

Configuring

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/ Adding a barcode to a PDF file

Adding a barcode to a PDF file

To add a barcode to a PDF file, select the area where you want to place the barcode, specify a barcode type, and add content. You can limit the placement of a barcode to specific pages in each page group by specifying a rule or typing page numbers.

RICOH ProcessDirector Plug-in for Adobe Acrobat supports the following barcode types:

- 2of5 (Interleaved 2 of 5)
- Code128
- Code39
- Datamatrix
- IMB (Intelligent Mail Barcode)
- QR code (Quick Response Code)
- RM4SCC (Royal Mail 4-State Customer Code)
- RMM (Royal Mail Mailmark)

 **Note:**

- If you are creating child jobs, make sure that the barcode type supports periods. Child jobs have a period in the job number (for example, 10000001.1). Automated Verification workflows create child jobs for open-loop reprints. The Postal Enablement [GroupDocsForPostalProcess](#) workflow creates a child job when the documents in the job qualify for more postal processing.

You can create a barcode from content within the PDF file. For example, if your processing extracts the customer account number for every mailpiece you print, you can create a barcode from the account number. You first create a document property for the account number. You can then select that document property when defining the barcode content.

If you want to use text in the PDF file to trigger placement of a barcode on a specific page in a page group, you first create a conditional trigger on that text and define a rule with the trigger as a condition. You can then select that rule when defining the barcode.

To add a barcode:

1. Open a PDF file in Adobe Acrobat Professional and either load a control file that contains a page group definition or define a page group.
2. Use the left mouse button to draw a box where you want the barcode to print. You do not need to draw the box to the exact size of the barcode.
The barcode is not resized to fit within the box. If you draw a box to the approximate size of the barcode, you can see its position relative to all the markup you add to the PDF file.
3. Click **Add Barcode**.
4. Type a **Name** for the barcode. Do not use spaces or special characters (such as @, #, \$, or %) in the name. You can use periods and underscores.
5. **Optional:** Use the Location section of the definition window to change the placement of the barcode by entering new **Horizontal** and **Vertical** coordinates. These coordinates specify the distance between the top left corner of the page and the top left corner of the barcode, before any rotation. If your manufacturing equipment has a specification for the location of the barcode, use these coordinates to set a precise location.

 **Note:**

- **Width** and **Height** change the size of the markup box but do not affect the location or size of the barcode.

6. Select the clockwise **Rotation (degrees)**. The reference point for rotating a barcode is its top left corner.

7. Use the Placement Conditions section to specify the pages to place the barcode on. Do either of these steps:

- Select **Pages based on a rule**, and then select a rule from the list. The default rule is **All Pages**. You can also:
 - Click the  icon to define a new rule.
 - Click the  icon to go to the Rules Manager.
- Select **Specify pages** and type the pages in each page group that you want. You can:
 - Use a hyphen to separate the first and last pages in a page range.
 - Use a comma to separate page selections.
 - Type n to specify the last page.

Example: a PDF file has two page groups. The first has four pages, and the second has seven pages. Specifying pages 3–n places markup on pages 3–4 in the first page group, and pages 3–7 in the second.

8. Use the Barcode Configuration section to define the mechanical attributes and type of the barcode.

1. Use the **Barcode Type** list to select one of the following barcodes: **2of5**, **Code128**, **Code39**, **Datamatrix**, **IMB**, **QR code**, **RM4SCC**, or **RMM**.

2. Click the **Settings** button to set the mechanical attributes of the barcode.

The Table [Barcode mechanical attributes](#) describes the settings for each barcode type.

