

Template:

A template document describes card layout by defining fonts, sides, graphics, text, barcodes, lines, rectangles, ellipses and magnetic encoding.

```
<?xml version="1.0" encoding="utf-8" ?>
<template>
  <font>
    <font />
  </font>
</font>
<sides>
  <side>
    <print_types>
      <print_type>
        <graphic />
        <text />
        <barcode />
        <line />
        <ellipse />
        <rectangle />
      </print_type>
    </print_types>
  </side>
</sides>
<magdata>
<track />
</magdata>
</template>
```

Tag Descriptions:

```
<template name="" version="" card_type="" card_thickness="" delete="" destination="" >
```

name	name of the template
version	template version number
card_type	identifies the card type
card_thickness	thickness of card in mm; default is 30
delete	“no” = job data will be kept until the next job is received; (default) “yes” = job will be deleted at the end of processing
source	“feeder” = load card from feeder (default) “internal” = use card from internal position “atm” = load card from ATM slot “autodetect” = load card from feeder or ATM slot
destination	“eject” = normal exit path for printer without laminator (default) “reject” = card goes into the reject tray “hold” = card goes to the home position “feeder” = card returns to the input location “lam_top” = card goes to laminator for top side lamination “lam_bottom” = card goes to laminator for bottom side lamination “lam_both” = card goes to laminator for top and bottom side lamination “lam_any” = card goes to laminator without regard for laminate availability. It will be laminated top, bottom, both or neither. If no laminate is installed, the card simply passes through the laminator. “lam_none” = card passes through laminator without lamination

```
<font id="" name="" size="" bold="" italic="" underline="" />
```

all fonts used by a template are predefined

id	font index; used by a text tag
name	font name; default is Arial
size	font point size; default is 10
bold	“yes” or “no”; default is “no”
italic	“yes” or “no”; default is “no”
underline	“yes” or “no”; default is “no”

<side name="" orientation="" rotation="" sharpness="" k_mode="">

name	"front" or "back"	default is "front"
orientation	"landscape" or "portrait"	default is "landscape"
rotation	0 or 180; default is 0	
sharpness	"off", "low", "normal", "high"; default is "off"	
k_mode	"text", "barcode", "mixed", "picture"; default is "mixed"	

<print_type type="" fill="" preheat="">

type	"color", "monochrome", "overlay", "inhibit", "helper"; default is color
fill	background fill color (RGB) for the fill layer; default is none
preheat	valid range -50 to 50 for color, mono front, or mono back only

<graphic order_id="" field="" format="" opacity="" height="" width="" x="" y="" rotation="" delete="" />

order_id	processing order, 1 thru x with 1 being the bottom layer
field	reference name for data binding
format	"bmp", "jpeg"; default is "bmp"
opacity	
height	height of the image in pixels
width	width of the image in pixels
x	bottom left x axis in pixels
y	bottom left y axis in pixels
rotation	0, 90, 180, 270; default is 0
delete	"yes" or "no" delete image after processing; default="yes"

<graphic>reference</graphic> reference specifies the name of a stored image

<text order_id="" field="" font_id="" x="" y="" color="" angle="" height="" width="" alignment="" v_alignment="" shrink="" />

order_id	processing order, 1 thru x with 1 being the bottom layer
field	reference name for data binding
font_id	font reference
x	x axis location in pixels
y	y axis location in pixels
color	RGB text color
	red "FF0000"
	green "00FF00"
	blue "0000FF"
angle	angle of rotation; referenced point is the lower left x, y coordinates
width	width of the text box; optional
height	height of the text box; optional
alignment	horizontal alignment within the text box; only valid if height and width have been defined
	"left", "right", "center"; default is "left"
v_alignment	vertical alignment within the text box; only valid if height and width have been defined
	"top", "bottom", "center"; default is "left"
shrink	"yes" or "no"; "yes" indicates if the text is to fit within the width specification

<text>data</text> data specifies the text data to print

```
<barcode order_id="" field="" font_id="" x="" y="" rotation="" code="" multiplier="" ratio="" height="" width="" bar_height=""
quiet_zone_width="" add_checksum="" display_checksum="" fore_color="" bar_color="" back_color=""
show_text="" encode_type="" error_correction_level="" code_version="" module_size="" encoding_name="" />
```

