Windows SDK Program Manual

LK-Pxx(ESC/POS)

Mobile Receipt Printer

Rev. 1.32

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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 LKESCAPI.h file.
  Development environment is based on VC++and .NET.

2.1. OpenPort

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

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

[Parameter]

* PortName

– Pointer to a null-terminated string that specifies the name of the object, such as COM port. When connecting Bluetooth it sets virtual port name of connected device. When connecting Wi-Fi it sets IP Address of connected device.

* BaudRate

– In order to set up the transmission speed of connected device, it sets speed. When connecting Bluetooth, it sets virtual port speed of the connected device. When connecting Wi-Fi, it sets port number of the connected device.

[Return Values]

LK_SUCCESS : This value returns when a function succeeds.

LK_FAIL : This value returns when a function fails.

2.2. ClosePort

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

```
long
ClosePort()
```

[Return Values]

LK_SUCCESS : This value returns when a function succeeds.

LK_FAIL : This value returns when a function fails.

2.3. PrintNormal

This function is used for supporting text printing and OLE POS command.

```
long
PrintNormal(
        LPCTSTR Data
)
```

[Parameter]

* Data

- Pointer to a null-terminated string. It is same as PrintNormal function in OLE POS Command.

For command list, please refer to the Page-11 ~ Page-13.

[Return Values]

LK_SUCCESS : This value returns when a function succeeds.

LK_FAIL : This value returns when a function fails.

2.4. PrintString

This function is used for supporting text printing with ESC command.

```
long
PrintString(
        LPCTSTR Data
)
```

[Parameter]

* Data

- Pointer to a null-terminated string. It sets String to print.

[Return Values]

LK_SUCCESS : This value returns when a function succeeds.

LK_FAIL : This value returns when a function fails.

2.5. PrintText

This function is used for supporting text printing

long
PrintText(
    LPCTSTR Data,
    long Alignment,
    long Attribute,
    long TextSize
)

[Parameter]

* Data

– Pointer to a null-terminated string. It sets text to print.

* Alignment

– This value is alignment. It sets text alignment.

Variable	Description
LK_ALIGNMENT_LEFT	Left alignment
LK_ALIGNMENT_CENTER	Center alignment
LK_ALIGNMENT_RIGHT	Right alignment

* Attribute

– This value is text attributes. It sets text attributes to print.

Variable	Description
LK_FNT_DEFAULT	FontA, Set up as a standard
LK_FNT_FONTB	Set up as FontB
LK_FNT_BOLD	Set up as Bold attribute
LK_FNT_UNDERLINE	Set up as Underline attribute

* TextSize

– This value is text size. It sets text size to print.

Variable (Set up width ratio)	Description
LK_TXT_1WIDTH	Set up width ratio as x1
LK_TXT_2WIDTH	Set up width ratio as x2
LK_TXT_3WIDTH	Set up width ratio as x3
LK_TXT_4WIDTH	Set up width ratio as x4
LK_TXT_5WIDTH	Set up width ratio as x5
LK_TXT_6WIDTH	Set up width ratio as x6
LK_TXT_7WIDTH	Set up width ratio as x7
LK_TXT_8WIDTH	Set up width ratio as x8

Variable (Set up height ratio)	Description
LK_TXT_1HEIGHT	Set up height ratio as x1
LK_TXT_2HEIGHT	Set up height ratio as x2
LK_TXT_3HEIGHT	Set up height ratio as x3
LK_TXT_4HEIGHT	Set up height ratio as x4
LK_TXT_5HEIGHT	Set up height ratio as x5
LK_TXT_6HEIGHT	Set up height ratio as x6
LK_TXT_7HEIGHT	Set up height ratio as x7
LK_TXT_8HEIGHT	Set up height ratio as x8

[Return Values]

LK_SUCCESS : This value returns when a function succeeds.

LK_FAIL : This value returns when a function fails.

2.6. PrintBitmap

This function is used for printing image files[Bmp file].

```
long
PrintBitmap(
        LPCTSTR BitmapName,
        long Alignment,
        long Mode
)
```

[Parameter]

* BitmapName

– Pointer to a null-terminated string. This value is the bitmap file name with full path of bitmap file.

* Alignment

– This value is alignment. It sets image alignment..

Variable	Description
LK_ALIGNMENT_LEFT	Left alignment
LK_ALIGNMENT_CENTER	Center alignment
LK_ALIGNMENT_RIGHT	Right alignment

* Mode

– This value is dithering mode. It sets dithering mode.

Variable	Description
LK_BITMAP_NO_DITHER	Process image as B/W Level
LK_BITMAP_ERROR_DIFFUSION	Process image as Error Diffusion Level
LK_BITMAP_ORDERED_DITHER	Process image as Ordered Dither Level

[Return Values]

LK_SUCCESS : This value returns when a function succeeds.

LK_FAIL : This value returns when a function fails.