Barcode mechanical attributes

Barcode type	Attribute and description
2of5 and Code39	<p>The unit of measure for the numeric attributes for these barcode types is millimeters.</p> <p>barHeight This attribute determines the vertical height of each bar.</p> <p>checksumMode This attribute determines the behavior of checksums.</p> <ul style="list-style-type: none"> ■ To add the checksum to the message, enter: add ■ To check the checksum when rendering the barcode, enter: check ■ To disable checksum processing, enter: ignore ■ To enable the default barcode behavior, enter: auto <p>moduleWidth This attribute is the width of the narrow element.</p> <p>widthFactor This attribute is the multiplier for the wide element or how many times wider it is than the narrow element.</p>
Code128	<p>The unit of measure for the numeric attributes for this barcode type is millimeters.</p> <p>barHeight This attribute determines the vertical height of each bar.</p> <p>checksumMode This attribute determines the behavior of checksums.</p> <ul style="list-style-type: none"> ■ To add the checksum to the message, enter: add ■ To check the checksum when rendering the barcode, enter: check ■ To disable checksum processing, enter: ignore ■ To enable the default barcode behavior, enter: auto <p>moduleWidth This attribute is the width of the narrow element.</p>
Datamatrix	<p>The unit of measure for the numeric attributes of this barcode type is millimeters.</p> <p>maxSize This attribute determines the maximum number of modules in both X and Y directions.</p> <p>minSize This attribute determines the minimum number of modules in both X and Y directions.</p> <p>moduleWidth This attribute determines the size of each pixel element.</p> <p>shape The FORCE_SQUARE value forces the use of square symbols. No other values are supported.</p>
IMB and RM4SCC	<p>The unit of measure for the numeric attributes for these barcode types is millimeters.</p> <p>ascenderHeight This attribute defines the height of both the ascender and descender sections of long bars.</p> <p>intercharGapWidth This attribute defines the width of each gap. The value you enter must be from 0.38 through 0.63 and must be the same as the moduleWidth value.</p> <p>moduleWidth This attribute defines the width of each bar and must be from 0.38 through 0.63.</p> <p>trackHeight This attribute defines the height each short track or center bar and must be a value from 1.02 through 1.52.</p>

QR code	The unit of measure for the numeric attribute of this barcode type (moduleWidth) is inches.
	encoding This attribute defines the encoding type of the QR barcode. To specify UTF-8 encoding, enter: Auto To specify that the Unicode data is output in that format, enter: Shift_JIS or another supported type of Shift JIS code points, such as sjis or x-sjis .
	<p>Note:</p> <ul style="list-style-type: none"> ■ The input data for the barcode must always be Unicode character points. Do not use Shift_JIS or any other non-Unicode input data.
	errorcorrection This attribute defines the capability to restore the data in a damaged QR barcode. To specify that 7% of the code can be restored, enter: L To specify that 15% of the code can be restored, enter: M To specify that 25% of the code can be restored, enter: Q To specify that 30% of the code can be restored, enter: H
	moduleWidth This attribute determines the size of each pixel element.
RMM	version Do not change this attribute; it is reserved for future use.
	shape This attribute determines the type of barcode. <ul style="list-style-type: none"> ■ To specify a 2D Type 9 barcode, enter: square ■ To specify a 2D Type 29 barcode, enter: rectangle The values for the attribute are not case-sensitive.

9. Select one of the following from the **Content Type** list.

Note:

- Because RICOH ProcessDirector generates barcode content as it prepares a PDF file for printing, RICOH ProcessDirector Plug-in for Adobe Acrobat cannot always determine valid content for a barcode. For example, some barcodes cannot accept text or line breaks. If you include invalid barcode content, the PDF file job might fail in the RICOH ProcessDirector **BuildPDFFromDocuments** step.

Job Property	Select a job property whose value you want to include in the barcode.
Document Property	Select a document property whose value you want to include in the barcode.
Statistic	Select a statistic whose value you want to include in the barcode.
Text	Enter text that you want to include in the barcode.
Line Break	Select this content type when you want to force a line break. The break occurs after the last character of the prior barcode content.
Script	Only select this option on the advice of your software support representative.

