

The Lexmark Universal Driver packages use the same graphic user interface as the product-specific drivers the users are accustomed to, and now all queues will share that same interface, decreasing calls to the help desk. Users can create and save profiles for their most frequently used settings, or use profiles that were created for them by IT.

Facilitates corporate sustainablity initiatives

Administrators can use the Lexmark Universal Driver packages to encourage their organization's environmental policies. The default queue settings can be modified to include duplex, multi-page printing (N-up), toner darkness, and other resource-saving measures.

Before you begin

Operating system support

The Lexmark Universal Print Drivers are available for the following operating systems in 32-bit and 64-bit versions (where available):

- Windows Server 2008
- Windows Vista
- Windows Server 2003
- Windows XP
- Windows Server 2000
- Windows 2000

> **Note:** Microsoft does not offer certification for Windows 2000. When installing the Universal Print Driver, Windows 2000 users may see a dialog concerning the digital signature. This dialog can be ignored.

The Universal Print Drivers are also compatible with the following Citrix implementations in 32-bit and 64-bit versions (where available):

- Windows Server 2003 with Citrix Presentation Server 4.0
- Windows Server 2003 with Citrix Presentation Server 3.0
- Windows Server 2000 with Citrix Presentation Server 4.0
- Windows Server 2000 with Citrix Presentation Server 3.0

Device compatibility

The Universal Print Drivers are compatible with the following devices:

Device	PCL emulation	PS emulation
Mono Laser Printers		
E120n[1]	√	
E220[1]	√	
E230, E232, E234	√	
E238, E240	√	
E240n, E340, E342n	√	√
E250d, E250dn, E350d, E352dn, E450dn	√	√
E260d, E260dn	√	√
E330[1], E332[1]	√	√
E360d, E360dn	√	√
[1] The duplex function is not supported.		
[2] Custom forms, collation, booklet printing, and most print quality controls are not available.		

Device	PCL emulation	PS emulation
E460dn, E460dw	√	
E320, E322	√	√
E321[1], E323[1]	√	√
T420	√	√
T430	√	√
T520, T522	√	√
T620, T622	√	√
T630, T632, T634	√	√
T640, T642, T644	√	√
T650, T652, T654	√	√
W820	√	√
W840	√	√
Optra T612, Optra T614	√	√
Optra S 1625	√	
Optra S 1855	√	
Optra S 2420	√	
Optra S 2450, Optra S 2455	√	
Mono Multifunction Printers		
X340n[2], X342n[2]	√	
X422	√	√
X642e	√	√
X644e, X646e	√	√
X646ef	√	√
X651de, X652de, X654dte, X656de, X658de	√	√
X820e	√	√
X830, X832	√	√
X850e, X852e, X854e	√	√
Color Laser Printers		
C510	√	√
C520, C522, C524	√	√
C530, C532, C534	√	√
C540, C543, C544	√	√
[1] The duplex function is not supported.		
[2] Custom forms, collation, booklet printing, and most print quality controls are not available.		

Device	PCL emulation	PS emulation
C750	√	√
C760, C762	√	√
C770, C772	√	√
C780, C782, C782 XL	√	√
C912	√	√
C920	√	√
C935	√	√
Color Multifunction Printers		
X543, X544	√	√
X762e	√	√
X772e	√	√
X782e, X782e XL	√	√
X912	√	√
X940e, X945e	√	√
[1] The duplex function is not supported.		
[2] Custom forms, collation, booklet printing, and most print quality controls are not available.		

Connectivity

The Lexmark Universal Print Drivers support direct printing to IP ports, parallel ports, and USB ports in all supported operating systems.

Note: Bidirectional communication is only available with standard IP ports and Lexmark Enhanced TCP/IP ports. Bidirectional communication is also available with USB connections if Lexmark Communication Software has been installed.

Standard IP Ports

Printing to standard IP ports is supported via the Windows native TCP port monitor and Port 9100 in all supported operating systems.

Lexmark Enhanced TCP/IP Ports

Lexmark Enhanced TCP/IP ports are not included as part of the Lexmark Universal Print Driver package.

