Windows SDK Program Manual

LK–Pxx(ZPL)

Mobile Label Printer

Rev. 1.23

TABLE OF CONTENTS

1. Instruction.
2. Method.

1. Instruction.

This Windows SDK Program Manual describes the function which is exposed from DLL file needed in developing Desktop Windows application.

2. Method.

- Functions for using in dll are defined in ZPLAPI.h file.
  Development environment is based on VC++ and .NET.

2.1. OpenPort

This function is used for opening ports in order to use Muldule(DLL).

```
long
OpenPort(
        LPCTSTR PortName,
        long BaudRate
)
```

[Parameters]

* PortName

– String which has a null-terminated string. It receives virtual port name currently connected device. When connecting Wi-Fi it receives IP of connected device as a factor.

* BaudRate

– In order to set up the transmission speed of connected device, it receives as a factor. When connecting Wi-Fi it receives port No. of the connected device as a factor.

[Return Values]

LK_SUCCESS : When a function succeeds it returns.
LK_FAIL : When a function fails it returns.

2.2. ClosePort

This function is used for closing ports to cancel the use of Module(DLL).

```
long
ClosePort()
```

[Return Values]

LK_SUCCESS : When a function succeeds it returns.
LK_FAIL : When a function fails it returns.

2.3. printerCheck

This function is used for printer status checking.

long printerCheck()

[Return Values]

LK_SUCCESS : This value returns when a function succeeds.

LK_FAIL : This value returns when a function fails.

2.4. status

This function is used for getting the printer status.

long status()

[Return Values]

STS_ZPL_NORMAL : Printer Status is No Error and MSR is not Ready.

STS_ZPL_BUSY : Printer Status is busy status.

STS_ZPL_PAPER_EMPTY : Printer Status is no paper.

STS_ZPL_COVER_OPEN : Printer Cover is open.

STS_ZPL_BATTERY_LOW : Printer battery capacity is low.

2.5. setInternationalFont

Set a international character sets using for parameter.

long setInternationalFont(int internationalFont) ,

[Parameters]

* internationalFont

- Set the international character sets.

2.6. setupPrinter

This function is used for defining paper form.

long setupPrinter(char orientation, char mTrack, int width, int height)

[Parameters]

* orientation (Print Orientation)

Variable	Description
ROTATION_0	Print text with no rotation.
ROTATION_90	Print text with 90 rotation.(counterclockwise)
ROTATION_180	Print text with 180 rotation.(counterclockwise)
ROTATION_270	Print text with 270 rotation.(counterclockwise)

* mTrack (Media Tracking)

Variable	Description
SENSE_CONTINUOUS	Continuous media.
SENSE_GAP	Non continusous media web sensing. (Gap)
SENSE_WEB	Non continuous media mark sensing. (Blackmark)

* width , height

Page width and height. (Dots)

2.7. startPage

Define Start page. This method is used at the beginning of page.

long startPage()

2.8. endPage

Define End page. This method is used at the end of page.

long endPage(int quantitiy)

[Parameters]

* quantitiy

- Number of pages.

2.9. printText

This method is used for printing text.

long printText(char deviceFont, char orientation, int height, int width, int x, int y,
LPCTSTR data)

[Parameters]

* deviceFont

- Device font in printer [FONT_A ~ FONT_H]

* orientation

Variable	Description
ROTATION_0	Print text with no rotation.
ROTATION_90	Print text with 90 rotation.(counterclockwise)
ROTATION_180	Print text with 180 rotation.(counterclockwise)
ROTATION_270	Print text with 270 rotation.(counterclockwise)

* height, width

- Set the height and width of text (Dots)

* x , y

- Set the x, y coordination of printing position.

* data

- Set the data of string to print.

2.10. printBitmap

Print bitmap image.

long printBitmap(LPCTSTR BitmapFileName, int x, int y)

[Parameters]

* filename

- Set the path of image file.

* x,y

- Set the x, y coordination of printing position.

2.11. printCircle

Draw the circle.

long printCircle(int x, int y, int diameter, int thickness, char lineColor)

[Parameters]

* x, y

- Set the x, y coordination of printing position [Dots].

* diameter

- Set the diameter.

* thickness

- Set the thickness of line.

* lineColor

- Set the color of line [B(Black), W(White)]

2.12. printDiagonalLine

long printDiagonalLine(int x, int y, int width, int height, int thickness, char lineColor,
char direction)

[Parameters]

* x,y
  - Set the x, y coordination of diagonal line position [Dots].
* width, height
  - Set the width and height of diagonal line (Dots)
* thickness
  - Set the thickness of line [1-32000]
* lineColor
  - Set the color of line [B(Black) , W(White)]
* direction
  - Set the direction of line [R(Right-Upper), L(Left-Upper)]

2.13. printEllipse

Print ellipse.

long printEllipse(int x, int y, int width, int height, int thickness, char lineColor)

[Parameters]

* x,y
  - Set the x, y coordination of ellipse position [Dots].
* width, height
  - Set the width and height of ellipse [Dots].
* thickness
  - Set the thickness of line [2-4095]
* lineColor
  - Set the color of line [B(Black) , W(White)]

2.14. printRectangle

Print rectangle

long printRectangle(int x, int y, int width, int height, int thickness, char lineColor,
int rounding)

[Parameters]

* x,y

  - Set the x, y coordination of rectangle position [Dots].

