Universal Print Driver

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Contents

Introduction..... 4

What is the Universal Print Driver?..... 4
Benefits..... 4
New features..... 5
Change history..... 5

Before you begin..... 14

Operating system support..... 14
Device compatibility..... 15
Connectivity..... 21
Travel Print..... 21
Supported paper sizes and types..... 22
Supported paper sizes..... 22
Supported paper types..... 22
Language support..... 23

Installing the Universal Print Driver..... 25

Updating previous versions of the Universal Print Driver..... 25
Downloading the Universal Print Driver..... 25
Updating installed options..... 25
What is a Package Creation Utility?..... 25
Using Travel Print..... 26
Enabling the Travel Print feature..... 26

Understanding the Universal Print Driver..... 27

Using the Layout tab..... 27
Using the Paper/Finishing tab..... 28
Using the Quality tab..... 29
Using the Fax preferences tab..... 33
Using the Watermark tab..... 34
Using the Overlays tab..... 34
Using the Print and Hold tab..... 34
Using the Other Options tab..... 35

Frequently asked questions.....39

Notices.....42

Index.....44

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 version 2 for Windows.

Notes:

- The Universal Print Driver version 2 can be installed along with Universal Print Driver version 1.0 or later.
- To obtain a copy of the documentation for the Universal Print Driver version 1.0 or later, visit the Lexmark website.
- For more information on the driver version numbering format, see "What is the UPD version numbering format?" on page 39.

What is the Universal Print Driver?

The UPD provides 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 UPD for use with mono and color printers.

Benefits

Allows versatility

The UPD is available in more than 27 languages, supporting more than 200 printer models, whether attached locally or over a network. All packages have been tested in cluster server environments, Microsoft™ Terminal Servers, and Citrix Presentation Server™ environments, and are Microsoft certified (digitally signed). PCL™ 5, PCL XL, and PostScript™ 3 emulations are available for Microsoft Windows Vista® operating system or later.

Enables bidirectional communication

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

Reduces cost for system support

Using UPD, testing and internal certification of print drivers is simplified with only one package to manage. Time spent on installation, both on servers and workstations, is reduced, and hard drive space formerly occupied by many product-specific drivers is now diminished.

Enables increased user efficiency

The UPD uses the same graphical user interface as the product-specific drivers the users are accustomed to. Now all queues 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 system support.

Facilitates corporate sustainability initiatives

Administrators can use UPD to promote the environmental policies of their organization. The default queue settings can be modified to include two-sided printing, multiple-page printing (N-Up), toner darkness, and other resource-saving measures.

New features

Citrix Ready®

Starting in October 2012, the UPD has participated in the Citrix Ready Program as a Certified Product. Testing was conducted using the following:

- Citrix XenApp™ 7.8, Citrix XenApp 7.7, Citrix XenApp 7.6, and Citrix XenApp 7.5 on Microsoft Windows Server® 2016 x64 operating system
- Citrix XenDesktop™ 7.8, Citrix XenDesktop 7.7, Citrix XenDesktop 7.6, and Citrix XenDesktop 7.5 on Microsoft Windows Server 2016 x64 operating system
- Citrix XenApp 7.8, Citrix XenApp 7.7, Citrix XenApp 7.6, and Citrix XenApp 7.5 on Microsoft Windows Server 2012 R2 x64 operating system
- Citrix XenDesktop 7.8, Citrix XenDesktop 7.7, Citrix XenDesktop 7.6, and Citrix XenDesktop 7.5 on Microsoft Windows Server 2012 R2 x64 operating system
- Citrix XenApp 7.8, Citrix XenApp 7.7, Citrix XenApp 7.6, and Citrix XenApp 7.5 on Microsoft Windows Server 2012 x64 operating system
- Citrix XenDesktop 7.8, Citrix XenDesktop 7.7, Citrix XenDesktop 7.6, and Citrix XenDesktop 7.5 on Microsoft Windows Server 2012 x64 operating system
- Citrix XenApp 7.8, Citrix XenApp 7.7, Citrix XenApp 7.6, Citrix XenApp 7.5, Citrix XenApp 6.5, and Citrix XenApp 6.0 on Microsoft Windows Server 2008 R2 x64 operating system

Change history

Lexmark Universal Print Driver version 2.11.0.0

Note: If you are not using status monitor applications, then you can upgrade to UPD 2.11. If you are using status monitor applications, then use only UPD 2.6.0.0.

- **Addition of supported printers**—Added support for the following:

  Color laser multifunction products
  - CX317dn
  - CX417de
  - CX517de

  Color laser printers
  - CS317dn
  - CS417dn
  - CS517de

Mono laser multifunction products

- MX317dn
- MX417de
- MX517de
- MX617de

Mono laser printers

- MS317dn
- MS417dn
- MS517dn
- MS617dn
- XM5200 Series (XM5263, XM5270)
- XM7200 Series (XM7263, XM7270)

Note: For more information, see "Device compatibility" on page 15.

- **Addition of supported languages**—Added support for the following languages:
  - Croatian
  - Serbian
  - Slovak
  - Slovenian
- **Addition of supported Novell operating system**—Added support for Novell 15 operating system. For a list of supported operating systems, see "Operating system support" on page 14.
- **Addition of supported Windows operating system**—Added support for Microsoft Windows Server 2016. For a list of supported operating systems, see "Operating system support" on page 14.
- **Addition of support for Citrix Ready XenApp certifications**—Added certification support for the following:
  - Citrix XenApp 7.8 and XenDesktop 7.8
  - Citrix XenApp 7.7 and XenDesktop 7.7

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.
- **Continued support for Citrix Ready XenApp certifications**—Continued certification support for the following:
  - Citrix XenApp 7.6 and XenDesktop 7.6
  - Citrix XenApp 7.5 and XenDesktop 7.5
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.
- **Improved print time**—Reduced the time to first print.

Lexmark Universal Print Driver version 2.10.0.0

Note: If you are not using status monitor applications, then you can upgrade to UPD 2.10. If you are using status monitor applications, then use only UPD 2.6.0.0.

- **Addition of smart two-sided printing support**—Added the “Other paper size with different orientation” setting in the Paper/Finishing tab. Users can select a different paper size that is loaded in a different orientation when doing two-sided printing or using finishing options.
- **Image compression improvement**—Added the image compression feature in PostScript print drivers.

  For PostScript print drivers, the following image compression options are available:
  - **NONE**—Disable image compression.
  - **Lossless**—Use Lempel-Ziv-Welch (LZW) compression to reduce the file size without reducing the image quality. Sometimes, the image may not be compressed to retain the image quality.
  - **High**—Use JPEG compression to reduce the file size by reducing the image quality. To adjust the image quality and compression level, use the Quality slider. Increasing the image quality decreases the image compression.
- **Display actual print speed**—Added feature to show the actual print speed. You can see the print speed in the General tab of the Printer Properties dialog box.
  - If the print driver is installed and is connected to the printer, then the actual print speed is shown. If the printer is disconnected, then the print model is set to Universal Mono Laser or Universal Color Laser, and the print speed is 20 ppm.
  - If the print driver is installed and the printer is selected using Set Print Model, then the actual print speed is shown. If the printer is disconnected, then the minimum print speed is shown.
- **Removal of support for Windows Server 2003**—For a list of supported operating systems, see “Operating system support” on page 14.
- **Addition of supported color laser printers**—Added support for the following:
  - Lexmark C4100 Series (C4150)
  - Lexmark C6100 Series (C6160de)
  - Lexmark CS720 Series (CS720de)
  - Lexmark CS725 Series (CS725de)
  - Lexmark CS820 Series (CS820de, CS820dte, CS820dtfe)
  - Lexmark CX820 Series (CX820de, CX820dtfe)
  - Lexmark CX825 Series (CX825de, CX825dte, CX825dtfe, CX825dtpe)
  - Lexmark CX860 Series (CX860de, CX860dte, CX860dtfe, CX860dtpe)
  - Lexmark XC6100 Series (XC6152de, XC6152dtfe)
  - Lexmark XC8100 Series (XC8155de, XC8155dte, XC8160de, XC8160dte)
  - Lexmark CX725 Series (CX725de, CX725dhe, CX725dthe)
  - Lexmark XC4100 Series (XC4150)

  Note: For more information, see “Device compatibility” on page 15.
- **Addition of support for Citrix Ready XenApp 7.6 certification**—For a list of supported Citrix implementations, see “Operating system support” on page 14.
- **Continued support for Citrix Ready XenApp certifications**—Continued certification support for the following:
  - Citrix XenApp 7.5
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see “Operating system support” on page 14.