If enhanced port capability is installed separately on the host system, printing to an enhanced port is supported in Lexmark Universal Print Drivers.

UNC Ports

UNC ports are supported.

LPR Ports

LPR ports are supported if available in the operating system.

Locally-Attached Devices

USB and parallel connections are supported.

Supported paper sizes and types

Note: To use a paper size that is unlisted, configure a Universal Paper Size.

Paper sizes supported by the Universal Printer Driver

Paper size	Dimensions
A3	297 x 420 mm (11.7 x 16.5 in.)
A4	210 x 297 mm (8.3 x 11.7 in.)
A5	148 x 210 mm (5.8 x 8.3 in.)
A6	105 x 148 mm (4.1 x 5.8 in.)
B4	250 x 254 mm (9.8 x 10 in.)
B5	182 x 257 mm (7.2 x 10.1 in.)
Executive	184 x 267 mm (7.3 x 10.5 in.)
Banner 1	216 x 914 mm (10.1 x 36.0 in.)
Banner 2	216 x 1219 mm (10.1 x 48.0 in.)
Banner 3	297 x 914 mm (11.7 x 36.0 in.)
Banner 4	297 x 1219 mm (11.7 x 48.0 in.)
Folio	216 x 330 mm (8.5 x 13 in.)
Legal	216 x 356 mm (8.5 x 14 in.)
Letter	216 x 279 mm (8.5 x 11 in.)
México oficio	216 x340 mm (8.5 x 13.4 in.)
Statement	140 x 216 mm (5.5 x 8.5 in.)
Tabloid	279 x 432 mm (11 x 17 in.)
Universal	100 x 148 mm (3.9 x 5.8 in.) up to 305 x 483 mm (11.7 x 19 in.)[2]
7 3/4 Envelope (Monarch)	98 x 191 mm (3.9 x 7.5 in.)
B5 Envelope	176 x 250 mm (6.9 x 9.8 in.)
C5 Envelope	162 x 229 mm (6.4 x 9 in.)
9 Envelope	98 x 225 mm (3.9 x 8.9 in.)
10 Envelope	105 x 241 mm (4.1 x 9.5 in.)

Paper size	Dimensions
DL Envelope	110 x 220 mm (4.3 x 8.7 in.)

Paper types and weights supported by the printer

- Plain
- Bond
- Transparency
- Glossy
- Card stock
- Labels
- Letterhead
- Preprinted
- Colored paper
- Envelope
- Light paper
- Heavy paper
- Rough paper
- Recycled

Note: The Universal Printer Driver also supports six user-defined custom paper types.

Language support

The Lexmark Universal Print Drivers support 19 languages.

- Chinese (simplified)
- Chinese (traditional)
- Danish
- Dutch
- English
- Finnish
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazilian)
- Romanian
- Russian
- Spanish

- Swedish
- Turkish

Installing the Universal Print Driver

Depending on the needs of the individual administrator, the Universal Print Driver may be installed through the Windows Add Printer Wizard or through the System Administrator installaton package available on the Lexmark Web site.

Downloading the Universal Printer Driver

1 Go to **www.lexmark.com**.

2 Under **Drivers and Downloads**, click **Driver Finder**.

3 Locate your printer.

4 From the drop-down menu, select the appropriate operating system.

5 From Download Type, select **Universal Printer Driver** .

6 Click **Download Now** for the PostScript or PCL emulation Universal Print Driver you want to install or for the Lexmark Universal Driver System Administrator package.

   Note: If you install an emulation-specific Universal Print Driver, the Phonebook application must be downloaded separately. The Phonebook application automatically installs with the administrator package.

7 Follow the instructions on the screen to download the Universal Printer Driver.

Configuring installed options

If bidirectional communication is enabled for the printer, available options will be detected and installed automatically.

If bidirectional communication is not available, install options manually.

