Label Printer

ZMWIN

API FUNCTIONS MANUAL

Version: 2.0.0.1

2012@
ZMIN TECHNOLOGIES CO.,LTD.

Contents

Description of API functions file

File Name: ZMWIN.dll

Version: 2.X.X.X

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Purpose

This API function library is used with ZMIN Printers, for compiling the applications based on the operating system of Windows9X, NT, 2000, XP, Win7,Win8.

This API function library only supports products of ZMIN Technologies Co., Ltd.

This API function supports customers send the command language to printer through the ZMIN windows driver.

Abbreviations contrast

PCLE: Printer Command Language E of ZMIN.

API: Application Program Interface.

Dots: Pixel is a kind dimensional unit used in computer science technology. Originally means the minimum unit of the TV imaging. The minimum imaging unit for a printer: Dots are equal to one inch divided by the maximum resolution of the printer.

For example: 1 inch = 25.4mm or 1000mil

For the 203 DPI Printers: 1 dot = 25.4mm / 203 = 0.125mm (1dot = 1000mil / 203 = 5mil)

For the 300 DPI printers: 1 dot = 25.4mm / 300 = 0.085mm (1dot = 1000mil / 300 = 3mil)

TrueType Font: TrueType is an outline font standard developed by Apple and Microsoft in the late 1980s. It has become the most common format for fonts on both the Microsoft Windows operating systems.

The TrueType Font have installed in windows can be used by this API functions.

Notice

String

In command sets, we can use data strings with the following characteristics:

Name: for graphics, soft fonts and forms.

Data: for fonts and bar code

The quotation mark character (") designates the beginning and ending of a string.

The backslash (\) character designates that the following character(s) is literal and will be encoded into the data field. Please refer to the following

Examples:

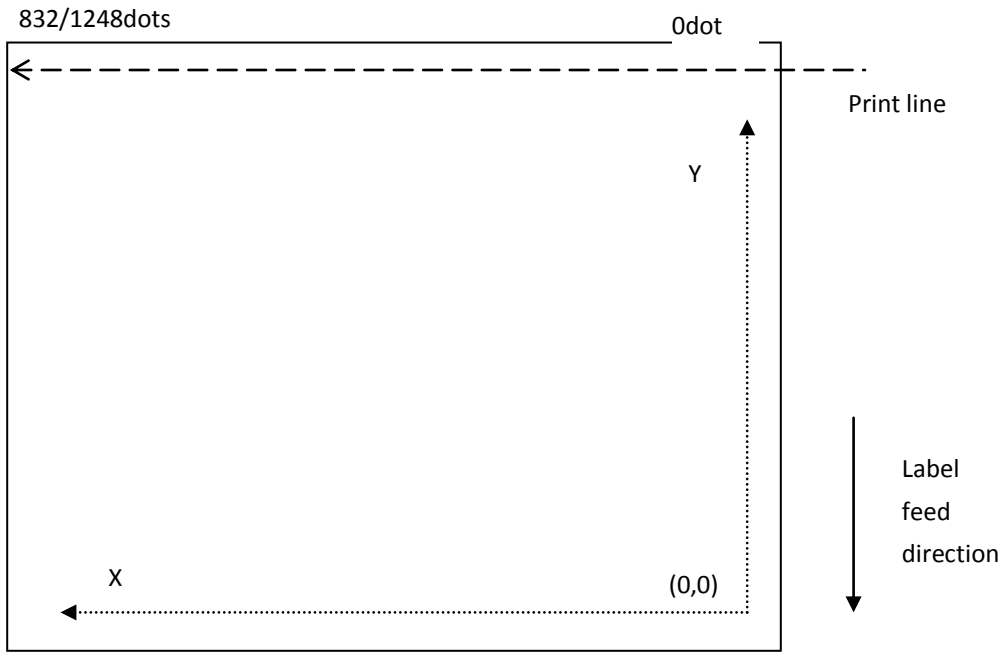
Character input

To Print	Input
"	\ "
\	\\
0x00 - 0x7F	\x00 - \x7F

Note： All commands and names are case sensitive.