Lexmark Universal Print Driver version 2.9.1

Note: If you are not using status monitor applications, then you can upgrade to UPD 2.9.1.0. If you are using status monitor applications, then use only UPD 2.6.0.0.

- **Addition of supported Windows operating system**—Added support for Windows 10. For a list of supported operating systems, see "Operating system support" on page 14.
- **Continued support for Citrix Ready XenApp certifications**—Continued certification support for the following:
  - Citrix XenApp 7.5
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.

Lexmark Universal Print Driver version 2.9

Note: If you are not using status monitor applications, then you can upgrade to UPD 2.9.0.0. If you are using status monitor applications, then use only UPD 2.6.0.0.

- **Application of a driver configuration file to printers on a cluster or remote environment**—Added support for the Printer Driver Configuration Utility to apply a configuration file to printers on a cluster or remote environment. The configuration file can be applied using the Printer Driver Configuration Utility or from the command line using ConfigUtil. For more information, see the *Printer Driver Configuration Utility Help*.
- **JPEG image compression improvement**—Improved JPEG image compression by using the LIBJPEG library in rendering JPEG images, and removing GPL2 and GPL3 licensed files.
- **Enabled JPEG pass-through**—Added the option to allow the host application to send JPEG data as it is, without converting it to a bitmap image file. This option is available in the Configuration tab of the Printer Properties window.

  Note: This feature is available only in PCL XL emulation drivers.
- **Removal of available presets in the Print Quality tab**—Removed the following print quality presets for color and mono printers.

  For color printers:
  - Text
  - Text/Photo
  - Photo
  - Custom

  For monochrome printers:
  - Draft
  - Normal
  - Best
  - Custom
- **Addition of Print Quality Defaults setting**—Added a predefined setting for print quality. This option is available in the Print Settings menu.
- **Replaced the "Enhance fine lines" feature with the "Halftone" feature**
- **User interface (UI) performance improvement**—Improved the performance when opening the Printing Preferences and Printer Properties windows in a Point and Print with a network latency scenario.

- **Job accounting support for fax**—Added job accounting support for tracking fax jobs.
- **Google Cloud Print™ support**—Added support for printing documents from Google Cloud Print using Lexmark UPD. The following print driver features do not work when printing from Google Cloud Print:

  Print driver emulations
  - Multiple pages per side (N-Up)
  - Use full printable area

  PostScript drivers
  - Poster
  - Booklet
  - Multiple input options (MIO)
  - PostScript Language level (PS)

  PCL XL emulation drivers
  - Send color to printer
- **Print driver user interface (UI) compatibility with the European Accessibility Mandate 376 (EN 301 549)**
- **Restriction of color printing when setting the printer model to Universal Mono Laser**—If **Universal Mono Laser** is selected as the printer model from the Configuration tab in the Printer Properties window, then the print output is always in gray scale.
- **Continued support for Citrix Ready XenApp certifications**—Continued certification support for the following:
  - Citrix XenApp 7.5
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.

Lexmark Universal Print Driver version 2.8

Note: If you are not using status monitor applications, then you can upgrade to UPD 2.8.0.0. If you are using status monitor applications, then use only UPD 2.6.0.0.

- **User interface (UI) performance improvement**—Improved the performance of the Printing Preferences and Printer Properties windows.
- **Removal of default two-sided printing support**—Removed support for enabling two-sided printing by default in the print driver during installation. For printers that support two-sided printing, the feature can be enabled manually. For a list of printers that support two-sided printing, see "Device compatibility" on page 15.
- **Global print support**—Added print support for non-Lexmark devices that support compliant PostScript and PCL emulation page description languages (PDLs).

  Two new models are available in the model list in the print properties:
  - **Basic Color Laser**—Allows compatible non-Lexmark devices to use the Lexmark UPD for basic color printing
  - **Basic Mono Laser**—Allows compatible non-Lexmark devices to use the Lexmark UPD for basic black-and-white printing

Not all Lexmark printer and non-Lexmark device features, functions, and capabilities are available with the use of Basic Color Laser and Basic Mono Laser models. Depending on the capabilities of the specific non-Lexmark device, only basic features are supported. These features include, but are not limited to, the following:

  - Some paper sizes and types
  - Some source selections
  - Two-sided printing
  - Paper layout options
- **Image compression improvement**—Improved the image compression feature to reduce the spool file size.
- **Improved printing**—Fixed printing issues, including the following:
  - Delayed print driver response when updating the printer configuration using the Update Now-Ask Printer option
  - Incorrect staple and hole punch location when printing using a PostScript 3 driver
  - Problems printing watermarks when using a Microsoft Word plug-in
  - Problems printing Microsoft Word documents containing embedded PCL5 macros using PCL XL emulation and PostScript drivers
  - Problems in Microsoft PowerPoint® print preview when using a PostScript 3 driver
  - Problems when printing from a Windows 8.1 computer using PCL XL emulation and PostScript 3 drivers
- **Addition of supported Novell operating system**—Added support for the following:
  - Novell 12
  - Novell 11

  Note: For a list of supported operating systems, see "Operating system support" on page 14.
- **Addition of support for Citrix Ready XenApp 7.5 certification**—For a list of supported Citrix implementations, see "Operating system support" on page 14.
- **Continued support for Citrix Ready XenApp certifications**—Continued certification support for the following:
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.

Lexmark Universal Print Driver version 2.7.2

Notes:

- If you are not using status monitor applications, then you can upgrade to UPD 2.7.2.0. If you are using status monitor applications, then use only UPD 2.6.0.0.
- This version of the driver contains only bug fixes. If you are using a private print driver, then check the updates before installing this version to avoid losing specific fixes for your private print driver.
- **Removal of support for Windows XP**—For a list of supported operating systems, see "Operating system support" on page 14.
- **Improved printing documents with JPEG images**—Fixed issues in PCL XL emulation drivers when printing Microsoft Word documents with JPEG images. We recommend using image compression when printing these documents to avoid generating large print spools.
- **Improved printing Microsoft Excel® file formats**—Fixed thumbnail print output when printing Microsoft Excel files using PCL XL emulation drivers.

- **Continued support for Citrix Ready XenApp certifications**—Continued certification support for the following:
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.

Lexmark Universal Print Driver version 2.7.1

Note: If you are not using status monitor applications, then you can upgrade to UPD 2.7.1.0. If you are using status monitor applications, then use only UPD 2.6.0.0.

- **Microsoft Device Stage support**—Added support to use Device Stage when installing Lexmark UPD on a TCP/IP port.
- **Enhanced image resolutions**—Added support for applications to use enhanced resolutions (1200 IQ, 2400 IQ, 4800 CQ) to match the capability of Lexmark printers.

  Note: This feature is available only in PCL5 and PCL XL emulation drivers.
- **Image compression**—Added the option to compress image data in documents to improve printing performance.