Adding an option manually

1 From Print Properties, click the **Install Options** tab.

2 From the Available options list, select the appropriate option.

3 Click **Add>>** to move that option to the Currently installed options list.

4 Click **OK**.

Removing an option manually

1 From Print Properties, click the **Install Options** tab.

2 From the Currently installed options list, select the appropriate option.

3 Click **<<Remove** to move that option to the Available options list.

4 Click **OK**.

Note: These functions are available only to users with administrative privileges on computers using Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP, and Windows 2000.

Understanding the Universal Print Driver

Page Layout options

Select	To
Collate	Specify that multiple copies of a document are collated. For example, if a document has five pages and two copies are requested, then the collated output would be 1, 2, 3, 4, 5, 1, 2, 3, 4, 5. The non-collated output would be 1, 1, 2, 2, 3, 3, 4, 4, 5, 5. If there is insufficient memory installed to collate the document, then the collated output is generated for each page already stored in memory, so the output might be 1, 2, 3, 1, 2, 3, 4, 5, 4, 5. **Note:** Collate settings are not saved if the Printer-based collation setting is set to Off on the Install Options tab.
Orientation	Specify the alignment of the paper or form when it is printed. • **Portrait**–Vertical page orientation, where the page is taller than it is wide • **Landscape**–Horizontal page orientation, where the page is wider than it is tall • **Rotate 180°**–Turning the document "upside down" on the page. This option can be used with any other orientation option.
Mirror[1]	Rotate the document around its center line. The printed image will appear as though it were held up to a mirror.
Scaling[1]	Reduce or enlarge the document. A value smaller than 100 produces a smaller document, and a value greater than 100 produces a larger document. **Note:** Some Windows programs offer a scaling option. Using the two options simultaneously may produce unexpected results.
Automatic duplex[2]	Print on both sides of the paper. If the optional duplex unit is installed, then the printer can print on both sides of the paper automatically.
Manual duplex[2]	Print on both sides of the paper. Manual duplex printing may be available without the optional duplex unit. Check the documentation that came with the printer to determine which options are supported.
Booklet[3]	Print a multiple-page document on both sides of the paper so that when the printed sheets are folded along the long edge, the page numbers are sequential. **Note:** While the sheets have landscape orientation, the page images remain in portrait orientation, printed on one half of the sheet.
Poster	Print a document in a larger format. The printer produces a poster by dividing the document into an equal number of sections and then printing each of those sections on a separate sheet. The sheets can then be trimmed and assembled into the enlarged document, graphic, or chart.

[1] PS emulation compatible only. PCL emulation is not available.

[2] Not enabled by default if bidirectional communication is unavailable.

[3] Supported in printer models with duplex capability.

Select	To
Pages per sheet (N-up)	Specify the number of page images to print on one sheet. By default, the printer prints one page image per sheet. To print two page images per sheet, select 2-up, and so on.
Print last page first	Print the document in sequential order. The feature ensures that the pages of the print job are in the correct order when retrieved from the exit bin.
[1] PS emulation compatible only. PCL emulation is not available.	
[2] Not enabled by default if bidirectional communication is unavailable.	
[3] Supported in printer models with duplex capability.	

Paper options

Option	Description
Paper size	Specifies the paper or envelope size to use.
Manage custom paper sizes	Allows you to add, edit, or delete a custom paper size. **Note:** Administrators can use the "Manage custom paper sizes" option to add, edit, or delete custom paper sizes on a server. For non-administrators or restricted users who use this option, any modifications to custom paper sizes will apply only to that user's instance of the printer driver.
Paper tray	Determines the location, or source, of the paper to be used when printing the document. Use "Automatically select" to have the driver select the paper tray based on the form-to-tray assignments specified in the driver. Select "Use printer settings" to allow the printer to select the appropriate tray based on the current printer settings. To select a specific paper tray, select the name of the tray from the list.
Paper type	Specifies the type of paper you want to use when printing your documents. Options include Transparency, Card stock, or Letterhead.
Multiple input sources	From the More Input Options section, you can select different paper sources for different sections of a document. For example, you can print the first and last pages from a tray containing colored paper, or you can add a front cover from a tray containing a preprinted form. **Note:** Using the front or back cover setting will add a blank (non-printed) page to the beginning or end of your document. To select a paper tray and paper type for the first or last pages, use First page or Last page.

