



Lexmark™

CS725R or CX725R RFID Laser Solution

Integration Guide

February 2019

www.lexmark.com

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Change history

February 2019

- Added instructions on the following:
 - Installing the print driver
 - Validating the print driver
 - Converting Lexmark C4150 or XC4150 into an RFID printer
- Added information on sample RFID settings and their behaviors.
- Updated information on the following:
 - Understanding the RFID settings
 - Troubleshooting the printer when it shows error 44.01 or RFID media error
 - Troubleshooting the printer when it shows error 44.xx or tag command error
 - Troubleshooting the printer when it shows error 58 or input configuration error
 - Troubleshooting the printer when it shows error 985.xx
- Updated instructions on encoding RFID tags using PCL[®] data stream.

April 2018

- Updated the overview.
- Added information on printer configuration.
- Updated information on understanding RFID settings.
- Updated instructions on loading RFID media.
- Added instructions on verifying RFID printer setup.

December 2017

- Initial document release.

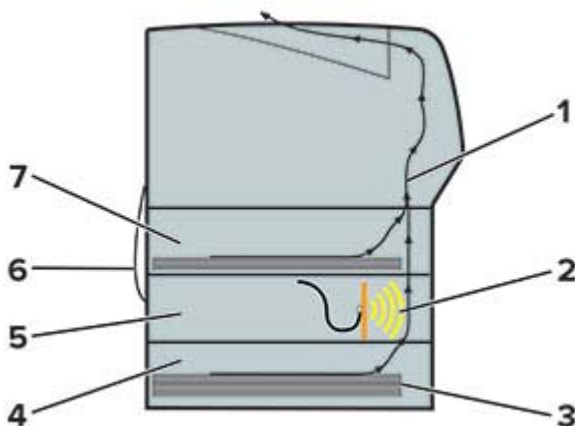
Overview

Radio-frequency identification (RFID) is a technology that helps businesses improve workflow and maximize process efficiencies. Lexmark provides color laser printer and multifunction product solutions capable of programming RFID tags and printing labels.

The Lexmark™ CS725R or CX725R RFID Laser Solution has the following key features:

- Prints labels and encode RFID tags on the same device at up to 50 pages a minute.
- Prints labels in color, which increases visibility and information retention.
- Uses a wide range of RFID media and supports sizes up to legal (215.9 x 355.6 mm, or 8.5 x 14 in.).
- Supports Electronic Product Code (EPC) Gen2 (ISO 18000-6C) for ultra high frequency (UHF) RFID tags.
- Programs tags from 16 to 496 bits of EPC memory in 16-bit increments and from 2 to 64 bytes of user memory.

The solution includes either a Lexmark CS725 printer or CX725 MFP with an RFID-enabled firmware, RFID option, and media tray. The RFID option is installed below the standard 550-sheet tray and above the media tray.



1	Media path
2	UHF radio and antenna
3	RFID media
4	Media tray
5	RFID option
6	RFID option cable connected to the rear USB port of the printer
7	Standard 550-sheet tray

When a print job with RFID command is sent to the printer, the printer performs the following steps:

- 1** The printer draws the RFID media from the media tray.
- 2** The RFID option encodes the data in the RFID tag, and then it immediately reads the RFID tag to check if encoding is successful.
- 3** The form is printed on the RFID media.

This document provides information on how to configure, use, and troubleshoot the solution.

Deployment readiness checklist

Make sure that:

- You have one of the following devices:
 - **Lexmark CS725R**—A color printer bundled with an RFID option and RFID-enabled firmware
 - **Lexmark CX725R**—A color MFP bundled with an RFID option and RFID-enabled firmware
 - **RFID option**—A tray with an RFID encoder that converts your Lexmark CS725 printer or CX725 MFP into an RFID printer

 - You have one of the following applications or driver:
 - Lexmark Forms Composer
 - Note:** To obtain the application, contact your Lexmark representative.
 - Lexmark RFID Tag Command Generator
 - Special-release version of the Lexmark Universal Print Driver PCL 5 emulation
- Note:** If you encode the RFID tag using PCL data stream, then download both the RFID Tag Command Generator and the special-release version of the Lexmark Universal Print Driver PCL 5 emulation.
- The RFID tag on the RFID media supports EPC Gen2 (ISO 18000-6C) standard.

Installing the RFID Solution

The following components are required for an RFID printer configuration:

- Lexmark CS725 printer or CX725 MFP

Note: You can also convert your Lexmark C4150 or XC4150 into an RFID printer. For more information, see [“Converting Lexmark C4150 or XC4150 into an RFID printer” on page 13.](#)

- Media tray (550-sheet tray)
- RFID option package that contains the following:
 - RFID option
 - Lexmark Forms and Bar Code Card
 - Flash drive with the RFID-enabled firmware

RFID printer configuration



1	Lexmark CS725R printer or CX725R MFP
2	Standard 550-sheet tray
3	RFID option
4	Media trays Notes: <ul style="list-style-type: none"> • Lexmark CS725R printer supports up to three media trays. • Lexmark CX725R MFP supports up to two media trays.

Installing the RFID option

⚠ CAUTION—SHOCK HAZARD: To avoid the risk of electrical shock, if you are accessing the controller board or installing optional hardware or memory devices sometime after setting up the printer, then turn off the printer, and unplug the power cord from the electrical outlet before continuing. If you have any other devices attached to the printer, then turn them off, and unplug any cables going into the printer.