  Note: This option is available only in PCL XL emulation drivers.
- **Trifold support**—Added the option to fold paper in thirds automatically. This option is available in the Fold menu.
- **Default two-sided printing support**—Added support to enable two-sided printing in the print driver during installation if a printer supports two-sided printing. For a list of printers that support this feature, see "Device compatibility" on page 15.
- **Client installation improvement in a Novell environment**—Improved installation by using bidirectional communication when installing UPD on a client using a Novell IPP port.
- **Addition of supported color and mono laser printers**—For a list of supported printers, see "Device compatibility" on page 15.
- **Continued support for Citrix Ready XenApp certifications**—Continued certification support for the following:
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.

Lexmark Universal Print Driver version 2.6.1

- **Communication improvement in a server environment**—Removed the language monitor component.

  A language monitor is an optional print driver component that provides extra functionality. In Lexmark UPD, the language monitor provides the following functions:
  - It coordinates status requests to the printer to ensure that these requests do not interfere with printing.
  - It provides True End-of-Job support.

  These functions are required for status monitor applications, such as the Lexmark Status Messenger and the Lexmark Print Monitor Agent.

  Note: If you are not using status monitor applications, then you can upgrade to UPD 2.6.1.0. If you are using status monitor applications, then use only UPD 2.6.0.0.

- **Continued support for Citrix Ready XenApp certifications**—Continued certification support for the following:
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.

Lexmark Universal Print Driver version 2.6

- **Driver version numbering updated**—Updated the driver version numbering schema. For more information, see "What is the UPD version numbering format?" on page 39.
- **Addition of supported color and mono laser printers**—For a list of supported printers, see "Device compatibility" on page 15.
- **Addition of supported Windows operating systems**—Added support for the following:
  - Windows 8.1
  - Windows Server 2012 R2

  Note: For a list of supported operating systems, see "Operating system support" on page 14.
- **Paper size support update**—Updated the list of supported paper sizes. For a list of supported paper sizes, see "Supported paper sizes" on page 22.
- **Continued support for Citrix Ready XenApp certifications**—Continued certification support for the following:
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.

Lexmark Universal Print Driver version 2.x.5

- **Addition of supported color and mono laser printers**—For a list of supported printers, see "Device compatibility" on page 15.
- **Addition of supported Windows operating systems**—Added support for the following:
  - Windows 8
  - Windows Server 2012

  Note: For a list of supported operating systems, see "Operating system support" on page 14.
- **Addition of support for Citrix Ready XenApp certifications**—Added certification support for the following:
  - Citrix XenApp 6.5
  - Citrix XenApp 6.0

  Note: For a list of supported Citrix implementations, see "Operating system support" on page 14.
- **Addition of supported language**—Added Arabic in the supported languages. For a list of supported languages, see "Language support" on page 23.
- **Package Creation Utility**—Use the utility to create customized installer packages that you can launch without user input, and integrate into your deployment solution.

Lexmark Universal Print Driver version 2.x.4

- **Addition of supported color laser printers**—For a list of supported printers, see "Device compatibility" on page 15.
- **Addition of supported Windows operating system**—For a list of supported operating systems, see "Operating system support" on page 14.

Lexmark Universal Print Driver version 2.x.3

- **Addition of supported color inkjet printers**—For a complete list of supported printers, see "Device compatibility" on page 15.
- **Addition of supported paper sizes in inkjet printers**—Added supported paper sizes for borderless printing in some inkjet printers. For more information, see "Supported paper sizes" on page 22.

Lexmark Universal Print Driver version 2

- **Driver version numbering**—The driver version number increments whenever there are major or minor functional modifications.
- **New user interface**—The new user interface of UPD provides a more consistent look and feel across all printer models.
- **Custom installation package**—Administrators can create pre-configured installation packages that include only the software and drivers that meet their needs.
- **Job Accounting**—Lets you track print jobs for accounting purposes by associating the print job with specific account information. The account information includes a user name or ID, an account code, and a department code.
- **Dynamic driver configuration**—UPD updates automatically to reflect the features and options of any specific printer model.
- **Printer Driver Configuration Utility**—Lets you create driver configurations. Driver configurations are print driver settings and other data that are saved in a Driver Configuration File (DCF).

Before you begin

Operating system support

The Universal Print Driver is compatible with the following Microsoft Windows operating systems in 32-bit and 64-bit versions (where available):

- Windows Server 2016
- Windows 10
- Windows 8.1
- Windows Server 2012 R2
- Windows Server 2012
- Windows 7
- Windows Server 2008 R2
- Windows Server 2008
- Windows Vista

Notes:

- As of April 8, 2014, Lexmark no longer provides patches or updates for Lexmark software available for Microsoft Windows XP (32-bit and 64-bit versions) operating systems. UPD 2.7.1.0 is the last release that supports Windows XP operating systems.
- Lexmark follows Microsoft Products Support Lifecycle Policy in providing software support for Windows operating systems. For more information on Microsoft Products Support Lifecycle Policy, go to **http://support.microsoft.com/gp/lifeselect**.

The Universal Prit Driver is also compatible with the following Citrix implementations in 32-bit and 64-bit versions (where available):

- Citrix XenApp 7.8 for Microsoft Windows Server 2016 operating system
- Citrix XenDesktop 7.8 for Microsoft Windows Server 2016 operating system
- Citrix XenApp 7.8 for Microsoft Windows Server 2012 R2 operating system
- Citrix XenDesktop 7.8 for Microsoft Windows Server 2012 R2 operating system
- Citrix XenApp 7.8 for Microsoft Windows Server 2012 operating system
- Citrix XenDesktop 7.8 for Microsoft Windows Server 2012 operating system
- Citrix XenApp 7.8 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenDesktop 7.8 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenApp 7.7 for Microsoft Windows Server 2016 operating system
- Citrix XenDesktop 7.7 for Microsoft Windows Server 2016 operating system
- Citrix XenApp 7.7 for Microsoft Windows Server 2012 R2 operating system
- Citrix XenDesktop 7.7 for Microsoft Windows Server 2012 R2 operating system
- Citrix XenApp 7.7 for Microsoft Windows Server 2012 operating system
- Citrix XenDesktop 7.7 for Microsoft Windows Server 2012 operating system
- Citrix XenApp 7.7 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenDesktop 7.7 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenApp 7.6 for Microsoft Windows Server 2016 operating system

- Citrix XenDesktop 7.6 for Microsoft Windows Server 2016 operating system
- Citrix XenApp 7.6 for Microsoft Windows Server 2012 R2 operating system
- Citrix XenDesktop 7.6 for Microsoft Windows Server 2012 R2 operating system
- Citrix XenApp 7.6 for Microsoft Windows Server 2012 operating system
- Citrix XenDesktop 7.6 for Microsoft Windows Server 2012 operating system
- Citrix XenApp 7.6 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenDesktop 7.6 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenApp 7.5 for Microsoft Windows Server 2016 operating system
- Citrix XenDesktop 7.5 for Microsoft Windows Server 2016 operating system
- Citrix XenApp 7.5 for Microsoft Windows Server 2012 R2 operating system
- Citrix XenDesktop 7.5 for Microsoft Windows Server 2012 R2 operating system
- Citrix XenApp 7.5 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenDesktop 7.5 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenApp 6.5 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenApp 6.0 for Microsoft Windows Server 2008 R2 operating system
- Citrix XenApp 5.0 for Microsoft Windows Server 2008 operating system

The Universal Print Driver is also compatible with the following Microsoft Windows Clustered Servers in 32-bit and 64-bit versions (where available):

- Windows Server 2016
- Windows Server 2012 R2
- Windows Server 2012
- Windows Server 2008 R2
- Windows Server 2008

The Universal Print Driver is compatible with the following Novell operating systems:

- Novell NetWare 6.5 Open Enterprise Server
- Novell Open Enterprise Server on SUSE Linux Enterprise Server with the following configurations in 32-bit and 64-bit versions (where available):
  - NOES 15 on SLES 11 SP3
  - NOES 11 SP2 on SLES 11 SP3
  - NOES 11 SP1 on SLES 11 SP2
  - NOES 2 SP2 on SLES 10 SP4

  Note: These configurations support only Windows clients for Micro Focus iPrint for Windows 10, Windows 8.1, Windows 7, and Windows Vista operating systems.