Coordinates system

The coordinates system for the barcode label printer is shown below:



Functions lists

Name	Description
OpenPort	Open the windows driver's communication port, prepare to send commands.
ClosePort	Close the communication port opened by OpenPort(),End to transfer.
ZM_ClearBuffer	Clear the printer's ram buffer.
SetPCComPort	Set the windows's COM port.
GetErrState	Get the error run return code if there has any error when run the API.
ZM_GetInfo	Get the DLL's information of version.
ZM_SetDirection	Set label print orientation.
ZM_SetDarkness	Set print darkness.
ZM_SetPrintSpeed	Set print speed.
ZM_SetLabelHeight	Set the height and gap of the label.
ZM_SetLabelWidth	Set the width of the label.
ZM_SetCoordinateOrigin	Set the coordinate reference point.
ZM_DrawBarcode	Print 1D barcode which content is a constant string.
ZM_DrawBarcodeEx	Print 1D barcode, which content can be combined with the fixed data, Counter,Variable.
ZM_DrawTextTrueTypeW	Print text with TrueType Font.
ZM_DrawText	Print text with printer's internal font, which content is a constant string.
ZM_DrawTextEx	Print text with printer's internal font., which content can be combined with the fixed data, Counter,Variable.
ZM_PcxGraphicsList	Print PCX graphics name list which have been stored in the printer.
ZM_PcxGraphicsDel	Delete one or all of PCX graphics which have been stored in the printer.
ZM_PcxGraphicsDownload	Save PCX graphics to the printer.
ZM_BmpGraphicsDownload	Converting BMP graphics to PCX graphics and save it to the printer.
ZM_DrawPcxGraphics	Print PCX graphics.
ZM_PrintPCX	Print PCX graphics.
ZM_DrawBinGraphics	Print Binary graphics.
ZM_DrawLineXor	Draw line with "Exclusive OR" function.
ZM_DrawLineOr	Draw line with "OR" function.
ZM_DrawDiagonal	Draw diagonal line.
ZM_DrawWhiteLine	Draw white line.
ZM_DrawRectangle	Draw rectangle.
ZM_PrintLabel	Print out label.
ZM_SoftFontList	Print out soft font name list which have been stored in the printer.
ZM_SoftFontDel	Delete one or all of soft font which have been stored in the printer.
ZM_FormEnd	Ends Form store. It must be used together with ZM_FormDownload().

ZM_FormList	Print out Form name list which have been stored in the printer.
ZM_FormDel	Delete one or all of Form which have been stored in the printer.
ZM_FormDownload	Save Form to the printer. It must be used together with ZM_FormEnd().
ZM_ExecForm	Run Form.
ZM_PrintLabelAuto	Auto print the form as soon as all variable data has been supplied.(Use this command only in a stored form)
ZM_DefineCounter	Define Counter.
ZM_DefineVariable	Define Variable.
ZM_EnableFlASH	Enable the data are stored to FLASH.(Depend on model of printer)
ZM_DisableFLASH	Disable the data are stored to FLASH.
ZM_Download	Download Variable or Counter.
ZM_DownloadInitVar	Set the initial value of Variable or Counter.
ZM_PrintConfigunation	Print out self test label.
ZM_Reset	Reset the printer.
ZM_SetPrinterState_	Set the printer's work state.
ZM_FeedMedia	Feed out a label.
ZM_MediaDetect	Perform the label calibration.
ZM_CutPage	Sets cutter work status.
ZM_BinGraphicsList	Print out binary graphics name list which have been stored in the printer.
ZM_BinGraphicsDel	Delete one or all of binary graphics name list which have been stored in the printer.
ZM_BinGraphicsDownload	Save a binary graphics to the printer.
ZM_RecallBinGraphics	Print binary graphics which have been stored in the printer.
ZM_DisableErrorReport	Disable the printer's status report via the COM port.
ZM_EnableErrorReport	Enable the printer's status report via the COM port.
ZM_ErrorReport	Get the printer's status code.
ZM_ErrorReportEx	Get the printer's status code with timeout.
ZM_SetPagePrintCount	Set the copies of page.
ZM_WritePrinter	Send the data to printer.

OpenPort

Description:

This function is used to open the communications port.

The OpenPort function must be executed correctly prior to being able to use the other functions in this directory.

Syntax:

int OpenPort(

LPTSTR xxxx

);

Parameters:

xxxx

The name of the current printer used by windows.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

int return = OpenPort("ZMIN X1"); //Open the communication port currently chosen by ZMIN X1.

ClosePort

Description:

This function is used to close the communication port which opened by the OpenPort function.
It suggests that call the ClosePort to close the communication port after completing all of the operation processed by other functions. Otherwise, your program will always take up the opened communication port until the program be closed.

Syntax:

void ClosePort(void);

Parameters:

None

Return Value:

None

Example:

ClosePort( );

ZM_ClearBuffer

Description:

This function is used to clear the contents in printer buffer.

It suggest that use this function to clear the contents in printer buffer before sending a new label to the printer.

Note: Please do not use this function in the FORM.

Syntax:

int ZM_ClearBuffer (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_ClearBuffer ( );

SetPCComPort

Description:

This function is used to set the baud rate of the COM port in PC.