- 1 Turn off the printer.
- 2 Unplug the power cord from the electrical outlet, and then from the printer.
- 3 Unpack the RFID option, and then remove all packing material.
- 4 Align the RFID option above the media tray, and then lower the RFID option until it *clicks* into place.

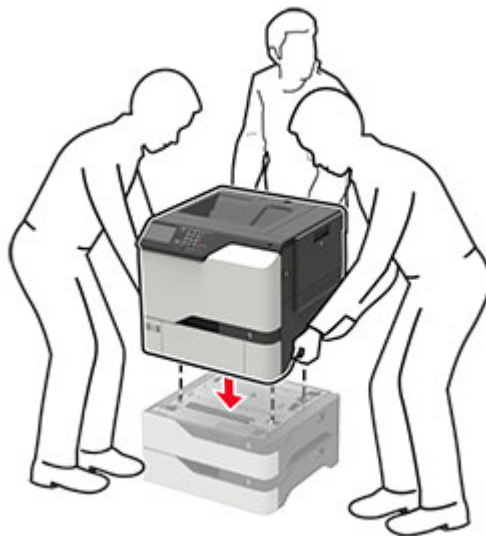


- 5 Lift the printer using the side and rear handles.

⚠ CAUTION—POTENTIAL INJURY: If the printer weight is greater than 20 kg (44 lb), then it may require two or more people to lift it safely.

Note: If an optional 550-sheet tray is installed, then unlock it before lifting the printer. Do not try to lift the printer and the optional tray at the same time.

- 6 Align the printer with the RFID option, and then lower the printer until it *clicks* into place.



- 7 Connect the power cord to the printer, and then to the electrical outlet.

⚠ CAUTION—POTENTIAL INJURY: To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

Note: To avoid printer errors, do not connect the RFID option cable.

- 8 Turn on the printer.

- 9 Install the RFID-enabled firmware.

Warning—Potential Damage: To avoid loss of data or printer malfunction, do not touch the flash drive or the control panel while the printer is updating.

- a Insert the flash drive into the front USB port of the printer.
- b Touch **USB Drive**, and then select the RFID-enabled firmware file.
- c Follow the instructions on the display.

Note: After installation, the printer restarts automatically.

- 10 Connect the RFID option cable to the rear USB port of the printer.

- 11 Turn off the printer.

- 12 Remove the flash drive from the printer.

- 13 Wait for about 10 seconds, and then turn on the printer.

Installing the print driver

A special-release version of the Lexmark Universal Print Driver PCL 5 emulation is available for use with RFID printers. To obtain a copy, contact your Lexmark representative.

Note: The special-release version of the print driver is compatible only with Microsoft Windows 7 operating system or later.

1 From a computer, run the executable file.

Note: Make sure that you have administrator access.

2 Read, and then accept the License Agreement.

3 In the Select an Installation Type dialog box, select either **Extract** or **Install Only**, and then click **Start**.

Notes:

- If you connect to a network printer, then select **Extract**.
- If you connect to a printer using a USB, then select **Install Only**.

4 Validate the print driver. For more information, see [“Validating the print driver” on page 11](#).

Validating the print driver

Make sure that you have installed the special-release version of the Lexmark Universal Print Driver PCL 5 emulation.

1 From a computer, open Control Panel.

2 Click **Devices and Printers**.

3 Right-click **Lexmark Universal Print Driver PCL 5**, and then click **Printer properties**.

4 In the Printer Properties dialog box, click **Configuration**.

5 From the Configuration Options section, make sure that RFID Option is enabled.

If the print driver does not automatically identify the RFID option, then update the registry key as shown in one of the following:

- **Registry location - HKEY_LOCAL_MACHINE\SOFTWARE\LEXMARK\DRIVERS\RFIDENABLED**
“RFIDENABLED”=DWORD:00000001
- **Registry location - HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Print**
\Printers\Lexmark Universal PCL 5\PrinterDriverData
RFIDENABLED=DWORD:00000001

Installing the Forms and Bar Code Card



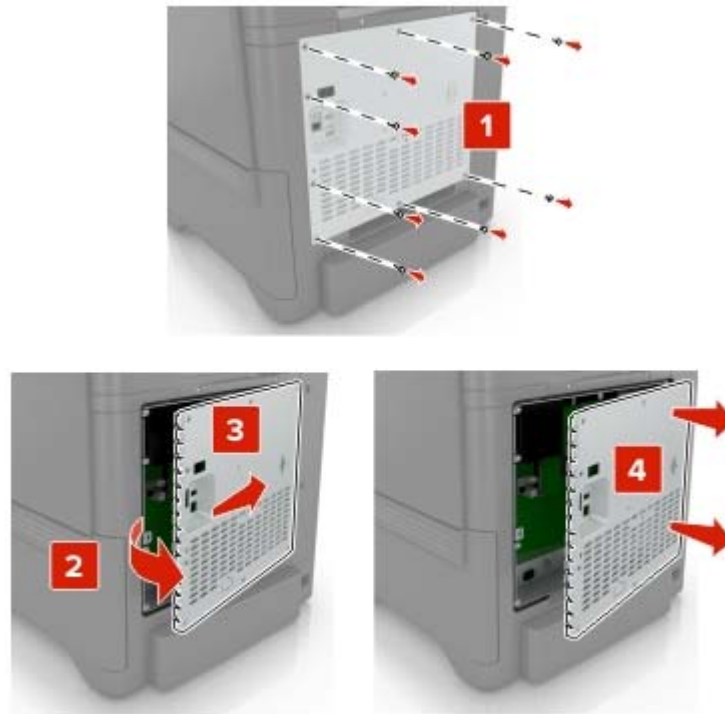
CAUTION—SHOCK HAZARD: To avoid the risk of electrical shock, if you are accessing the controller board or installing optional hardware or memory devices sometime after setting up the printer, then turn off the printer, and unplug the power cord from the electrical outlet before continuing. If you have any other devices attached to the printer, then turn them off, and unplug any cables going into the printer.