Device compatibility

The Lexmark Universal Print Drivers are compatible with the following devices:

Device	PCL 5 emulation	PCL XL emulation	PS emulation
Mono laser printers			
E120n[1]	✓	✓	
E220[1]	✓		
E230, E232, E234, E234n	✓		
E238, E240	✓	✓	
E240n, E340, E342n	✓	✓	✓
E250d, E250dn, E350d, E352dn, E450dn	✓	✓	✓
E260, E260d, E260dn	✓	✓	✓
E320, E322	✓		✓
E321[1], E323[1]	✓		✓
E330, E332	✓		✓
E360d, E360dn	✓	✓	✓
E460dn, E460dw, E462dtn	✓	✓	✓
M1100 Series[2] (M1140, M1140 Plus, M1145)	✓	✓	✓
M3100 Series[2] (M3150, M3150dn)	✓	✓	✓
M5100 Series[2] (M5155, M5163, M5163dn, M5170)	✓	✓	✓
MS310 Series[2] (MS310d, MS310dn, MS312dn, MS315dn, MS317dn)	✓	✓	✓
MS410 Series[2] (MS410d, MS410dn, MS415dn, MS417dn)	✓	✓	✓
MS510 Series[2] (MS510dn, MS517dn)	✓	✓	✓
MS610 Series[2] (MS610de, MS610dn, MS617dn)	✓	✓	✓
MS710 Series[2] (MS710, MS711)	✓	✓	✓
MS810 Series[2] (MS810, MS811, MS812)	✓	✓	✓
MS910 Series[2] (MS911de)	✓	✓	✓
Optra S 1625	✓		
Optra S 1855	✓		

[1] Two-sided printing is not supported.

[2] Two-sided printing is supported by default.

[3] Custom forms, collation, booklet printing, and most print quality controls are not available.

Device	PCL 5 emulation	PCL XL emulation	PS emulation
Optra S 2420	✓		
Optra S 2450, Optra S 2455	✓		
Optra T612, Optra T614	✓		✓
T420	✓		✓
T430	✓		✓
T520, T522	✓		✓
T620, T622	✓		✓
T630, T632, T634	✓		✓
T640, T642, T644	✓	✓	✓
T650, T652, T654, T656	✓	✓	✓
W820	✓	✓	✓
W840	✓	✓	✓
W850	✓	✓	✓
Mono laser multifunction products			
6500e	✓	✓	✓
MX310 Series[2] (MX310dn, MX317dn)	✓	✓	✓
MX410 Series[2] (MX410de, MX417de)	✓	✓	✓
MX510 Series[2] (MX510de, MX511de, MX511dhe, MX517de)	✓	✓	✓
MX610 Series[2] (MX610de, MX611de, MX611dhe, MX617de)	✓	✓	✓
MX6500e Series[2] (MX6500e)	✓	✓	✓
MX710 Series[2] (MX710, MX711)	✓	✓	✓
MX810 Series[2] (MX810, MX811, MX812)	✓	✓	✓
MX910 Series[2] (MX910de, MX911dte, MX912dxe)	✓	✓	✓
X203n, X204n	✓	✓	✓
X264dn, X363dn, X364dn, X364dw	✓	✓	✓
X340n[3], X342n[3]	✓	✓	

[1] Two-sided printing is not supported.

[2] Two-sided printing is supported by default.

[3] Custom forms, collation, booklet printing, and most print quality controls are not available.

Device	PCL 5 emulation	PCL XL emulation	PS emulation
X422	✓		✓
X463de, X464de, X466dte, X466dtwe	✓	✓	✓
X642e	✓	✓	✓
X644e, X646e	✓	✓	✓
X646ef	✓	✓	✓
X651de, X652de, X654dte, X656de, X658de	✓	✓	✓
X820e	✓	✓	✓
X830, X832	✓		✓
X850e, X852e, X854e	✓	✓	✓
X860e, X862e, X864e	✓	✓	✓
XM1100 Series[2] (XM1135, XM1140, XM1145)	✓	✓	✓
XM3100 Series[2] (XM3150)	✓	✓	✓
XM5100 Series[2] (XM5163, XM5170)	✓	✓	✓
XM5200 Series[2] (XM5263, XM5270)	✓	✓	✓
XM7100 Series[2] (XM7155, XM7163, XM7170)	✓	✓	✓
XM7200 Series[2] (XM7263, XM7270)	✓	✓	✓
XM9100 Series[2] (XM9145, XM9155, XM9165)	✓	✓	✓
Color laser printers			
C510	✓		✓
C520, C522, C524	✓	✓	✓
C530, C532, C534	✓	✓	✓
C540, C543, C544, C546	✓	✓	✓
C734, C736	✓	✓	✓
C746dn, C746dtn, C746n, C748de, C748dte, C748e	✓	✓	✓
C750	✓		✓
C752	✓		✓

[1] Two-sided printing is not supported.

[2] Two-sided printing is supported by default.

[3] Custom forms, collation, booklet printing, and most print quality controls are not available.

Device	PCL 5 emulation	PCL XL emulation	PS emulation
C760, C762	✓	✓	✓
C770, C772	✓	✓	✓
C780, C782, C782 XL	✓	✓	✓
C790, C792	✓	✓	✓
C912	✓		✓
C920	✓	✓	✓
C925	✓	✓	✓
C935	✓	✓	✓
C950de	✓	✓	✓
C2100 Series[2] (C2132)	✓	✓	✓
CS310 Series[2] (CS310dn, CS310n, CS317dn)	✓	✓	✓
CS410 Series[2] (CS410de, CS410dn, CS410n, CS417dn)	✓	✓	✓
CS510 Series[2] (CS510de, CS517de)	✓	✓	✓
CS720de	✓	✓	✓
CS725de	✓	✓	✓
CS820 Series (CS820de, CS820dte, CS820dtfe)	✓	✓	✓
CS4150	✓	✓	✓
CS6160de	✓	✓	✓
Color laser multifunction products			
CX310 Series[2] (CX310dn, CX310n, CX317dn)	✓	✓	✓
CX410 Series[2] (CX410de, CX410e, CX417de)	✓	✓	✓
CX510 Series[2] (CX510de, CX517de)	✓	✓	✓
CX725 Series (CX725de, CX725dhe, CX725dthe)	✓	✓	✓
CX820 Series (CX820de, CX820dtfe)	✓	✓	✓
CX825 Series (CX825de, CX825dte, CX825dtfe, CX825dtpe)	✓	✓	✓

[1] Two-sided printing is not supported.

[2] Two-sided printing is supported by default.

[3] Custom forms, collation, booklet printing, and most print quality controls are not available.