2.7. PrintBarCode

This function is used for supporting barcode printing.

```
long
PrintBarCode(
        LPCTSTR Data,
        long Symbology,
        long Height,
        long Width,
        long Alignment,
        long TextPosition)
```

[Parameter]

* Data

– Pointer to a null-terminated string. It sets the barcode data to print.

* Symbology

– This value is barcode symbol type. It sets barcode type to print.

Variable	Description
LK_BCS_UPCA	Print UPC A BarCode
LK_BCS_UPCE	Print UPC E BarCode
LK_BCS_EAN8	Print EAN-8 BarCode
LK_BCS_EAN13	Print EAN-13 BarCode
LK_BCS_JAN8	Print JAN-8 BarCode
LK_BCS_JAN13	Print JAN-13 BarCode
LK_BCS_ITF	Print Interleaved 2 of 5
LK_BCS_Codabar	Print Codabar BarCode
LK_BCS_Code39	Print Code 3 of 9 BarCode
LK_BCS_Code93	Print Code 93 BarCode
LK_BCS_Code128	Print Code 128 BarCode

* Height

– This value is barcode height in Dot Units. It sets barcode height to print.

* Width

– This values barcode width in Dot Units.

It sets total barcode width to print or Range[2 ~ 6].

* Alignment

– This value is alignment. It sets barcode alignment.

Variable	Description
LK_ALIGNMENT_LEFT	Left alignment
LK_ALIGNMENT_CENTER	Center alignment
LK_ALIGNMENT_RIGHT	Right alignment

* TextPosition

- This value is printing position of barcode HRI letters(barcode data).

Variable	Description
LK_HRI_TEXT_NONE	Do not print barcode data
LK_HRI_TEXT_ABOVE	Print barcode data above the barcode
LK_HRI_TEXT_BELOW	Print barcode data below the barcode

[Return Values]

LK_SUCCESS : This value returns when a function succeeds.

LK_FAIL : This value returns when a function fails.

2.8. LineFeed

This function is used for sending feeding command to printer.

```
long
LineFeed(
        long LFCount
)
```

[Parameter]

* LFCount

- This value is the number of lines for line feeding. It sets line feeding counter.

[Return Values]

LK_SUCCESS : This value returns when a function succeeds.

LK_FAIL : This value returns when a function fails.

2.9. 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.

2.10. status

This function is used for getting the printer status.

long status()

[Return Values]
LK_STS_NORMAL: Printer Status is No Error and MSR is not Ready.
LK_PAPER_EMPTY : Printer Status is no paper.
LK_COVER_OPEN : Printer Cover is open.
LK_BATTERY_LOW : Printer battery capacity is low.
LK_STS_MSR_READ : Currently MSR in read mode, printing is impossible.

2.11. PrintNVBitmap

This function is used to support the Bitmap Image printing stored in Flash Memory.

long
PrintNVBitmap(
    long NVImageNumber
)
[Parameter]
* NVImageNumber
– It sets the Number image stored in Flash Memory to print.
[Return Values]
LK_SUCCESS : This value returns when a function succeeds.

2.12. PrintText2Image

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

long PrintText2Image (
    LPCTSTR FontName,

long FontStyle,

long FontDotSize,

LPCTSTR TextData,

long ReversePrint

)

[Parameters]

FontName:

[in] It sets the True-Type Font name.

FontStyle:

[in] It sets the True-Type Font characteristics.

Variable	Description
LK_TTF_THIN	Weight of True-Type Font is THIN.
LK_TTF_NORMAL	Weight of True-Type Font is NORMAL.
LK_TTF_BOLD	Weight of True-Type Font is BOLD.
LK_TTF_ITALIC	Style of True-Type Font is italic.
LK_TTF_UNDERLINE	Style of True-Type Font is underline.

FontDotSize:

[in] It sets the True-Type Font size.(Dot Size).

TextData:

[in] Pointer to a null-terminated string. It sets text to print.

ReversePrint:

[in] It sets the value of reverse printing.

Variable	Description
LK_TTF_REVERSE_NO	Not Reverse Printing.
LK_TTF_REVERSE_YES	Reverse Printing.

[Return Values]

LK_SUCCESS : returns after function success..

2.13. PrintQRCode

The function is used to print QRCode using command.

long PrintQRCode (

LPCTSTR Data,

long Size,

long ModuleSize,

long ECLevel,

long Alignment

)

[Parameters]

Data:

[in] This value is the data for QRCode with NULL character.

It sets the data for QRCode printing.

Size:

[in] This value is size of data.

It sets the size of data to print QRCode.

ModuleSize:

[in] This value is module size.

It sets the size of module to print QRCode.

[Range] : 1 ~ 20

ECLevel:

[in] This value is Error Correction Level.

It sets the Error Correction Level to print QRCode.

[Range] : 0 ~ 3

[Default] : 0

Variable	Description
LK_QRCODE_EC_LEVEL_L	Error Correction Level L(7%)
LK_QRCODE_EC_LEVEL_M	Error Correction Level M(15%)
LK_QRCODE_EC_LEVEL_Q	Error Correction Level Q(25%)
LK_QRCODE_EC_LEVEL_H	Error Correction Level H(30%)

Alignment:

[in] This value is QRCode alignment.