1 Turn off the printer.

2 Unplug the power cord from the electrical outlet, and then from the printer.

3 Using a flat-head screwdriver, remove the controller board access cover.

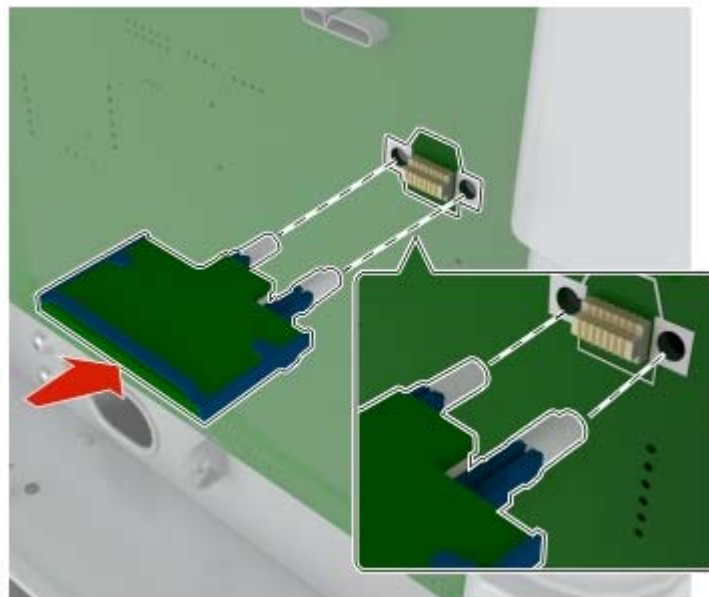
Warning—Potential Damage: Controller board electronic components are easily damaged by static electricity. Touch a metal surface on the printer before touching any components or connectors.



- 4 Unpack the Forms and Bar Code Card.

Warning—Potential Damage: Avoid touching the connection points along the edge of the card.

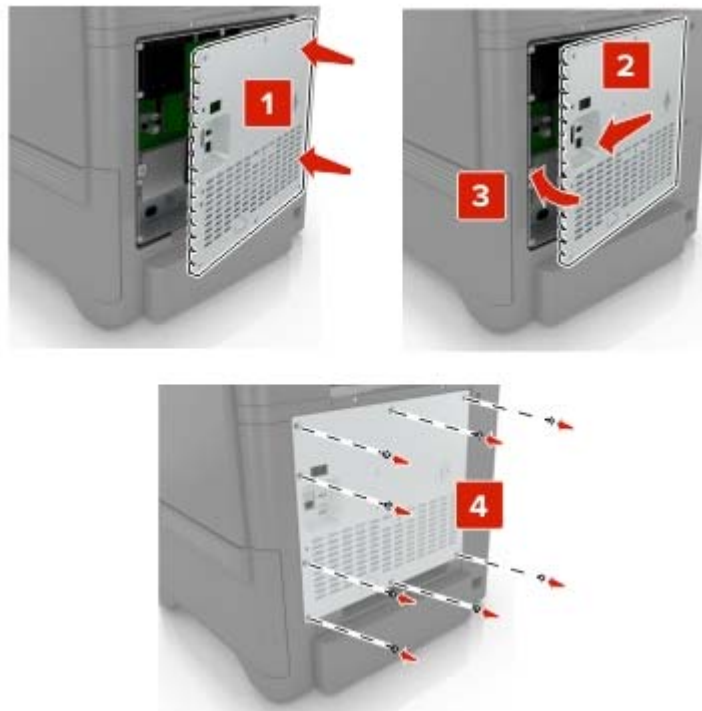
- 5 Push the Forms and Bar Code Card firmly into place.



Note: The entire length of the connector on the card must fit tightly to its slot in the controller board.

Warning—Potential Damage: Improper installation of the card may cause damage to the card and the controller board.

6 Reattach the access cover.



7 Connect the power cord to the electrical outlet, and then turn on the printer.

CAUTION—POTENTIAL INJURY: To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

Converting Lexmark C4150 or XC4150 into an RFID printer

Before you begin, make sure that you have installed the special-release version of the Lexmark Universal Print Driver PCL 5 emulation. For more information, see [“Installing the print driver” on page 10](#).

- 1 From a computer, open Control Panel.
- 2 Click **Devices and Printers**.
- 3 Right-click the printer, and then click **Printer properties**.
- 4 In the Printer Properties dialog box, click **Configuration**.
- 5 From the Configuration Options section, click **Set Printer Model**.
- 6 From the Set Printer Model menu, enable **User Selected**, and then select a printer model from the list.

Notes:

- If your printer is Lexmark C4150, then select **Lexmark CS725 Series**.
- If your printer is Lexmark XC4150, then select **Lexmark CX725 Series**.