Device	PCL 5 emulation	PCL XL emulation	PS emulation
CX860 Series (CX860de, CX860dte, CX860dtfe, CX860dtpe)	✓	✓	✓
X543, X544, X546	✓	✓	✓
X548, X548e	✓	✓	✓
X734de, X736de, X738de	✓	✓	✓
X746de, X748de, X748dte	✓	✓	✓
X762e	✓	✓	✓
X772e	✓	✓	✓
X782e, X782e XL	✓	✓	✓
X790, X792	✓	✓	✓
X912	✓		✓
X925, XS925	✓	✓	✓
X940e, X945e	✓	✓	✓
X950de, X952de, X954de	✓	✓	✓
XC2100 Series[2] (XC2130, XC2132)	✓	✓	✓
XC4150	✓	✓	✓
XC6100 Series (XC6152de, XC6152dtfe)	✓	✓	✓
XC8100 Series (XC8155de, XC8155dte, XC8160de, XC8160dte)	✓	✓	✓
Color inkjet printers			
Pro710 Series (Pro715, Pro719)	✓	✓	✓
Pro910 Series (Pro912, Pro915, Pro919)	✓	✓	✓
Pro4000 Series (Pro4000, Pro4000c)	✓	✓	✓
Pro5500 Series (Pro5500, Pro5500t)	✓	✓	✓
S310 Series (S315, S319)	✓	✓	✓
S410 Series (S415, S419)	✓	✓	✓
S510 Series (S515, S519)	✓	✓	✓

[1] Two-sided printing is not supported.

[2] Two-sided printing is supported by default.

[3] 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, USB ports, and web services ports in all supported operating systems.

Note: Bidirectional communication is available with standard IP ports, Lexmark Enhanced TCP/IP ports, USB connections, web services ports, and Novell iPrint ports.

Standard IP ports

Printing to standard IP ports is supported through the Windows operating system 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 in the Lexmark Universal Print Driver package.

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

LPR ports

LPR ports are supported if available in the operating system.

USB ports

USB ports are supported.

Web services ports

Web services ports are supported if available in the operating system.

Travel Print

The Travel Print feature allows users who travel frequently or change printers on a regular basis to switch easily between multiple devices. Users can then designate up to 10 frequently used printers as favorites, providing easy access to the ones they use most.

Travel Print users can also search for printers using the printer host name or IP address, or by searching a subnet. The printer search results include essential information about each printer, including, among other things, its model name, current operational state, IP address, and color and two-sided printing capabilities.

Users can also use the Travel Print feature to access the Embedded Web Server for a selected device, allowing access to even more detailed printer information and configuration options.

Supported paper sizes and types

Available paper sizes and types may vary, depending on printers and print drivers.

Supported paper sizes

- 12 x 18 inches
- A3 (297 x 420 mm)
- A4 (210 x 297 mm)
- A5 (148 x 210 mm)
- A6 (105 x 148 mm)
- B4 (257 x 364 mm
- B5 (182 x 257 mm)
- Banner 1 (216 x 914 mm)
- Banner 2 (216 x 1219 mm)
- Banner 3 (297 x 914 mm)
- Banner 4 (297 x 1219 mm)
- Envelope (Monarch) 7 3/4 (3.9 x 7.5 inches)
- Envelope 9 (3.9 x 8.9 inches)
- Envelope 10 (4.1 x 9.5 inches)
- Envelope B5 (176 x 250 mm)
- Envelope C5 (162 x 229 mm)
- Envelope DL (110 x 220 mm)
- Executive (7.3 x 10.5 inches)
- Folio (8.5 x 13 inches)
- Legal (8.5 x 14 inches)
- Letter (8.5 x 11 inches)
- Oficio (Mexico) (216 x 340 mm)
- Postcard (4 x 6 inches)
- SRA3 (320 x 450 mm)
- Statement (5.5 x 8.5 inches)
- Tabloid (11 x 17 inches)
- Universal (216 x 360 mm)

Supported paper types

- Bond
- Business card
- Card stock
- Colored
- ColorLok certified plain
- Envelope

- Glossy brochure
- Glossy photo
- Heavy glossy
- Heavy plain
- Iron-on transfer
- Labels
- Letterhead
- Lexmark PerfectFinish™ Photo
- Lexmark Photo
- Light
- Matte brochure
- Matte photo
- Photo greeting cards
- Plain
- Premium plain
- Preprinted
- Recycled
- Rough/Cotton
- Rough Envelope
- Transparency
- Vinyl labels

Notes:

- The Universal Print Driver may support custom paper types, depending on your printer model.
- Available paper types may vary, depending on printers and print drivers.

Language support

The Lexmark Universal Print Drivers support the following languages:

- Arabic
- Chinese (simplified)
- Chinese (traditional)
- Croatian
- Czech
- Danish
- Dutch
- English
- Finnish
- French
- German
- Greek

- Hungarian
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazilian)
- Romanian
- Russian
- Serbian
- Slovak
- Slovenian
- 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 installation package available on the Lexmark website.

Updating previous versions of the Universal Print Driver

The Universal Print Driver (UPD) version 2 is designed to work in parallel with UPD version 1. This gives administrators or end users the ability of having both versions installed at once. When upgrading from UPD version 1 to 2, switching the driver from the Advanced tab of the Printer Properties dialog is not supported. Administrators must delete the existing UPD version 1 print queues, and then create new print queues using UPD version 2.

Downloading the Universal Print Driver

1. Go to **www.lexmark.com**.
2. Click **Customer Support** > **Universal Print Driver**.
3. Navigate to the "Complete drivers and software for Windows" section, and then click **Download**.

   Notes:

   - If you download an emulation-specific Universal Print Driver, then the Phone Book and Travel Print applications must be downloaded separately. Both applications automatically install with the administrator package.
   - For more information on the full list of packages, see the Universal Print Driver section.
4. Follow the instructions on the computer screen.

Updating installed options

1. From the Printer Properties dialog box, click the **Configuration** tab.
2. Click **Update Now-Ask Printer** > **OK**.

Note: The print driver updates the status of all printer options. If bidirectional communication is not active or is unavailable for the printer, then the print driver cannot perform this operation and shows an error.

What is a Package Creation Utility?

Package Creation Utility lets you create customized installer packages that you can launch without user input, and integrate into your deployment solution. It is a tool that generates driver installation packages which automate the installation of print drivers with preconfigured connectivity and print options.

Using Travel Print

The Travel Print feature lets you search and select a network printer when printing or faxing from the host computer.

If you travel frequently and must regularly change printers, then you no longer need to install several print queues to support printers at multiple locations.

When Travel Print is used, a printer selection dialog appears when you:

- Send a print job to the print driver from a Windows print dialog.
- Access Printing Preferences from a Windows print dialog.
- Access either Printing Preferences or Printer Properties from the print driver.

From the printer selection dialog box, you can designate up to 10 frequently used printers in the Favorites tab. You can also search for printers in the Search tab using the printer host name or IP address, or by searching a subnet. The search results display important printer information, such as the printer status, IP address, and color and two-sided printing capabilities. You can also access the Embedded Web Server for a selected printer to view more detailed printer information and configuration options.

Notes:

- You must have administrator rights to be able to install and enable Travel Print. To install, run the Travel Print installation package or the Universal Print Driver system administrator installation package. For information on obtaining a copy of the installation packages, visit the Lexmark website.
- Travel Print is not intended for server-based printing. The print driver and Travel Print should be installed locally on host computers.
- If you want Travel Print to update the printer model and configuration options, then enable the "Update Configuration from Printer" feature.

Enabling the Travel Print feature

Travel Print is enabled by associating the print driver with the Travel Print port.

Note: The Travel Print port will be available only if Travel Print is installed. To install Travel Print, run the Travel Print installation package or the Universal Print Driver system administrator installation package. For information on obtaining a copy of the installation packages, contact your printer manufacturer.

To associate the print driver with the Travel Print port:

1. Open the Printer Properties for the print driver.
2. Select the **Ports** tab.
3. Select **Travel Print port** as the port for the print driver.

To disable the Travel Print feature, change the print driver port to any other printer port.