Print Quality options

Select	To
Color printing	Print in color, if color printing is supported by the printer model.
Print in black and white*	Switch between color printing and black-and-white printing to save color toner and decrease the amount of time necessary to print the document. For color images, this feature substitutes black-and-white grayscale for color.
Print all text in black (no grayscale)	Print text as 100 percent black, regardless of the color of the text in the original file. Leave the check box empty to print your document in grayscale.
Pixel boost	Print your document with finer detail. • **Use printer settings**—The printer driver applies this setting as needed. • **Off**—This setting is *not* used for the print job. • **Fonts**—The printer driver applies this setting only to text within the print job. • **Horizontally**—This setting darkens horizontal lines of text and images within the print job. • **Vertically**—This setting darkens vertical lines of text and images within the print job. • **Both directions**—This setting darkens both horizontal lines and vertical lines of text and images within the print job. **Note:** Pixel boost is not available on all printer models.
Color Correction*	Adjust the printed color to better match the colors of other output devices or standard color systems.
Color Balance*	Adjust color by individually increasing or decreasing the amount of toner used for each color plane.
ColorSaver™*	Conserve toner in graphics and images while maintaining high-quality text. The amount of toner used to print graphics and images is reduced, however, if text is printed with factory default toner usage. If selected, this setting overrides Toner darkness settings.
RGB correction*	Set the color quality controls. • **Use printer settings**—The printer driver applies the brightness, contrast, and saturation settings to the print job. This is the default setting. • **Manual**—This setting lets the user set each control separately.
Brightness	Adjust the darkness of the document. A negative value will darken text, images, and graphics, while a positive value will lighten text, images, and graphics in the document.
Contrast	Adjust the degree of difference between levels of gray in the document. A higher setting shows more difference between levels of gray.
Saturation	Increase the intensity of all color levels in the document. A higher saturation setting will intensify all colors but will not increase detail in the document.
* Supported when Color printing is available.	

Select	To
Enhance fine lines	Print your document with finer detail. • **Use printer settings**—The printer driver applies this setting as needed. • **On**—This setting is used for the print job. • **Off**—This setting is *not* used for the print job. **Note:** Using this option may result in color shifts and artifacts being more easily exposed.
Toner darkness	Lighten or darken text and images. Conserve toner by choosing a lighter setting. **Note:** Using this option may result in a decrease in print quality or artifacts being more easily exposed.
Resolution	Specify the printing resolution in *dots per inch* (dpi).
* Supported when Color printing is available.	

Finishing options

Select	To
Staple	Staple the paper.
Offset	Offset a set of pages from the previous set of pages at selected times.
Hole punch	Punch holes in each printed page of your job so that the document can be placed in a binder or folder.
Fold	Fold the printed pages in half, along the long edge.
Booklet fold	Prompt the finisher to fold the printed booklet sheets. The finisher will fold a single stack of up to 5 sheets into one bundle. For larger print jobs, any remaining sheets under the 5–sheet maximum will be printed in a separate bundle. A print job of 13 sheets will be printed in two bundles of 5 sheets and one bundle of 3 sheets. The completed bundles are nested inside the next bundle of the print job. When completed, the final bundle will be the assembled booklet.

Note: The printer must have a finisher installed that supports these options for the options to be available. Fold and booklet fold are only available with a booklet finisher.