7 Click **OK** > **Apply**.

8 Install the RFID option to the printer. For more information, see [“Installing the RFID option” on page 9](#).

Configuring the solution

Accessing the Embedded Web Server

- 1 Obtain the printer IP address. Do either of the following:
 - Locate the IP address on the printer home screen.
 - From the printer home screen, touch **Settings** > **Network/Ports** > **Network Overview**.
- 2 Open a web browser, and then type the printer IP address.

Configuring the solution using the Embedded Web Server

- 1 From the Embedded Web Server, click **Settings** > **RFID**.
- 2 If necessary, change the RFID settings.

Note: For more information, see [“Understanding the RFID settings” on page 15](#).
- 3 Click **Save**.

Configuring the solution using the control panel


- 1 From the home screen, touch **Settings** > **RFID**.
- 2 If necessary, change the RFID settings.

Note: For more information, see [“Understanding the RFID settings” on page 15](#).
- 3 Apply the changes.

Understanding the RFID settings

- **Retry Count**—The number of times the printer reprints the page on another media when it detects that the preceding page has an unreadable RFID tag. The default value is 0.
- **Stop On Error**—The job is stopped when the printer detects an unreadable RFID tag, and then an error 44.01 appears on the printer display. The default value is YES.

Note: For more information on error messages, see [“RFID media and tag command errors” on page 27](#).






- **Mark On Error**— is printed on the RFID media that overlays the existing print when the printer detects an unreadable RFID tag. The default value is YES.

Note: Enabling Mark on Error may reduce the print speed significantly and may speed up the printer fan to maintain the fuser temperature.

- **Reset Tag Counters**—The internal counter that records the number of successful and failed RFID encoding jobs, and the number of printed labels that are reset.

Sample RFID settings and their behaviors

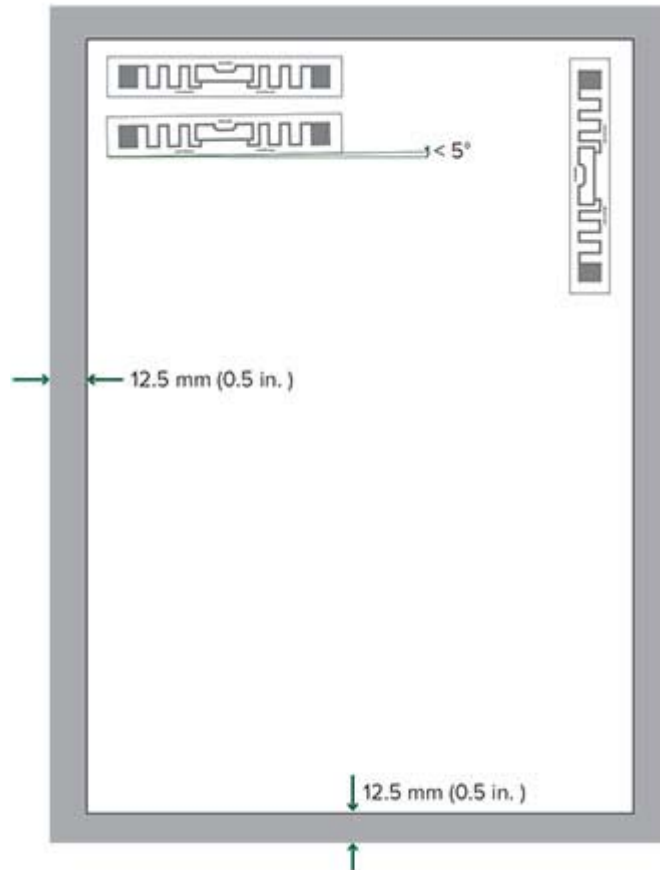
For more information on RFID settings, see [“Understanding the RFID settings” on page 15.](#)

Settings	Behaviors
Stop on Error = NO Retry = 0 Mark on Error = NO	<ul style="list-style-type: none"> • Prints a bad-tag page without . • Prints the in-flight pages, and then terminates the remaining jobs.
Stop on Error = NO Retry = 1 or more Mark on Error = NO	<ul style="list-style-type: none"> • Prints a bad-tag page without . • Reprints the bad-tag page. <p>Note: The reprinted page may not follow the bad-tag page immediately.</p>
Stop on Error = NO Retry = 1 or more Mark on Error = YES*	<ul style="list-style-type: none"> • Prints a bad-tag page with . • Reprints the bad-tag page. <p>Note: The reprinted page may not follow the bad-tag page immediately.</p>
Stop on Error = YES Retry = 0 Mark on Error = NO	<ul style="list-style-type: none"> • Does not print a bad-tag page. • If a bad tag is detected, the printer prints all in-flight pages, the printer stops, and then shows error 44.01. <ul style="list-style-type: none"> – Selecting Continue reprints the bad-tag page. The reprinted page may not follow the bad-tag page immediately. – Selecting Cancel terminates the job.
Stop on Error = YES Retry = 1 or more Mark on Error = NO	<ul style="list-style-type: none"> • Prints a bad-tag page without . • Reprints the bag-tag page. Prints the remaining jobs when a retry is successful. <p>Note: The reprinted page may not follow the bad-tag page immediately.</p> <ul style="list-style-type: none"> • If a retry is unsuccessful, then the printer stops and shows error 44.01. <ul style="list-style-type: none"> – Selecting Continue reprints the bad-tag page, and then prints the remaining jobs. – Selecting Cancel terminates the job.
Stop on Error = YES Retry = 1 or more Mark on Error = YES*	<ul style="list-style-type: none"> • Prints a bad-tag page with . • Reprints the bad-tag page after printing the in-flight pages, and then prints the remaining jobs. • If a retry is unsuccessful, then the printer stops and shows error 44.01. <ul style="list-style-type: none"> – Selecting Continue reprints the bad-tag page, and then prints the remaining jobs. – Selecting Cancel terminates the job.
<p>* If Mark on Error is set to YES, then the print speed is reduced significantly.</p>	

Designing RFID media

RFID media design considerations

To meet the requirements of your RFID usage, we recommend working with your vendor in designing the RFID media.