Understanding the Universal Print Driver

Using the Layout tab

The Layout tab controls the organizational attributes of each print job.

Use	To
Copies	Specify the number of copies to be printed and how each copy is organized. • **Number of Copies**—Select the number of copies to be printed. • **Collate**—Select the order in which pages are printed when printing multiple copies of a document. For example, if you are printing two copies of a five-page document, then the collated output is 1, 2, 3, 4, 5, 1, 2, 3, 4, 5. The non-collated output is 1, 1, 2, 2, 3, 3, 4, 4, 5, 5. If the installed memory is insufficient to collate the document, then the collated output is generated for each page that is already stored in the memory, so the output might be 1, 2, 3, 1, 2, 3, 4, 5, 4, 5. • **Reverse page order**—Print the pages of a document in reverse order so that in the finished output, the last page appears on top. If you want the output back in normal page order, then manually reverse the pages.
Page Orientation	Specify the alignment of the paper or form when it is printed. • **Portrait**—Select the vertical page orientation, where the page is taller than it is wide. • **Landscape**—Select the horizontal page orientation, where the page is wider than it is tall. • **Rotate 180°**—Rotate the page image to 180 degrees. This setting can be used with the other orientation options.
Print on Both Sides (Duplex)	Specify which settings to use when printing on both sides of the page. Select a two-sided printing method from the list. Long Edge and Short Edge specify which edge of the printed document will be used as the binding edge. **Notes:** • You can print instructions for manual two-sided printing in select printer models. • You can use the Dry Time Delay menu in select printer models to specify how long it takes before the printer prints on the opposite side of a freshly printed page. Dry Time Delay menu settings include the following: • **Normal (Default)**—This uses the standard drying time. • **Medium**—This partially extends the drying time. • **Extended**—This uses the maximum drying time.

Use	To
Page Layouts	Select Page Layout section options. • **Normal**—Page Layout options are not applied to the print job. • **Multiple pages per side (N-Up)**—Print multiple pages on each sheet of paper. • **Booklet**—Print a document as a booklet. • **Poster**—Print a document in a larger format. • **Mirror**—Print a mirror image of the document. **Note:** Some options are available only in select printer models.
Document Reading Order Preset	Select the reading order of the document you are printing. • Left to right • Right to left **Note:** The reading order changes the preset value of the “Page order” option in the “N-Up settings” dialog, “Binding edge” option in the “Booklet settings” dialog, and “Near” and “Far” alignment positions when editing watermarks.

Notes:

- Some options shown on the Layout tab are available only in select printer models and drivers. For more information, see the *User's Guide*.
- The settings specified in the Layout tab may be independent from the options that are selected in the print dialog of a Windows-based program. Program settings typically override the settings in the Layout tab.
- Specifying multiple number of copies on both the Layout tab and the Windows-based program print dialog may produce unpredictable results.
- To save the Collate setting, select **Use printer-based** in the Configuration tab of the Printer Properties dialog.

Using the Paper/Finishing tab

The Paper/Finishing tab controls the paper and finishing attributes of each print job.

Use	To
Paper	Select paper handling options. • **Paper Size**—Select the paper size. • **Resizing Options**—Select “Fit to paper size,” which automatically scales the page image to match a specific paper size, or manually scale the document image by a certain percentage. **Notes:** – Some Windows programs offer a scaling option. Using the two options simultaneously may produce unexpected results. – The scaling option is available only in the PostScript driver. • **Manage Custom Sizes**—Add, edit, or delete a custom paper size. Once a custom paper size is created or modified, it is available for selection in the **Paper size** menu. • **Use full printable area**—The page image prints as close to the edge of the page as the printer allows. The full printable area on the page may vary from printer to printer. • **Other paper size with different orientation**—Select the paper size that is loaded in different orientation. This option is recommended for two-sided print jobs, jobs that use the finisher, or both. **Note:** Selecting **Off** disables two-sided printing. • **Paper type**—Select the paper type. • **Paper source/tray**—Select the paper tray. • **Use multiple input options**--Use paper or other media from different paper trays in the same print job. **Note:** This option may not be available in some drivers.
Finishing	Select available finisher options installed for use with the printer. • **Output Bin**—Select the output bin. **Note:** Supported output bins may vary for different printers. See your printer documentation for a list of available output bins. • **Offset**—Stack print jobs in staggered sets in an output bin. • **Staple**—Specify the number and placement of staples in a finished print job. • **Hole Punch**—Specify the location and number of holes to be punched in the finished print job. • **Fold**—Specify how the finished print job is folded.

Notes:

- Some finishing options are available only in some printers. For more information on the available finishing options, see the *User's Guide*.
- Finisher options must be installed for them to be available in the Paper/Finishing tab.

Using the Quality tab

The Quality tab controls the print and image quality settings of a print job.

Use	To
Print Quality settings	Optimize the print quality of the print job. • **Draft**—Print the document using the lowest resolution for faster printing. • **Normal**—Print the document using the standard print quality settings. • **Best**—Print the document using the best possible resolution. • **Custom**—Print the document using the settings specified by the user. **Notes:** • These settings are available only for inkjet printers. • To let the printer automatically select the appropriate print resolution settings, select **Auto**.
Sharpen	Sharpen the detail of the print image by increasing the contrast around the edges of text and images. **Notes:** • This option is available only in inkjet printers. • When printing images that have already had a sharpening effect applied by another application, using the Sharpen feature in the driver can produce unintended results.
Resolution	Specify the printed output resolution in dots per inch, in image quality (IQ), or in color quality (CQ). **Note:** This option is available only in laser printers.
Halftone	Select alternate halftone screens. • **Use printer settings**—Apply the settings specified in the printer. • **Normal**—Use standard halftone screens. • **Detail**—Use alternate halftone screens designed for thin color lines and text rather than uniformity and smoothness.
Color Preference	Change the intensity of the colors on the printed page. • **Auto**—The printer automatically selects the color preference. • **Natural**—Apply a moderate degree of intensity to printed colors. • **Vivid**—Apply the highest degree of intensity to the printed colors. **Note:** This option is available only in inkjet printers.
Advanced Color Options	Determine the print mode for the job. • **Auto**—The printer automatically determines the print mode. • **Use ICC test Chart Process**—Use a special print mode based on ICC profiles. **Note:** This option is available only in inkjet printers.
Gray Correction	Control the brightness and contrast of the printed output. • **Use printer settings**—Apply the setting specified in the printer. • **Off**—Disable gray correction. • **Manual**—Customize the brightness and contrast of the printed output. This setting enables the brightness and contrast sliders. **Note:** This option is available only in monochrome printers.

Use	To
Pixel Boost	Enhance image and text detail in a print job by increasing pixel density according to the selected setting. • **Use printer settings**—Apply the setting specified in the printer. • **Off**—Disable pixel boost. • **Fonts**—Darken the text on the printed output. This setting affects only font data. • **Horizontally**—Darken the horizontal lines of text and images on the printed page. • **Vertically**—Darken the vertical lines of text and images on the printed page. • **Both directions**—Darken both horizontal and vertical lines of text and images on the printed page. **Note:** This option is available only in monochrome printers.
Color Output	Specify whether a document is printed in color or black and white, and what ink combinations are used to complete the job. **Note:** This option is available only in inkjet printers.
Send color to printer	Print color images in grayscale. **Notes:** • This option is available only in monochrome printers. • When a print job is sent to the printer, the printer converts colored images to monochrome grayscale. • This option may enhance grayscale images but may result in a slightly slow printing performance.
Print Color Text as Black	Print all color text using black ink only. **Note:** This option is available only in monochrome printers.
Print text as black	Print text in black, but print images in color. **Notes:** • This option may be available only in some print drivers. • This option is available only in color printers.
Print in black and white	Print the document in black and white. **Note:** This option is available only in color printers.
Toner Darkness	Lighten or darken the printed output. • **Use printer settings**—Apply the setting specified in the printer. • **Use toner darkness**—Customize the toner darkness of the printed output. This setting enables the toner darkness slider. **Note:** This option is available only in laser printers.

