Template:

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

```
<?xml version="1.0" encoding="utf-8" ?>
<template>
    <fonts>
        <font />
    </fonts>
    <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="" card_type="" card_thickness="" delete="" source="" destination="">`

name	name of the template
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 “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 for ZXP 1/3 series printers and ZMotif series printers without a laminator. For ZMotif printers with a laminator the default will be set based on installed laminate.) “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. 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="" />`

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	image opacity level; default is 100
height	height of the image in pixels
width	width of the image in pixels
x	x axis location in pixels
y	y axis location in pixels
rotation	clockwise angle of rotation 0, 90, 180, 270; default is 0
delete	“yes” or “no” delete image after processing; default=”no”

<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	clockwise angle of rotation
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="" bar_height="" quiet_zone_width="" add_checksum="" display_checksum="" supplement_code="" show_text="" correction_level="" columns="" aspect_ratio="" error_correction_level="" 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
code	“code39”, “code128”, “code128A”, “code128B”, “code128C”, “pdf417”, “ean8”, “ean13”, “qrcode”
multiplier	sets the width of the narrow module in pixels
ratio	code39 - sets the factor by which wide bars are broader than narrow bars, should be > 1.0
height	sets the full height of the barcode including the human-readable portion
bar_height	sets the height of the bars in pixels
quiet_zone_width	area around bar code that serves to isolate it from surrounding text and graphics
add_checksum	code39, ean8/13 – sets the checksum mode “add”, “auto”, “check”, “ignore”
display_checksum	code39 - display checksum: default is “no”
supplement_code	ean8/13 - value to be added to the barcode data value, value=value+"+"+supplement_code
show_text	indicates if text is to be shown under the barcode; “yes” or “no”
correction_level	pdf417 - sets the error correction level for the barcode, a value between 0 and 8
columns	pdf417 - sets the number of data columns for the barcode the number of rows will automatically be determined based on the amount of data
aspect_ratio	pdf417 - sets the ratio of the barcode width to the height a ratio of 5 means the width is 5 times the height
error_correction_level	qrcode - “l”: approximately 7% of codewords can be restored. Error correction level L is appropriate for high symbol quality and/or the need for the smallest possible symbol “m”: approximately 15% of codewords can be restored. Level M is described as Standard level and offers a good compromise between small size and increased reliability “q”: approximately 25% of codewords can be restored. Level Q is a High reliability level and suitable for more critical or poor print quality applications “h”: approximately 30% of codewords can be restored. Level H offers the maximum achievable reliability
encoding_name	qrcode - sets the message encoding. The value must conform to one of Java's encodings and have a mapping in the ECI registry

<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	x axis location in pixels
y	y axis 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	x axis location
y	y axis 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”, “custom”, “binary”; default is “iso”. iso only for ZXP 1/3 series printers
coercivity	“high” or “low”; default is “high”
verify	“yes” or “no”; default is “yes”

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

field	reference name for data binding
number	track number to encode
format	“ascii” or “hex”; default is asci. ascii only for ZXP 1/3 printers

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>
    <field_name_1>field_1_data</field_name_1>
    <field_name_2>field_2_data</field_name_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">
 <fonts>
  <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" />
 </fonts>
 <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">
  <fonts>
    <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" />
  </fonts>
  <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="">
  <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="0xFFFFFF" alignment="left"/>
          <text field="lastName" font_id="2" width="0" height="0" x="100" y="310" angle="0" color="0xFFFFFF" 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="0xFFFFFF"/>
        </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"
}
```