In designing the RFID media, make sure that:

- The RFID media contains only one RFID tag for every page.
- The RFID tag placement meets the following specifications:

RFID tag margin (minimum)	12.5 mm (0.5 in.)
RFID tag thickness (recommended)	≤ 0.35 mm (0.01 in.)
Horizontal offset	± 6 mm (0.25 in.)
Rotation	< 5°
Orientation	<ul style="list-style-type: none"> – Vertical – Horizontal (preferred)

Notes:

- Do not place the RFID tag where bar codes and images are printed.

- If applicable, the RFID tag is placed at the back of the printable side of the RFID media.
- We recommend designing the form so that the RFID tag is placed toward the back of the tray when the media is loaded.
- We recommend preprinting the loading instructions in the margins of the media to help operators load the media properly.

RFID media compatibility

The RFID media is a base specialty media with an RFID tag attached to it.

Lexmark RFID printers support a wide range of media types and sizes, including different types of RFID tags. We recommend working with your vendor in designing the RFID media.

RFID tag compatibility

Note: Near-field-only RFID tags are not supported.

Use the RFID option to program far-field or a combination of far-field and near-field tags that support EPC Gen2 (ISO 18000-6C) standard. The option can program tags from 16 to 496 bits of EPC memory in 16-bit increments.

The following are examples of compatible tags:

- Alien Technology ALN-9630 Squiglette
- Avery Dennison AD-227
- SMARTRAC DogBone
- SMARTRAC Frog
- eAgile GullWing
- RFID tags based on Impinj Monza 4/5/6, Alien Higgs, or other chipsets compatible with the EPC Gen2 standard

We recommend selecting a tag that meets the requirements of the RFID usage, and then testing it for compatibility with the printer.

Base specialty media

For a complete list of supported paper sizes and types, see the *Paper and Specialty Media Guide* for your printer.

Supported paper sizes and their dimensions

Paper size	Dimensions
A6	105 x 148 mm (4.1 x 5.8 in.)
A5	148 x 210 mm (5.8 x 8.3 in.)
A4	210 x 297 mm (8.3 x 11.7 in.)
Executive	184.2 x 266.7 mm (7.3 x 10.5 in.)
Folio	215.9 x 330.2 mm (8.5 x 13 in.)
JIS B5	182 x 257 mm (7.2 x 10.1 in.)
Legal	215.9 x 355.6 mm (8.5 x 14 in.)

Paper size	Dimensions
Letter	215.9 x 279.4 mm (8.5 x 11 in.)
Oficio	215.9 x 340 mm (8.5 x 13.4 in.)
Statement	139.7 x 215.9 mm (5.5 x 8.5 in.)
Universal	105 x 148 mm to 215.9 x 355.6 mm (4.13 x 5.83 in. to 8.5 x 14 in.)

Supported RFID media

- Card stock
- Envelope
- Plain paper
- Polyester
- Vinyl

Loading RFID media

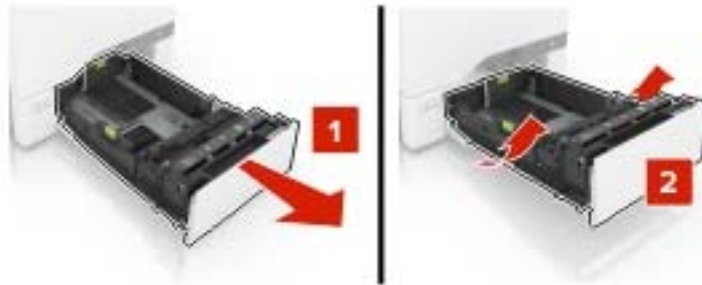
Setting the size and type of the RFID media

- 1 From the home screen, navigate to:
Settings > Paper > Tray Configuration > Paper Size/Type > select a paper source
- 2 Set the size and type of the RFID media.

Loading media trays

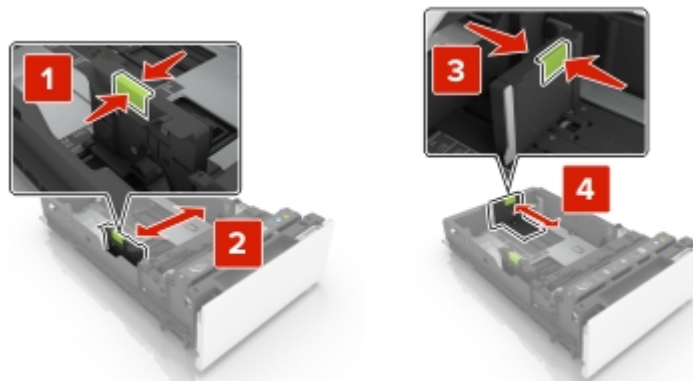
CAUTION—TIPPING HAZARD: To reduce the risk of equipment instability, load each tray separately. Keep all other trays closed until needed.