Use	To
ColorSaver™	Reduce the amount of toner that the printer uses when printing color images. • **Use printer settings**—Apply the setting specified in the printer. • **On**—Enable the ColorSaver feature. • **Off**—Disable the ColorSaver feature. **Notes:** • Text is printed using the default amount of toner. • This option is available only in laser printers.
Edit Color Correction	Adjust the printed color to better match the colors of other output devices or standard color systems. • **Use printer settings**—Apply the setting specified in the printer. • **Off**—Disable color correction. • **Auto**—Apply a different color conversion table to each object on the printed page, depending on the object type and how color is specified. • **Manual**—Customize the color conversion table that is applied to each object on the printed page, depending on the object type and how color is specified. This option enables the RGB and CMYK Manual color correction options. **Note:** This option is available only in color laser printers.
RGB Correction	Control the brightness, contrast, and saturation of the printed output. • **Use printer settings**—Apply the setting specified in the printer. • **Manual**—Customize the brightness, contrast, and saturation of the printed output. This setting enables brightness, contrast, and saturation sliders. **Note:** This option is available only in color laser printers.
Edit Color Balance	Adjust the color of the printed output by individually increasing or decreasing the amount of toner used for each color plane. • **Use printer settings**—Apply the setting specified in the printer. • **Manual**—Customize the amount of cyan, magenta, yellow, and black toner used in the printed output. This setting enables the color balance sliders. **Note:** This option is available only in color laser printers.
Edit Color Matching	Match the colors in the printed documented to the colors on the monitor. • **Contrast (for images)**—Apply color matching for photographs and images. • **Saturation (for business graphics)**—Apply color matching for charts or when using bright colors. • **Colorimetric (for closest colors)**—Apply color matching for a document that has a color that needs an exact match and a printer that can reproduce the specified color. **Note:** This option is available only in color laser printers.

Use	To
Rich Black	Make black objects richer. • **On**—Uses composite black for black or gray objects during RGB-CMYK color conversion. • **Off**—Uses either pure or composite black for black or gray objects depending on the color correction mode selected. **Note:** This option is available only in some print drivers.

Using the Fax preferences tab

The Fax tab in the Printing Preferences dialog controls which fax options are used with each job.

Use	To
Enable fax	Turn on the fax option in the driver.
Always display settings prior to faxing	Display the Send Fax dialog before the fax is sent. This allows you to verify that all recipient fax numbers are correct, and helps to prevent faxes from being sent to an incorrect recipient. If **Always display settings prior to faxing** is not selected, then the recipient fax number must be verified in the Fax Settings section of the Fax tab.
Fax Settings	Specify the dialing and page information associated with the fax. Fax Settings include the following: • **Fax number(s)**—These are the numbers that the fax will be sent to. Fax numbers can be entered manually or selected from the phone book. • **Dialing prefix**—This is the dialing prefix needed to access an outside line. If no dialing prefix is required, then leave this field blank. • **Fax name**—This is the Windows operating system user ID of the computer from which the fax is being sent. • **Paper size**—This designates the paper size the fax will be formatted for. • **Orientation**—This specifies the orientation of the fax image.
Cover Page	Add a cover page with the associated information to the outgoing fax. • **Include cover page with fax**—This adds a cover page to the fax. • **Include recipient information/comments**—This lets you add specific recipient names and comments if the fax needs to be directed to the attention of a specific person or department. • **Include sender information**—This adds information, such as the sender's name, company, address, and contact information. **Note:** To specify the sender information in the Fax Cover Settings dialog, click **Settings**.

Notes:

- The Fax option is available only in PostScript emulation driver. For more information on installing the PostScript emulation driver, see the *Software and Documentation* CD.
- If the Fax tab is not available, then the fax option is not installed.

Using the Watermark tab

The Watermark tab controls the use of watermarks in a print job.

Note: This feature may not be available in some drivers.

Use	To
Do not use watermarks	Exclude watermarks from the print job.
Use the same watermark on all pages	Print the selected watermark on all pages of the printed document.
Use a different watermark on the first page	Specify a watermark for the first page, as well as a different watermark, to display on all other pages. **Note:** If two-sided printing (Duplex) is enabled, then the specified watermark is used on the front side of the first sheet.
Use a different watermark on odd/even pages	Specify different watermarks for odd and even pages.
Edit Watermarks	Open the Edit Watermarks dialog.

Using the Overlays tab

The Overlays tab in the Printing Preferences dialog controls which overlays are used with a print job and how the overlays are displayed.

Notes:

- The Overlays tab is available only in PCL and PCL XL emulation drivers.
- Overlays are available only in select printer models.

Use	To
Do not use overlays	Exclude overlays from the print job.
Use the same overlay on all pages	Select an overlay to print on all pages of the printed document.
Use a different overlay on the first page	Specify an overlay to print on the first page, and a different overlay to print on all subsequent pages.
Use a different overlay on odd/even pages	Specify which overlays will print on odd and even pages of the document.
Overlay placement	Specify the placement of the overlay in relation to the page images. • **Over the page's images**—Print the overlay on top of the text or graphic. • **Under the page's images**—Print the text or graphic on top of the overlay.

Using the Print and Hold tab

The Print and Hold tab provides extra controls for how and when a job is printed. When using the Print and Hold tab, you can submit a print job to the printer, but the printer will hold the print job until the user releases it at the printer control panel. The Print and Hold tab provides varying levels of security for held jobs. Refer to the following table to determine the appropriate Print and Hold tab option.

The Print and Hold tab is available in the Printing Preferences dialog.

Note: The Print and Hold feature is available only in select printer models.

Use	To
Use Print and Hold	Enable the Print and Hold tab feature.
Use logged-in user name	Query the Windows operating system for the user's ID and submit the ID as the default user name associated with the held print job.
User Name	Associate a user name with a held print job.
Keep duplicate documents	Allow print jobs having the same user and job names to remain in the printer memory without being overwritten.
Confidential print	Password-protect confidential print jobs with a four-digit personal identification number *(PIN)*. The PIN is four digits, 0–9 or 1–6. For more information on the allowed digits for the PIN, see your printer *User's Guide*. A confidential print job does not print until the PIN is entered in the PIN field and a user name is selected on the printer control panel.
Verify print	Print the first copy of a complex multiple-copy print job for inspection. The remaining copies are held until they are released for printing or canceled.
Reserve print	Store a print job in the printer memory for printing at a later time.
Repeat print	Print the job immediately and store a copy in the printer memory so that more copies may be printed at a later time.

Notes:

- Some features are available only in select printer models.
- For more information on releasing held jobs from the printer control panel, see the printer *User's Guide*.

Using the Other Options tab

The Other Options tab controls the print driver options not associated with a feature-specific tab.

Note: Some options are available only in some printer models.