1. If you selected a document property, job property, or statistic **Content Type**, you can apply text modifier rules to the value of the property or statistic. Click the  icon to display a Modify Text window for defining one or more modifier extraction rules to extract the exact value you need.
2. Enter text into the **Text to Modify** field. RICOH ProcessDirector generates or extracts statistics and properties as it processes each page group in production PDF files. Because these values are not available to RICOH ProcessDirector Plug-in for Adobe Acrobat, you must enter a text value that represents the values that RICOH ProcessDirector processes. The modifier rule is a template that is applied to all values of the content type that you selected. For example, you want to print only the last eight digits of customer account number, and you have stored the entire number into a document property. You select **Document Property** as the **Content Type**, and select the account document property as the **Content Value**. You define two **Remove Character** text modifier rules to strip dashes and spaces from the number to make them all uniform. Then you define a **Substring by Position** rule to retain only the last eight digits. You do not need to know any single value of a document property to create modifier rules. You need to know only the possible formats that could occur in your PDF files.

3. Choose one of these modifiers:

Content modifiers

Modifier	Action
Remove Character	<p>Type one character or a blank character (use the space bar to type a blank character) that you want to remove from the value. The character is case-sensitive. Then select one of these buttons:</p> <ul style="list-style-type: none"> ■ Remove all instances of the character The specified character is removed from all positions in the value. For example, an account number is: 324-1443255-11. You can type a - to remove all - characters from the value, producing 324144325511. ■ Remove leading characters The specified character is removed from the beginning of the value. For example, if you type a blank character, all blank characters are removed from the beginning of the value. ■ Remove trailing characters The specified character is removed from the end of the value. For example, if you type a blank character, all blank characters are removed from the end of the value. ■ Remove leading and trailing characters The specified character is removed from the beginning and end of the value. For example, if you type a blank character, all blank characters are removed from the beginning and end of the value.
Substring by Position	Select Beginning of Line or End of Line from the Starting From list. Select a number for First Position to indicate the location of the first character in the text value. Select a number for Number to Retain to indicate how many characters are retained.
Substring by Delimiter	<p>Type a character or a blank character in the Delimiter field to indicate where the text value is split into separate string segments. The character and the text string are case-sensitive. Select Beginning of Line or End of Line from the Starting From drop-down menu. Select a number for First Position to define the position of the delimiter in the text string. Select a number for Number to Retain to define the number of text string segments to retain.</p> <p>These examples show how to select text string segments by specifying a delimiter:</p> <ul style="list-style-type: none"> ■ For the account number 324-1443255-11, you can use - as the delimiter to split the value into these three text strings: 324, 1443255, and 11. Select Beginning of Line. To select the second and third text strings (1443255 and 11), select 2 for both First Position and Number to Retain. ■ For the mailing address Eldorado Springs CO 80025, you can use a blank character as the delimiter to split the value into these four text strings: Eldorado, Springs, CO, and 80025. Select End of Line. <ul style="list-style-type: none"> ■ To select the zip code, select 1 for both First Position and Number to Retain. ■ To select the state, select 2 for First Position and 1 for Number to Retain. ■ To select the city, select 3 for First Position and 10 for Number to Retain. By specifying 10 for Number to Retain, you can select city names with up to ten words.
Pad with Character	Select Beginning of Line or End of Line from the Padding Location list. Enter a character or a blank character as the padding character into the Character to Pad with field. Enter a number in the Minimum Padded Text Length field to define the minimum length of the text string. If the number of characters in the text string is less than this minimum length, padding characters are added until the text string equals the minimum length.

10. To add a new content definition row, click the  icon. After you have added all content types and modifier rules to the barcode, you can place a check mark in the box next to a content type and use the up and down arrows to reorder the content. Use the  icon to delete selected content.
11. If you defined multiple lines of text and you want RICOH ProcessDirector Plug-in for Adobe Acrobat to remove lines that only contain white space, click the **Remove blank lines** check box to select it.
12. To create your barcode configuration, click **OK**.
13. To verify that the barcode has the content and page placement you intended, click **Ricoh => Preview**.
14. **Optional:** You can edit the barcode definition by double-clicking the barcode box or by right-clicking the box and clicking **Edit**.
15. When you are ready to save all your enhancements to the PDF file, including the new barcode definition, click **Ricoh => Save Control File**.
16. In the RICOH ProcessDirector **BuildPDFFromDocuments** step, specify the name and location of the control file that contains the barcode definition.

Parent topic: [Adding markup to a PDF file](#)