- 1 Remove the tray.
Note: To avoid jams, do not remove trays while the printer is busy.



- 2 Adjust the guides to match the size of the RFID media that you are loading.

Note: Use the indicators on the bottom of the tray to position the guides.



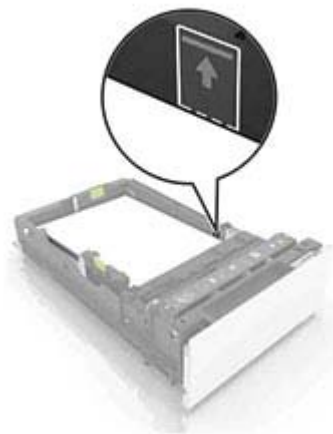
- 3 Load the media stack with the printable side faceup.

The capacity of the media tray is up to 200 sheets. To maximize the capacity, make sure that:

- The media weight is 75 g/m² (20 lb).
- The RFID tag thickness is not more than 0.35 mm (0.01 in.).
- The RFID tag is placed toward the back of the tray.

Notes:

- Do not slide the RFID media into the tray.
- The RFID tag can cause uneven stacking. To avoid paper jams, make sure that no portion of the stack height exceeds the mark as shown in the following graphic:



4 Insert the tray.

5 If necessary, set the media size and type to match the RFID media loaded in the tray.

Verifying RFID printer setup

Before you encode the tags and print the forms, make sure that:

- The RFID option is installed correctly.
 - The RFID option is installed below the standard 550-sheet tray.
 - The RFID option is installed above the media tray.

Note: For more information, see [“Installing the RFID option” on page 9](#).
- The RFID option is connected to the rear USB port of the printer.
- The RFID-enabled firmware is installed correctly.
 - 1** From the Embedded Web Server, click **Settings > Reports > Device > Device Information**.
 - 2** From the CALSTAT section, look for Engine, and then check its value. The value must be **CB.040.E015RFID**. If the value is incorrect, then install the RFID-enabled firmware. For more information, see [step 9 on page 10](#).
- If you encode RFID tags using Forms Composer, then make sure that the Forms and Bar Code Card is installed correctly. For more information, see [“Installing the Forms and Bar Code Card” on page 11](#).
- If you encode RFID tags using PCL data stream, then make sure that you have installed the special-release version of the Lexmark Universal Print Diver PCL 5 emulation. For more information, see [“Installing the print driver” on page 10](#).
- You have tested the compatibility of the RFID media with the printer.
 - 1** Load the RFID media with the RFID tag facedown. Make sure that the RFID tag is placed toward the back of the tray.
 - 2** Insert the flash drive that came with the RFID option package.
 - 3** From the display, touch **LexmarkRFID_Testfile.pdf**.
 - 4** Touch **Print**.
 - 5** Using an RFID reader, scan the tag on the RFID media. If the RFID reader shows **ASCII LexCS725RFID** or **HEX 4c 65 78 43 53 37 32 35 52 46 49 44**, then the RFID media is compatible with the printer.
- The RFID media are loaded properly in the media tray. For more information, see [“Loading media trays” on page 20](#).

Encoding RFID tags and printing forms

The RFID tag command contains the RFID data to be encoded in the RFID tag. It also includes setup parameters, such as tag location, read-or-write capability for the programming module, and password protection.

To send the form and the RFID tag command to the printer, use any of the following:

- PDF document
- PCL data stream
- Lexmark Forms Composer

RFID Tag Command Generator

Note: For more information, see the *RFID Tag Command Generator User's Guide*.

The RFID Tag Command Generator is a command-line utility that is used to do the following:

- Insert a tag command into a PDF document.
- Generate a tag command for PCL data stream or Lexmark Forms Composer.
- Generate a parameter file to automate the PDF or PCL insertion process.
- Define the following setup parameters for each RFID tag:
 - RFID data
 - Memory bank
 - Tag location
 - Read or write capability for the programming module
 - Source tray
 - Output file name
 - Media type and size

To download the utility and the *RFID Tag Command Generator User's Guide*, go to <http://support.lexmark.com>.

Encoding RFID tags using PDF documents

The built-in PDF interpreter in Lexmark printers processes and prints PDF documents without a print driver. The RFID printer uses this feature to encode RFID tags when printing PDF documents.

Inserting the tag command into the PDF document

- 1 Using any application that supports the ISO 32000-1:2008 standard, create a PDF document.
- 2 Using the RFID Tag Command Generator, insert the tag command into the PDF document.

Note: For multiple-page documents, we recommend inserting the tag command on the first page.

For example, to add the RFID data and rename a PDF document by appending **RFID** to the file name, the command line is:

```
RFIDTagGen -i INV12345.pdf -o INV2345RFID.pdf -jf parameters.json -d 12345
```

where:

- **INV12345.pdf** is the original PDF document.
- **INV2345RFID.pdf** is the updated PDF document.
- **12345** is the variable data in the file name.
- **parameters.json** is the file that contains the setup parameters, such as tag location, read-and-write capability for the programming module, and password settings.

For more information, see the *RFID Tag Command Generator User's Guide*.