* width, height

  - Set the width and height of rectangle (Dots)

* thickness

  - Set the thickness of line [1-32000]

* lineColor

  - Set the color of line [B(Black) , W(White)]

* rounding

  - Set the level of rounding [0-8]

2.15. printBarcode

Print barcode.

long printBarcode(LPCTSTR barcodeType, LPCTSTR barcodeProp, int x, int y,
LPCTSTR data)

[Parameters]

* barcodeType

Variable	Description
BARCODE_Code11	Code 11
BARCODE_Interleaved_2OF5	Interleaved 2 of 5
BARCODE_Code39	Code 39
BARCODE_Code49	Code 49
BARCODE_PlanetCode	Planet Code
BARCODE_PDF417	PDF 417
BARCODE_EAN8	EAN 8
BARCODE_UPCE	UPC E
BARCODE_Code93	Code 93
BARCODE_CODABLOCK	CODA BLOCK
BARCODE_Code128	Code 128
BARCODE_UPSMAXICODE	UPS MAXICODE
BARCODE_EAN13	EAN 13
BARCODE_MicroPDF417	Micro PDF
BARCODE_Industrial_2OF5	Industrial 2 of 5
BARCODE_Standard_2OF5	Standard 2 of 5
BARCODE_Codabar	Codabar
BARCODE_LOGMARS	LogMARS
BARCODE_MSI	MSI
BARCODE_Aztec	Aztec
BARCODE_Plessey	Plessey
BARCODE_QRCode	QR Code
BARCODE_RSS	RSS

BARCODE_UPCEANEXT	UPC EAN Ext
BARCODE_TLC39	TLC 39
BARCODE_UPCA	UPC A
BARCODE_DataMatrix	Data Matrix
BARCODE_POSTNET	POSTNET

* barcodeProp
  - Set the barcode properties. See the SetBarocdeFiled() function.
  - Reference to ZPL Command.
* x, y
  - Set the x, y coordination of barcode position [Dots].
* data
  - Set the barcode data to print.

2.16. setBarcodeField

Set the barcode properties.

long setBarcodeField(int moduleWidth, int wideRatio, int barHeight)

[Parameters]

* moduleWidth
  - module width [1-10] (Dots)
* wideRatio
  - wide bar to narrow bar width ratio [2.0 - 3.0 (in 0.1 increments)]
* barHeight
  - barcode height [10 ~] (Dots)

2.17. printPDF417

Print the PDF417 barcode.

long printPDF417(int x, int y, char orientation, int security, int numOfColumn,
int numOfRow, char truncate, LPCTSTR barData)

[Parameters]

* x,y
  - Set the x, y coordination of pdf417 barcode position [Dots].
* orientation

Variable	Description
ROTATION_0	Print text with no rotation.
ROTATION_90	Print text with 90 rotation.(counterclockwise)
ROTATION_180	Print text with 180 rotation.(counterclockwise)
ROTATION_270	Print text with 270 rotation.(counterclockwise)

* security [1-8]

  - Security level (error detection and correction).

* numOfColumn [1-30]

  - Number of data columns to encode.

* numOfRow [3-90]

  - Number of data rows to encode.

* truncate [Y, N]

  - Truncate right row indicators and stop pattern.

* barData

  - Set the pdf417 barcode data to print.

2.18. printDataMatrix

Print the DataMatrix barcode.

long printDataMatrix(int x, int y, char orientation, int quality, int columns, int rows,
LPCTSTR barData)

[Parameters]

* x, y

  - Set the x, y coordination of datamatrix barcode position [Dots].

* orientation

Variable	Description
ROTATION_0	Print text with no rotation.
ROTATION_90	Print text with 90 rotation.(counterclockwise)
ROTATION_180	Print text with 180 rotation.(counterclockwise)
ROTATION_270	Print text with 270 rotation.(counterclockwise)

* quality [0, 50, 80, 100, 140, 200]

  - Quality Level

* columns [9-49]

  - Columns to encode (odd value(Quality 0-140), even value (quality 200))

* rows [9-49]

  - rows to encode (odd value(Quality 0-140), even value (quality 200))

* barData

  - Set the datamatrix barcode data to print.

2.19. printQRCode

Print the QR Code barcode.

long printQRCode(int x,int y,int model,int magfactor,char ECL, LPCTSTR barData)

[Parameters]

* x, y

  - Set the x, y coordination of QR Code barcode position [Dots].