order_id	processing order, 1 thru x with 1 being the bottom layer
field	reference name for data binding
font_id	font used to display barcode text
x	x axis location
y	y axis location
rotation	clockwise angle of rotation; "0", "90", "180", "270"
code	"code39", "code128", "code128A", "code128B", "code128C", "pdf417", "ean8", "ean13", "qrcode"
multiplier	sets the width of the narrow module in pixels
ratio	ratio between the wide bar or space and the narrow bar or space
width	width of the bounding box that the barcode will be printed in
height	height of the bounding box that the barcode will be printed in
bar_height	sets the height of the bars
quiet_zone_width	area around bar code that serves to isolate it from surrounding text and graphics
add_checksum	enable checksum; "yes", "no"
display_checksum	display checksum; "yes", "no"
supplement_code	EAN8/13 – value to be added to the barcode data value
supplement_type	EAN8/13 – supplement type "0" = None "1" = 2 digits "2" = 5 digits
supplement_separation	EAN8/13 – sets the gap separation between the barcode and the supplement data
supplement_top_margin	EAN8/13 – sets the height of the margin above the supplement bars
guard_bar	EAN8/13 – specifies whether the guard bars should be drawn; "yes", "no"
light_margin_indicator	EAN8/13 – specifies whether the light margin indicators should be drawn; "yes", "no"
columns	PDF417 – sets the number of data columns
rows	PDF417 – sets the number of data rows
aspect_ratio	PDF417 – sets the ratio of the barcode height to the width. A ratio of 5 means the width is 5 times the height
compaction_type	PDF417 – sets the compaction type; "auto", "binary", "text", "numeric"
correction_level	PDF417 – sets the error correction level; 0-8
truncated	PDF417 – sets whether the right side of the barcode is removed; ; "yes", "no"
fore_color	text color of printed code value
bar_color	barcode color: default is black
back_color	background color
show_text	indicates if text is to be shown under the barcode; "yes" or "no"
encode_type	QRCode – sets the encoding type to use; "auto", "numeric", "alpha numeric", "kanji", "byte"
error_correction_level	QRCode – sets the error correction level. "l": for high symbol quality and/or the need for the smallest possible symbol "m": standard, offers a good compromise between small size and increased reliability "q": high reliability level, suitable for more critical or poor print quality "h": offers the maximum achievable reliability
code_version	QRCode – sets the code version to use; "auto", "v01" thru "v40" "v01" = 21 x 21 "v40" = 177 x 177"
module_size	QRCode – sets the module size
encoding_name	QRCode – sets the encoding name (code page) to be used for byte mode

<barcode>data</barcode> data specifies the barcode to print

```
<line order_id="" x1="" y1="" x2="" y2="" thickness="" color="" />
```

order_id	processing order, 1 thru x with 1 being the bottom layer
x1	start x axis location
y1	start y axis location
x2	end x axis location
y2	end y axis location
thickness	line thickness in pixels
color	RGB text color red "FF0000" green "00FF00" blue "0000FF"

```
<ellipse order_id="" x="" y="" height="" width="" thickness="" color="" fill_color="" />
```

order_id	processing order, 1 thru x with 1 being the bottom layer
x	bottom left corner x location
y	bottom left corner y location
width	width in number of pixels
height	height in number of pixels
thickness	line thickness in number of pixels
color	line color in RGB
fill_color	fill color in RGB; if attribute does not exist indicates no fill or transparent

```
<rectangle order_id="" x="" y="" height="" width="" thickness="" color="" fill_color="" radius="" />
```

order_id	processing order, 1 thru x with 1 being the bottom layer
x	bottom left corner x location
y	bottom left corner y location
width	width in number of pixels
height	height in number of pixels
thickness	line thickness in number of pixels
color	line color in RGB
fill_color	fill color in RGB; if attribute does not exist indicates no fill or transparent
radius	for rounded corners; numeric value: default is 0

```
<magdata format="" coercivity="" verify="">
```

format	“iso”, “aamva”, “jis”, “vingcard”, “ballys”, “custom”, “binary”; default is “iso”
coercivity	“high” or “low”; default is “high”
verify	“yes” or “no”; default is “no”

```
<track field="" number="" format="" />
```

field	reference name for data binding
number	track number to encode
format	“ascii” or “hex”

Data Document:

Data documents specify data to be bound with templates for job creation. They can be XML or JSON formatted documents. A data document will identify the fields and the data to be bound to the fields.

XML Data Document:

```
<data template="" hold="">
  <field_name_1>field_1_data</field_1>
  <field_name_2>field_2_data</field_2>
</data>
```

JSON Data Document:

```
{
  "field_name_1": "field_1_data",
  "field_name_2": "field_2_data"
}
```

Examples:

Single sided print without data fields:

```
<?xml version="1.0" encoding="utf-8"?>
<template name="TemplTest2" card_type="2" card_thickness="30" source="feeder" destination="eject" delete="no">
  <font>
    <font id="1" name="arial" size="12" bold="no" italic="no" underline="no" />
    <font id="2" name="arial" size="14" bold="no" italic="yes" underline="yes" />
  </font>
  <sides>
    <side name="front" orientation="landscape" rotation="0" sharpness="low" k_mode="text">
      <print_types>
        <print_type type="mono">
          <line x1="95" y1="170" x2="450" y2="170" thickness="8" color="0" />
          <text field="" font_id="1" x="100" y="100" angle="0" color="0x000000" alignment="left">Richard</text>
          <text field="" font_id="2" width="0" height="0" x="280" y="100" angle="180" alignment="left">Smith</text>
        </print_type>
      </print_types>
    </side>
  </sides>
</template>
```