It is only available when use the COM port.

Note:

Be sure to correspond with the serial baud rate setting in your printer (by adjusting the DIP switch pin7&pin8 on or off, please refer to the user's manual).

Syntax:

int SetPCComPort(

DWORD BaudRate,

BOOL HandShake

);

Parameters:

BaudRate

Set baud rate value.

value: 9600,19200,38400,57600;

HandShake

HandShaking flag;

TRUE: Enable HandShaking;

FALSE: Disable HandShaking.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

SetPCComPort (9600, TRUE);

GetErrState

Description:

This function is used to check the correctness/validity of the other functions in ZMWIN.DLL.
Please refer to the section of ZMWIN.dll description of returning errors for error codes.
This function must use before the Closeport().

Syntax:

int GetErrState(void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

```
int state = 0;
OpenPort("ZMIN X1");
...
state = GetErrState();
...
ClosePort();
```

ZM_GetInfo

Description:

This function is used to get the edition information of this API DLL.

Syntax:

int ZM_GetInfo(void);

Parameters:

None.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_GetInfo(void)

ZM_SetDirection

Description:

This function is used to set print orientation for all graphics, text, bar codes, lines and rectangles.
this function will change the direction of contents, such as text, barcode, straight line, and rectangle.

Syntax:

int ZM_SetDirection (
    char direct
);

Parameters:

direct
    Orientation; Acceptable values are B or T. The default value is T.
    B: Print from bottom right corner.
    T: Print from top left corner.

Return Value:

    0 : Succeeds.
    Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

    ZM_SetDirection ('B');

ZM_SetDarkness

Description:

This function is used to set darkness of the TPH.

Syntax:

int ZM_SetDarkness (

unsigned int id

);

Parameters:

id

Acceptable values are from 0 to 20, the default value is 10.

This value is not in deed the temperature of the TPH, it is a relative value. The lightest print darkness is achieved with a value of 0 and the greatest print darkness is achieved with a value of 20.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_SetDarkness (10);

ZM_SetPrintSpeed

Description:

This function is used to set the print speed.

Syntax:

int ZM_SetPrintSpeed (

unsigned int px

);

Parameters:

px

Value: 10 – 80.

px value	speed	PPLB(compatible)
10	1.0 ips (25 mm/s)	0 or 1
15	1.5 ips (37 mm/s)	
20	2.0 ips (50 mm/s)	2
25	2.5 ips (63 mm/s)	
30	3.0 ips (75 mm/s)	3
35	3.5 ips (83 mm/s)	
40	4.0 ips (100 mm/s)	4
50	5.0 ips (125 mm/s)	5
60	6.0 ips (150 mm/s)	6
70	7.0 ips (175 mm/s)	
80	8.0 ips (200 mm/s)	

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_SetPrintSpeed (40);

ZM_SetLabelHeight

Description:

This function is used to set the label's height and the height of media gap/black line/bore hole.

Syntax:

int ZM_SetLabelHeight (

unsigned int lheight,

unsigned int gapH

);

Parameters:

lheight

label height in dots. Value range: 0-65535.

gapH

the height of media gap/black line/bore hole in dots.

Value: 0-65535.

The value of gapH is related to the position of labels.

Gap mode: By default, set gapH to gap length. The printer is in Gap mode and parameters are set with the media AutoSense.

Black Line Mode: Set gapH to B plus black line thickness in dots.

Continuous Media Mode: Set gapH to 0 (zero). The transmissive (gap) sensor will be used to detect the end of media.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_SetLabelHeight (160, 24);

ZM_SetLabelWidth

Description:

This function is used to set the label's width.

Syntax:

int ZM_SetLabelWidth (unsigned int lwidth);

Parameters:

lwidth

label width in dots .

Return Value

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_SetLabelWidth (250);

ZM_SetCoordinateOrigin

Description:

This function is used to set/change the coordinate origin point.

Syntax:

int ZM_SetCoordinateOrigin(

unsigned int px,

unsigned int py

);

Parameters:

px:

X coordinate moved distance in dots.

Py

Y coordinate moved distance in dots.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_SetCoordinateOrigin (12,23);

ZM_DrawBarcode

Description:

This function is used to print a 1D barcode, the content must be a constant string.

Syntax:

int ZM_DrawBarcode (

unsigned int px,

unsigned int py,

unsigned int pdirec,

LPTSTR pCode,

unsigned int NarrowWidth,

unsigned int pHorizontal,

unsigned int pVertical,

char ptext,

LPTSTR pstr

);

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

pdirec

Select printing Direction.

0 - No rotation; 1 - 90°rotation; 2 - 180°rotation; 3 - 270°rotation.

pCode

1D Barcode selection.