* model
  - 1 (original) , 2 (enhanced - recommended)
* magfactor [1-10]
  - magnification factor
* ECL [H,Q,M,L]
  - Error Correct Level
* barData
  - Set the QR Code barcode data to print.

2.20. printText2Image

This function is used to supporting True-Type font printing.

```
long printText2Image(long Orientation, long PrintX, long PrintY,
        LPCTSTR FontFace, long FontStyle, long FontSize,
        LPCTSTR TextData, long ReversePrint
        )
```

[Parameters]

* Orientation
  - Set the direction of print[0, 90, 180, 270].
* PrintX, PrintY
  - Set the x, y coordination of QR Code barcode position [Dots].
* FontFace
  - Set the True-Type Font name.
* FontStyle
  - Set the True-Type Font characteristics.

Variable	Description
TTF_WEIGHT_THIN	Weight of True-Type Font is THIN.
TTF_WEIGHT_NORMAL	Weight of True-Type Font is NORMAL.
TTF_WEIGHT_BOLD	Weight of True-Type Font is BOLD.
TTF_ITALIC	Style of True-Type Font is italic.
TTF_UNDERLINE	Style of True-Type Font is underline.

* FontSize
  - Set the True-Type Font size.(Dot Size).
* TextData
  - Set the text to print.
* ReversePrint
  - Set the value of reverse printing.

Variable	Description
TTF_REVERSE_NO	Not Reverse Printing.
TTF_REVERSE_YES	Reverse Printing.

[Return Values]

LK_SUCCESS : returns after function success.

2.21. userString

Send ZPL command to printer directly.

long userString(LPCTSTR customstring)

[Parameters]

* customstring

- Set the ZPL command to send.

2.22. printFile

Send file to printer directly.

long printFile(LPCTSTR printFileName)

[Parameters]

* printFileName

- Set the file to send.

Value	Explain	Return value
0	Language	n = 0: ENG(Default) n = 1: KOR n = 2: JIS n = 3: GB2312 n = 4: BIG5
1	Error-Clear	n = 0: Auto Error ClearOff(Default) n = 1: Auto Error Clear On
2	Peel	n = 0: Peel mode(Default) n = 1: Non-Peel mode
3	Left margin	Range : 0 ~ 254 (Default : 0) - 0 ~ 127 : Positive - 128 ~ 254 : Negative(-1 ~ -127)
4	TOF margin	Range : 0 ~ 254 (Default : 0) - 0 ~ 127 : Positive - 128 ~ 254 : Negative(-1 ~ -127)
5	Top margin	Range: 0 ~ 254 (Default : 0) - 0 ~ 127 : Positive - 128 ~ 254 : Negative(-1 ~ -127)
6	High Speed	'Y' or 'N'
7	Default Font	'A' or 'B'
8	Tone	0 ~ 127 : Positive 128 ~ 254 : Negative(-1 ~ -127)
9	Print Directon	'N' or 'I'
10	LineModeLineSpace	Range : 0~255
11	PageModeLineSpace	Range : 0~255
12	CoverOpenSwOption	n = 'Y' or 'N'
13	Head temperature	(Temperature): 0 ~ 254 - 0 ~ 127 : Positive - 128 ~ 254 : Negative(-1 ~ -127)

14	Battery voltage	Value: 68 ~ 82 V >= 78: 70 ~ 100% V >= 75: 30 ~ 70% V > 72: 10 ~ 30% V > 68 : Battery Warning V <= 68 : Shut down
15	Print queue	0 or 1 0 : empty 1 : Label remain
16	Label counter	Printing label counter

2.23. downloadGraphic ← Added in 1.20 (Bitmap), Added in 1.22 (pcx file)

This function is used for downloading the graphic.

void downloadGraphic(String filename, String imageSavedName)

[Parameter]

* filename
  - Set the path of image file. [Bitmap or pcx file]
* imageSavedName
  - Set the name of saved image in printer's flash memory.
    [1 to 8 alphanumeric characters]

2.24. printGraphic ← Added in 1.20

This function is used for print the saved image with x, y coordination.

void printGraphic(String imageSavedName, int x, int y,
int xMagnification, int yMagnification)

[Parameter]

* imageSavedName
  - Set the name of saved image in printer's flash memory.
    [1 to 8 alphanumeric characters]
* x, y
- Set the start x, y coordination of font position. (Unit is dot)
* xMagnification, yMagnification
- Set the magnification factor on the x and y – axis. [1 to 10]

2.25. deleteGraphic ← Added in 1.20

This function is used for delete the saved image.

void deleteGraphic(String imageSavedName)

[Parameter]

* imageSavedName

- Set the name of saved image in printer's flash memory.

[1 to 8 alphanumeric characters]