Use	To
TrueType Fonts	Determine how TrueType fonts are printed, which character set to display, and whether to send information about printer-resident fonts to the application. • **Bitmaps (each character)**—Create and send a bitmap to the printer for each different TrueType font character and point size in the document. • **Bitmaps (full page)**—Specify that each page of the text and graphics in a document is saved as a bitmap and sent to the printer. • **Outlines**—Creates and sends an outline to the printer for each different TrueType font character in a document. • **Automatically select**—Let the print driver select a setting for the print job. This option is available only in PostScript print driver. • **Adobe Type 1 fonts**—Print smaller TrueType fonts as bitmapped fonts, and print larger TrueType fonts as Adobe Type 1 outline fonts. This option is available only in PostScript print driver. • **Adobe Type 42 fonts**—Print TrueType fonts as Adobe Type 42 hinted outline fonts. Compared to Adobe Type 1 outline fonts, Type 42 fonts may appear smoother and less jagged, especially at larger point sizes. This option is available only in the PostScript print driver. **Note:** This option is available only if the printer supports a TrueType rasterizer.
Image Compression	Reduce the file size of print jobs that contain images. Reducing the file size improves printing performance. **Note:** This feature is available only in PCL XL emulation and PostScript print drivers. For PCL XL emulation print drivers, select **Enable Image Compression**, and then use the Quality slider to adjust the image quality and compression level. Increasing the image quality decreases image compression. For PostScript print drivers, select how you want the images to be compressed. • **NONE**—Disable image compression. • **Lossless**—Use Lempel-Ziv-Welch (LZW) compression to reduce file size without reducing image quality. In some cases, the image may not be compressed to retain image quality. • **High**—Use JPEG compression to reduce file size by reducing image quality. To adjust the image quality and compression level, use the Quality slider. Increasing the image quality decreases image compression.

Use	To
Edit Job Accounting	Open the Job Accounting preferences dialog box and modify the Job Accounting settings that are associated with the print job. • **Keep history for last 5 entries**—Retain the last five unique entries for each Job Accounting setting. The settings are available in a drop-down menu under each setting in the Job Accounting dialog box during printing. • **Prompt for account information at print time**—Prompt the user for job accounting information during printing. • **Do not prompt at print time. Use the following job accounting settings**—Use the Job Accounting settings specified in the following fields: – **Use logged-in user name**—Use the Windows login ID of the current user and updates the User Name/ID field with the retrieved information. – **User Name/ID**—The user name or user ID associated with the print job. – **Account Code**—The account code associated with the print job. – **Department Code**—The department code associated with the print job. **Note:** Some settings are available only in some printer models.
Metafile spooling	Specify the format in which to store printing information on your disk while a print job is waiting to be printed. • **Automatic**—The print driver determines which format results in the fastest overall print time for each job. • **On**—The print driver spools all jobs in metafile format. • **Off**—All print processor functions are disabled and the print driver no longer spools jobs in metafile (emf) format.
PostScript	Control how the print driver produces the PostScript data that is sent to the printer. • **Optimize output format**—Optimize the PostScript data stream that the print driver produces based on the selected format. Output formats include Speed, Portability, Encapsulated PostScript, and Archive. • **Language level**—Specify the level of PostScript to be used for the print job. Levels 1, 2, and 3 are available. • **Print error information**—Print information about any PostScript language errors encountered during printing. • **Generate PostScript in driver**—The print driver generates the PostScript language for the print job, rather than the program from which the document is printed. **Notes:** • These options are available only in PostScript drivers. • Some functions are not available for use with the Encapsulated PostScript option in the PostScript driver when Fax is enabled. • If Encapsulated PostScript is selected as the output format, then any printer-specific setting is removed. The output file can then be easily imported into other PostScript applications.
PCL emulation	Access the PCL emulation options for both PCL 5 and PCL XL printer emulations. • **Graphic Mode**—Control how the printer processes and prints text and graphics in a document. **Note:** This option is available only in the PCL 5 emulation driver.

Use	To
Continuous Image	Print pages without any space in between. The pages look like one continuous page. **Note:** This option is available only in some print drivers.

Frequently asked questions

What are the benefits of using the Universal Print Driver (UPD)?

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

Does the UPD support Plug'n'Play with devices?

Plug'n'Play is available on all supported devices. For a list of supported devices, see "Device compatibility" on page 15.

Is the UPD Microsoft certified?

The UPD version 2 for Microsoft Windows Vista operating system or later is 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 UPD as with any other product-specific driver.

What is a version number?

A version number is a unique number or set of numbers assigned to a specific release of a program, file, firmware, hardware, driver, or software.

What is the UPD version numbering format?

The UPD version number is divided into sets of numbers, separated by decimal points.

UPD 2.6.0.0 and later versioning schema

Example: **2.6.1.0**
where:
2 is the major version.
6 is the minor version.
1 is the revision of the minor version.
0 is the private version.

Part	Description
Major version	The primary level of the UPD release. It increments whenever there are major functional and architectural modifications.
Minor version	The secondary level of the UPD release. It increments whenever there are minor functional modifications.
Revision of the minor version	The tertiary level of the UPD release. It increments whenever there are updates made on the minor functional modifications.
Private version	The level of the UPD release for specific customers. **Note:** If the version value is 0, then the UPD is released to the general public.

UPD 2.x.5.0 and older versioning schema

Example: **2.1.5.0**
where:
2 is the major version.
1 is the data stream.
5 is the minor version.
0 is the private version.

Part	Description
Major version	The primary level of the UPD release. It increments whenever there are major functional and architectural modifications.
Data stream	The data stream value, which varies depending on the emulations: • PCL = 1 • PostScript = 2 • PCL XL = 3
Minor version	The secondary level of the UPD release. It increments whenever there are minor functional modifications.
Private version	The level of the UPD release for specific customers. **Note:** If the version value is 0, then the UPD is released to the general public.

Where can I find the version number of the print driver?

The version number can be found in the About tab of the Printer Properties dialog.

Are model-specific drivers still available?

Model-specific drivers are still available. While the UPD is essentially equivalent to a model-specific driver, the UPD supports various printers.

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

Use a model-specific driver if your printer is not in the list of supported printers.

What printing modes are supported with the PCL Emulation UPD?

Raster and GL/2 modes are supported. Host-based printing is not supported.

Why is the Resource Administration tab missing in Printer Properties?

The Resource Administration tab is available in the previous versions of UPD. The functionality of this tab for the UPD version 2 is now available in the Printer Driver Configuration Utility.

Is the Printer Driver Configuration Utility supported?

The Printer Driver Configuration Utility is supported when using the Lexmark Universal Print Driver System Installation package. The Lexmark Universal Print Driver System Administrator package is available at **www.lexmark.com**.

Is the UPD based on Microsoft system driver technology?

The UPD version 2 for Microsoft Windows Vista operating system or later is based on Microsoft system driver technology.

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Index

B
benefits 39

C
change history 5
confidential print jobs 34
  PIN 34
connectivity 21

D
device compatibility 15
downloading the Universal Print Driver 25

E
enabling Travel Print 26

F
fax preference tab
  using 33
fax settings
  using 33
Fax tab 33

H
holding print jobs 34

I
installed options
  updating 25

L
language support 23
Layout tab
  using 27

M
Microsoft certified 39
model-specific print driver 39

N
new features 5

O
operating system support 14
options
  updating 25
Other Options tab
  using 35
overlays tab 34
overview 4

P
Package Creation Utility 25
paper sizes
  supported by the Universal Print Driver 22
paper types
  supported by the Universal Print Driver 22
Paper/Finishing tab 28
PCL emulation support 39
Plug and play support 39
Plug'N'Play 39
Point and Print support 39
Printer Driver Configuration Utility support 39
printing
  confidential and other held jobs 34
  secure 34

Q
Quality tab
  using 29

R
repeating print jobs 34
reserving print jobs 34
Resource Administration tab
missing 39

S
secure printing 34
supported paper sizes 22

T
Travel Print 21, 26
  enabling 26

U
Universal Print Driver
  downloading 25
Universal Print Drivers
  overview 4
updating installed options 25
updating previous versions 25
using fax preference tab 33
using fax settings 33
using Travel Print 26

V
verifying print jobs 34
versioning schema 39

W
Watermark tab 34