3 Send the updated PDF document to the printer.

Notes:

- Do not print the updated PDF document using a print driver. The driver converts the document into a PCL or PostScript® file and removes the tag command.
- The updated PDF document is compatible with all standard PDF readers and printers. Only Lexmark RFID printers can process the RFID tag command.
- Other printers print the document and ignore the RFID tag command.

Encoding RFID tags using PCL data stream

When the print driver receives a print job, it interprets the characters in Segoe Print font as an RFID tag command. The tag command must be included on the first page of the document.

Before you begin, make sure that:

- You have installed the special-release version of the Lexmark Universal Print Driver PCL 5 emulation. For more information, see [“Installing the print driver” on page 10](#).
- The printer is connected to your computer using the special-release version of the print driver.
- The Segoe Print font is installed in your computer.
- You have downloaded the RFID Tag Command Generator. To download the utility, go to <http://support.lexmark.com>.

Data search and replace

Only the data portion of the tag command changes between print jobs. The portion that contains the setup parameters, such as memory bank, passwords, tag location, and source tray, is static.

To avoid the frequent use of the RFID Tag Command Generator, search the data from the tag command, and then replace it.

1 Using the RFID Tag Command Generator, create an RFID tag command. Make sure that the values for the setup parameters are set.

For example, you may convert the following command line into a tag command:

```
RFIDTagGen -hex -d 009590860000000000248611 -xpos 260 -ypos 108 -source 3 -gen_tc
```

where:

- **009590860000000000248611** is the tag data.
- **-xpos 260** is the vertical position of the RFID tag and its value in millimeters.
- **-ypos 108** is the horizontal position of the RFID tag and its value in millimeters.
- **-source 3** is the input tray source.

The resulting tag command is **E080104006c005700206960009590860000000000248611**, where **009590860000000000248611** is the tag data.

For more information, see the *RFID Tag Command Generator User's Guide*.

- 2 If necessary, replace the tag data with information that is specific to your print job.
- 3 Insert the tag command on the first page of the form or document.

Make sure that:

- The font used for the tag command is Segoe Print.
- There is no other text in the document that uses the Segoe Print font.
- There is only one tag command for each print job.
- The tag command string does not include any paragraph or character format, such as bold or italic.
- The tag command string is not placed inside tables or other object formats.

- 4 Save the document, and then print it.

Notes:

- Only the characters in Segoe Print font that appear on the front page of the document are recognized as a tag command.
- The print driver assumes that the data in Segoe Print font is a properly formatted tag command.
- The print driver ignores any succeeding use of the Segoe Print font in the print job. Succeeding characters in Segoe Print font are not printed or interpreted as a tag command.
- The print driver converts all the characters in Segoe Print font into a tag command payload without considering the length. The payload buffer size limit is 16KB.

Encoding RFID tags using Forms Composer

The Forms and Bar Code Card lets you store electronic forms in the printer, and then merge them with the variable data from the host computer.

Programming RFID Tags

The tag command is a combination of static parameters and variable data. The static parameter can be embedded directly into the form. You can also assign a form variable for the variable data of the tag command.

For example, **A00005700206960RFID_TagData**, where **A00005700206960** is the static parameter value and **RFID_TagData** is the form variable.

For more information, see the "Working with forms" training course in the Forms Composer package.


Adding the RFID data into the form

The form is compiled and stored in the printer. If you send the variable data to the printer, then the Forms and Bar Code Card merges the data with the form using the activation conditions. The activation conditions let you select the correct form.

- 1 Create a form using Forms Composer.

Note: For more information, see the *Lexmark Forms Composer Help*.

- 2 Click **File > Properties > Page > RFID Media > Properties**.

- 3** In the drop-down menu, select a field map file.
- 4** Change the RFID variable data for the RFID tag.
 - a** Click the expression table cell.
 - b** Click  to open the Edit RFID Expression dialog box.
 - c** Type the static parameter value, and then click **Insert Variable**.
 - d** Select a variable name, and then set the value.
 - e** If necessary, select **Trim Lines Left** or **Trim Lines Right**.
 - f** In the Insert Variable dialog box, click **OK**.
 - g** In the Edit RFID Expression dialog box, click **OK**.
- 5** Click **OK**.

Understanding printer messages

RFID media and tag command errors

If the printer detects a problem with either the RFID media or the tag command, then it shows an error message on the printer display.

RFID media error and its description

Error code	Description
44.01	The printer cannot encode data in the RFID tag.

Tag command errors and their descriptions

Error code	Description
44.11	The RFID option detects a tag command syntax error.
44.12	The RFID option cannot find the data.
44.13	The RFID option detects an extra data.
44.14	The tag command argument is invalid.
44.15	The tag command format is invalid.
44.16	The tag command format is not supported.
44.17	The RFID option detects illegal characters in the tag command.
44.18	The operation code is invalid.
44.19	The operation code is not supported.
44.20	The protocol is invalid.
44.21	The protocol is not supported.
44.22	The RFID option detects an invalid operation.
44.23	The RFID tag length included in the tag command does not match the actual tag length.
44.24	The RFID data is invalid.
44.25	The label or data stream contains more than one tag command.
44.26	The tag field value is less than the required value.
44.27	The special application code is not supported.
44.28	The custom power value is invalid.
44.29	The RFID option detects a feature that is not supported.
44.36	The RFID tag position is invalid.

Input configuration and RFID option errors

If the printer detects an RFID option error or hardware failure, then it shows an error message on the printer display.