Advanced features

Select	To
Watermark	Print a single line of text in the background of the document. Watermarks do not require much memory and are always sent to the printer with the document rather than being stored in the printer. Confidential, Original, and Copy are a few of the available watermarks. Watermarks are transparent in PostScript emulation. In PCL emulation, watermarks may be placed in front of or behind text.
Print and Hold	Control how and when a job is printed. **Note:** Print and Hold is not available on all printer models.
Account Tracking	Track print jobs for accounting purposes by entering an account number each time you send a print job to the printer. Use Account Tracking if: • Many departments in your company share a network printer. You can assign each department an account number, and then keep track of how many jobs each department prints, and charge each department appropriately. • Your clients request extra copies of documents and contracts. You can assign each client an account number to bill the client for the cost of printing.
Overlay*	Place a previously stored image, like a letterhead, graphic, or preprinted form, on each page of the printed document. You can add and store overlays on the printer for later use.
Fax	Print to fax. The printer will send a queued document as a fax rather than print it. The fax option functions as a normal fax machine, but is controlled through the printer driver as opposed to the printer control panel. Fax can be installed in one of two modes: Fax and Fax Only. Installing fax adds the Fax tab to the Printing Preferences dialog and the Fax Settings tab to the Printer Properties dialog. Installing Fax Only similarly installs the Fax and Fax Settings tabs, but also removes all other tabs from the Printing Preferences dialog, limiting printing preferences to fax options only. Faxing is not available on all printers. Fax options vary depending on printers and operating systems. See your printer User's Guide to find out if your printer supports fax.
Phone Book	Display a list of Fax numbers that can be selected as destinations for a fax job. The Phone Book feature is not an independent directory. Instead, the Phone Book references a source directory, either the Windows Address book, or Microsoft Outlook. As a result, any additions, edits, or deletions completed in the Phone Book feature will also be made to the source directory.
Form to Tray Assignment	Assign a form defining the paper size and margins to each of the printer paper sources. Many printers support more than one source of paper, such as multiple paper trays. Once a form is matched to a source, you can select the form when you print. The printer automatically prints from the tray assigned to the form. For example, if a printer has several trays containing A4 paper, but the paper in the trays is used for different purposes, the user can give custom names to the paper that also specify which paper source the printer should use.
* PCL emulation only. PostScript emulation is not available.	

Options

Select	To
Flash memory card	Save digital data such as texts, pictures, and formatting.
Paper input drawers	Increase the printer input capacity. Options may include the following: • Trays 1–5 • Multipurpose feeder • Envelope feeder
Paper exit bins	Increase the printer output capacity. Options may include the following: • Bins 1–10 • Top bin • Rear bin • Side bin
Finisher	Support various finishing options, including offset, staple, and hole punch.
Duplex unit	Print on both sides of the paper.
Printer hard disk	Increase the printer memory.

Frequently asked questions

Frequently asked questions

What are the benefits of using the Universal Print Driver?

The main benefit is the amount of time saved in deploying and administering a large fleet of printers. The Universal Print Driver can be used to print to multiple devices, therefore minimizing the number of drivers in the network environment.

Is the Universal Print Driver Microsoft certified?

The Universal Print Drivers for Windows 2000 and later are certified for all Windows operating systems for which Microsoft offers certification programs.

Is Point and Print available with this driver?

Point and Print works the same way with the Universal Print Drivers as with any other Lexmark driver.

Will Lexmark stop providing model-specific drivers?

There are no plans for the Universal Print Drivers to replace model-specific drivers.

When should I use a model-specific print driver instead of the UPD?

Use a model-specific driver if you need a PCL-XL (PCL 6) emulation driver or if your printer is not in the list of supported printers.

What printing modes are supported with the PCL Emulation Universal Print Driver?

Raster and GL/2 modes are supported. XL modes and host-based printing are not supported.

I have a color laser that is listed in the supported printers, but jobs sent to it always print in black and white. What is happening?

In the UPD, color printing capability is an installable option, but it is disabled in a default installation if bidirectional communication is unavailable. Installing the Color printing installable option will resolve this issue. For more information, see "Configuring installed options" on page 10. If the printer has bidirectional communication, force an update by clicking **Ask Printer** in the Print Properties dialog.

If the Color Printing option is installed, then Print in black and white may be selected. To deselect Print in black and white, go to the Print Quality tab of the Printing Preferences dialog.

Are the Driver Profiler utility and Script Install supported?

Driver Profiler and Script Install are both supported when using the Lexmark Universal Driver System Administrator Package. The Lexmark Universal Driver System Administrator package is available at **www.lexmark.com**.

Is the UPD based on Microsoft system driver technology?

The Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP, and Windows 2000 Universal Drivers are based on Microsoft system driver technology.