Dual sided print with data fields:

```
<?xml version="1.0" encoding="utf-8"?>
<template name="Template" card_type="2" card_thickness="30" delete="no">
  <font>
    <font id="1" name="arial" size="12" bold="no" italic="no" underline="no" />
    <font id="2" name="arial" size="14" bold="yes" italic="no" underline="no" />
  </font>
  <sides>
    <side name="front" orientation="landscape" rotation="0">
      <print_types>
        <print_type type="color">
          <graphic format="bmp" width="1024" height="170" x="0" y="0" delete="false">NameOfStoredImage_1</graphic>
        </print_type>
        <print_type type="mono">
          <graphic field="imageLogo" format="bmp" width="280" height="100" x="710" y="40" delete="false"/>
          <text field="firstName" font_id="1" width="0" height="0" x="50" y="400" angle="0" color="0x000000" alignment="left"/>
          <text field="lastName" font_id="1" width="0" height="0" x="50" y="450" angle="0" color="0x000000" alignment="left"/>
          <text field="email" font_id="2" width="0" height="0" x="50" y="500" angle="0" color="0x000000" alignment="left"/>
          <barcode field="qrCode" x="720" y="380" rotation="0" code="qrCode" multiplier="8"/>
        </print_type>
        <print_type type="overlay">
          <graphic format="bmp" width="1024" height="648">NameOfStoredImage_3</graphic>
        </print_type>
      </print_types>
    </side>
    <side name="back" orientation="landscape">
      <print_types>
        <print_type type="mono">
          <graphic format="bmp" width="1024" height="640" x="0" y="0" delete="false">NameOfStoredImage_2</graphic>
        </print_type>
      </print_types>
    </side>
  </sides>
</template>
```

XML Data Document:

```
<data>
  <firstName>Richard</firstName>
  <lastName>Smith</lastName>
  <email>rsmith@email.com</email>
  <imageLogo>NameOfStoredImage</imageLogo>
  <qrCode>www.zebra.com</qrCode>
</data>
```

JSON Data Document:

```
{
  "firstName" : "Richard",
  "lastName" : "Smith",
  "email" : "rsmith@email.com",
  "imageLogo" : "NameOfStoredImage",
  "qrCode" : "www.zebra.com"
}
```

Magnetic encode and dual sided print with data fields:

```
<?xml version="1.0" encoding="utf-8"?>
<template name="Template" card_type="2" card_thickness="30" source="feeder" destination="eject" delete="no">
  <fonts>
    <font id="1" name="arial" size="12" bold="no" italic="no" underline="no"/>
    <font id="2" name="calibri" size="14" bold="no" italic="yes" underline="no"/>
  </fonts>
  <sides>
    <side name="front" rotation="0" sharpness="">
      <print_types>
        <print_type type="color" fill="">
          <graphic field="image1" format="bmp" opacity="100" width="0" height="0" x="100" y="100" delete="yes"/>
          <graphic field="image2" format="bmp" width="610" height="325" x="400" y="50"/>
        </print_type>
        <print_type type="mono" fill="">
          <text field="firstName" font_id="1" width="0" height="0" x="100" y="250" angle="0" color="0xFFFFFFFF" alignment="left"/>
          <text field="lastName" font_id="2" width="0" height="0" x="100" y="310" angle="0" color="0xFFFFFFFF" alignment="left"/>
        </print_type>
      </print_types>
    </side>
    <side name="back" orientation="landscape" rotation="0" sharpness="normal">
      <print_types>
        <print_type type="mono" fill="">
          <text field="firstName" font_id="1" width="0" height="0" x="50" y="375" angle="0" color="" alignment=""/>
          <barcode order_id="1" field="barcodeData" multiplier="3" height="110" width="200" x="820" y="250" code="code39" ratio="2.0"
            rotation="90" show_text="yes" quiet_zone_width="0"/>
          <line x1="55" y1="440" x2="220" y2="440" thickness="4" color="0xFFFFFFFF"/>
        </print_type>
      </print_types>
      <magdata format="iso" coercivity="high" verify="yes">
        <track field="track1Data" number="1" format="ascii"/>
        <track field="track2Data" number="2" format="ascii"/>
        <track field="track3Data" number="3" format="ascii"/>
      </magdata>
    </side>
  </sides>
</template>
```

XML Data Document:

```
<data>
  <image1>NameOfStoredImage_1</image1>
  <image2>NameOfStoredImage_2</image2>
  <firstName>Richard</firstName>
  <lastName>Smith</lastName>
  <barcodeData>123456</barcodeData>
  <track1Data>TEMPLATE TRACK 1 DATA</track1Data>
  <track2Data>9879654321</track2Data>
  <track3Data>11022033044055066</track3Data>
</data>
```

JSON Data Document:

```
{
  "image1" : "NameOfStoredImage_1",
  "image2" : "NameOfStoredImage_2",
  "firstName" : "Richard",
  "lastName" : "Smith",
  "barcodeData" : "123456",
  "track1Data" : "TEMPLATE TRACK 1 DATA",
  "track2Data" : "9879654321",
  "track3Data" : "11022033044055066"
}
```