Input configuration error and its description

Error Code	Description
58	<ul style="list-style-type: none"> • The RFID option is defective or is not installed correctly. • The media tray is defective or is not installed correctly. • The number of installed media trays exceeds the maximum supported trays. <p>Notes:</p> <ul style="list-style-type: none"> – Lexmark CS725R printer supports up to three media trays. – Lexmark CX725R MFP supports up to two media trays.

RFID option errors and their descriptions

Error code	Description
985.01	The printer performs a routine RFID check.
985.02	The RFID option cannot connect to the serial port.
985.03	The printer cannot connect to the RFID option.
985.04	The communication between the printer and the radio is distorted.
985.05	An internal error in the RFID option occurs.
985.06	The antenna does not send a response.
985.07	The antenna is disconnected.

Troubleshooting

Printer is not working or is unresponsive

Try one or more of the following:

Make sure that the power cord is plugged into the printer and a properly grounded electrical outlet

Make sure that the electrical outlet is turned on when connected to a switch or breaker

Make sure that the printer is not plugged into any surge protectors, uninterrupted power supplies, or extension cords

Make sure that the printer cable is attached securely to the printer and the host computer, print server, or other network device

Make sure that all options are installed correctly

Make sure that the print driver settings are configured correctly

Restart the printer

Turn off the printer, wait for about 10 seconds, and then turn on the printer.

Printer shows error 44.01 or RFID media error

Error 44.01 indicates that the printer failed to encode an RFID tag.

Note: The Lexmark CS725R printer or CX725R MFP runs on a special-release version of the Universal Print Driver PCL 5 emulation. Do not update the firmware. Updating the firmware disables the RFID function. If a firmware update is necessary, then contact your Lexmark representative.

Try one or more of the following:

Make sure that you are printing on the correct RFID media

For more information, see [“Designing RFID media” on page 17](#).

Make sure that the RFID media has an RFID tag attached**Make sure that the RFID media is loaded correctly**

- Load the RFID media in the tray that is installed below the RFID option.
- Depending on your RFID media design, load the RFID media so that the tag orientation meets your specification.

Make sure that the print driver settings are configured to use the correct tray

The paper source setting in the print driver must match the paper source setting in the printer.

Make sure that the Retry Count setting is greater than zero

From the Embedded Web Server, click **Settings** > **RFID** > **Retry Count**.

Contact your Lexmark representative

Printer shows error 44.xx or tag command error

The error indicates a problem with the incoming print job. Each 44.xx error points to specific issue with the RFID tag command in the print job. For more information on tag command errors and their descriptions, see [“RFID media and tag command errors” on page 27](#).

Try one or more of the following:

Make sure that the tag command is programmed correctly

For more information, see the *RFID Tag Command Generator Administrator's Guide*.

Contact your Lexmark representative

Printer shows error 58 or input configuration error

Error 58 indicates that the RFID option has been installed in a wrong position. A problem in the RFID option or media tray may also result in error 58.

Try one or more of the following:

Make sure that the RFID option is installed correctly



The RFID option must be installed below the standard 550-sheet tray and above the media tray. For more information, see [“Installing the RFID option” on page 9](#).

Make sure that the number of trays installed below the RFID option is correct

- Lexmark CS725R printer supports up to three media trays.
- Lexmark CX725R MFP supports up to two media trays.

Replace either the media tray or the RFID option

- 1 Check the cause of the error. Do the following:
 - a Remove the media trays from the printer.
 - b Without unplugging the RFID option USB cable from the printer, remove the RFID option.
 - c Install the RFID option, and then install the media tray.
- 2 If the error persists after installing the RFID option, then replace the RFID option.
- 3 If the error persists after installing the media tray, then replace the media tray.

Contact your Lexmark representative

Printer shows error 985.xx

For more information on service messages and their descriptions, see [“Input configuration and RFID option errors” on page 28](#).

Try one or more of the following:

Make sure that the RFID option is installed correctly

For more information, see [“Installing the RFID option” on page 9](#).

Make sure that the RFID option is connected to the USB port

If the USB cable is not connected, then do the following:

- 1 Turn off the printer.
- 2 Connect the USB cable from the RFID option to the printer.
- 3 Turn on the printer.



Contact your Lexmark representative

Printer display is blank or shows only garbage text

Try one or more of the following:

Make sure that the RFID option is installed correctly

For more information, see [“Installing the RFID option” on page 9](#).

Restart the printer

Turn off the printer, wait for about 10 seconds, and then turn on the printer.

Contact your Lexmark representative

Cannot print labels or encode RFID tags

Try one or more of the following:

Make sure that the printer is ready to print

If the indicator light on the control panel is green, then it is ready to print.

Make sure that the tray is loaded with RFID media

For more information, see [“Loading media trays” on page 20](#).

Make sure that the correct print driver is installed

Make sure that a recommended USB or Ethernet cable is used

For more information, see the printer *User's Guide* or go to www.lexmark.com.

Make sure that the cable connections of the printer to the host computer, print server, or other network devices are connected securely

For more information, see the setup documentation that came with the printer.

RFID media jam

Remove the jam

For more information, see the printer *User's Guide*.

RFID media jams frequently

Try one or more of the following:

Make sure that the RFID media is loaded correctly

For more information, see [“Loading media trays” on page 20](#).

Make sure that the RFID option is installed correctly

For more information, see [“Installing the RFID option” on page 9](#).

Restart the printer

Turn off the printer, wait for about 10 seconds, and then turn on the printer.

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