It sets the value for QRCode alignment

Variable	Description
LK_ALIGNMENT_LEFT	Left alignment
LK_ALIGNMENT_CENTER	Center alignment
LK_ALIGNMENT_RIGHT	Right alignment

[Return Values]

LK_SUCCESS : returns after function success..

2.14. PrintPDF417

The function is used to print PDF417 using command.

```
long PrintPDF417 (
        LPCTSTR PdfData,
        long DataLength,
        long NumberOfColumns,
        long CellWidth,
        long Alignment
)
```

[Parameters]

PdfData:

[in] This value is the data for PDF417 with NULL character.

It sets the data for PDF417 printing.

DataLength:

[in] This value is size of data.

It sets the size of data to print PDF417.

NumberOfColumns:

[in] This value is Column counter.

It sets the size of Column to print PDF417.

[Range] : 3 ~ 13

CellWidth:

[in] This value is size of CellWidth.

It sets the size of Cell to print PDF417.

[Range] : 2 ~ 5

Cell width = 2	Number of columns (3 ~ 13)
Cell width = 3	Number of columns (3 ~ 8)
Cell width = 4	Number of columns (3 ~ 5)
Cell width = 5	Number of columns (3)

Alignment:

[in] This value is PDF417alignment.

It sets the value for PDF417alignment

Variable	Description
LK_ALIGNMENT_LEFT	Left alignment
LK_ALIGNMENT_CENTER	Center alignment
LK_ALIGNMENT_RIGHT	Right alignment

3. Command list supported by PrintNormal() function in OLE POS Command.

One Shots Perform indicated action.

Name	Data	Remarks
Paper cut	ESC |#P	Cuts receipt paper. The character '#' is replaced by an ASCII decimal string telling the percentage cut desired. If '#' is omitted, then a full cut is performed. For example: The C string "\x1B|75P" requests a 75% partial cut.
Feed and Paper cut	ESC |#fP	Cuts receipt paper, after feeding the paper by the **RecLinesToPaperCut** lines. The character '#' is defined by the "Paper cut" escape sequence.
Feed, Paper cut, and Stamp	ESC |#sP	Cuts and stamps receipt paper, after feeding the paper by the **RecLinesToPaperCut** lines. The character '#' is defined by the "Paper cut" escape sequence.
Fire stamp	ESC |sL	Fires the stamp solenoid, which usually contains a graphical store emblem.
Print bitmap	ESC |#B	Prints the pre-stored bitmap. The character '#' is replaced by the bitmap number.
Feed lines	ESC |#lF	Feed the paper forward by lines. The character '#' is replaced by an ASCII decimal string telling the number of lines to be fed. If '#' is omitted, then one line is fed.
Feed units	ESC |#uF	Feed the paper forward by mapping mode units. The character '#' is replaced by an ASCII decimal string telling the number of units to be fed. If '#' is omitted, then one unit is fed.
Feed reverse	ESC |#rF	Feed the paper backward. The character '#' is replaced by an ASCII decimal string telling the number of lines to be fed. If '#' is omitted, then one line is fed.

Print Mode Characteristics that are remembered until explicitly changed.

Name	Data	Remarks
Font typeface selection	ESC |#fT	Selects a new typeface for the following data. Values for the character '#' are: 0 = Default typeface. 1 = Select first typeface from the **FontTypefaceList** property. 2 = Select second typeface from the **FontTypefaceList** property. And so on.

Print Line Characteristics that are reset at the end of each print method or by a "Normal" sequence.

Name	Data	Remarks
Bold	ESC |bC	Prints in bold or double-strike.
Underline	ESC |#uC	Prints with underline. The character '#' is replaced by an ASCII decimal string telling the width of the underline in printer dot units. If '#' is omitted, then a printer-specific default width is used.
Italic	ESC |iC	Prints in italics.
Alternate color (Red)	ESC |rC	Prints in alternate color.
Reverse video	ESC |rvC	Prints in a reverse video format.
Shading	ESC |#sC	Prints in a shaded manner. The character '#' is replaced by an ASCII decimal string telling the percentage shading desired. If '#' is omitted, then a printer-specific default level of shading is used.
Single high & wide	ESC |1C	Prints normal size.
Double wide	ESC |2C	Prints double-wide characters.
Double high	ESC |3C	Prints double-high characters.
Double high & wide	ESC |4C	Prints double-high/double-wide characters.
Scale horizontally	ESC |#hC	Prints with the width scaled '#' times the normal size, where '#' is replaced by an ASCII decimal string.
Scale vertically	ESC |#vC	Prints with the height scaled '#' times the normal size, where '#' is replaced by an ASCII decimal string.
Center	ESC |cA	Aligns following text in the center.
Right justify	ESC |rA	Aligns following text at the right.
Normal	ESC |N	Restores printer characteristics to normal condition.