P4 Value	Barcode Type
0	Code 128 UCC (shipping container code)
1	Code 128 AUTO
1A	Code 128 subset A
1B	Code 128 subset B
1C	Code 128 subset C
1E	UCC/EAN
1F	EAN 128 subset A
1G	EAN 128 subset B
1H	EAN 128 subset C

2D	Interleaved 2 of 5 with human readable check digit
2G	German Postcode
2M	Matrix 2 of 5
2U	UPC Interleaved 2 of 5
3	Code 3 of 9
3C	Code 3 of 9 with check sum digit
3E	Extended Code 3 of 9
3F	Extended Code 3 of 9 with check sum digit
9	Code93
E30	EAN-13
E32	EAN-13 2 digit add-on
E35	EAN-13 5 digit add-on
E80	EAN-8
E82	EAN-8 2 digit add-on
E-85	EAN-8 5 digit add-on
K	Codabar
P	Postnet
UA0	UPC-A
UA2	UPC-A 2 digit add-on
UA5	UPC-A 5 digit add-on
UE0	UPC-E
UE2	UPC-E 2 digit add-on
UE5	UPC-E 5 digit add-on

NarrowWidth

Narrow bar width in dots.

pHorizontal

Wide bar width in dots.

pVertical

Barcode height in dots.

ptext

N - no print the readable characters under barcode;

B - print the readable characters under barcode.

pstr

A character string (length is 1 to 100) It must begin and ended with “”.

Example: “123456”.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DrawBarcode (50,30,0,'1A',1,1,10,'N',"123456");

ZM_DrawBarcodeEx

Description:

This function is used to print a 1D barcode, the content can be constant, counter value, variable or combined string.

Syntax:

int ZM_DrawBarcodeEx (

```
    unsigned int    px,
    unsigned int    py,
    unsigned int    pdirec,
    LPTSTR    pCode,
    unsigned int    NarrowWidth,
    unsigned int pHorizontal,
    unsigned int pVertical,
    char ptext,
    LPTSTR pstr,
    BOOL Varible
);
```

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

pdirec

Select printing Direction.

0 - No rotation; 1 - 90°rotation; 2 - 180°rotation; 3 - 270°rotation.

pCode

1D Barcode selection.

P4 Value	Barcode Type
0	Code 128 UCC (shipping container code)
1	Code 128 AUTO
1A	Code 128 subset A
1B	Code 128 subset B
1C	Code 128 subset C
1E	UCC/EAN
1F	EAN 128 subset A

1G	EAN 128 subset B
1H	EAN 128 subset C
2D	Interleaved 2 of 5 with human readable check digit
2G	German Postcode
2M	Matrix 2 of 5
2U	UPC Interleaved 2 of 5
3	Code 3 of 9
3C	Code 3 of 9 with check sum digit
3E	Extended Code 3 of 9
3F	Extended Code 3 of 9 with check sum digit
9	Code93
E30	EAN-13
E32	EAN-13 2 digit add-on
E35	EAN-13 5 digit add-on
E80	EAN-8
E82	EAN-8 2 digit add-on
E-85	EAN-8 5 digit add-on
K	Codabar
P	Postnet
UA0	UPC-A
UA2	UPC-A 2 digit add-on
UA5	UPC-A 5 digit add-on
UE0	UPC-E
UE2	UPC-E 2 digit add-on
UE5	UPC-E 5 digit add-on

NarrowWidth

Narrow bar width in dots.

pHorizontal

Wide bar width in dots.

pVertical

Barcode height in dots.

ptext

N - no print the readable characters under barcode;

B - print the readable characters under barcode.

pstr

A combined character string (length is 1 to 100),it can be combined with “DATA” , Cn, Vn.

“DATA”: A data field string, it must begin and ended with “”.

Example: “123456”.

Cn: A counter value. Refer to C command.

Vn: A variable string. Refer to V command.

Example: “data1”CnVn“data2”.

Varible

TRUE: Indicating the string contain the Counter value or Variables string data.

Example: ZM_DrawBarcodeEx (50,30,0,’1A’,1,1,10,’N’,C1” is ”V2,TRUE);

FALSE: It’s a fixed data string.

Example: ZM_DrawBarcodeEx (50,30,0,’1A’,1,1,10,’N’,”123456”,FALSE);

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DrawBarcodeEx (50,30,0,’1A’,1,1,10,’N’,”\”123456\””,TRUE);

ZM_DrawBarcodeEx (50,30,0,’1A’,1,1,10,’N’,”123456”,FALSE);

ZM_DrawBarcodeEx (50,30,0,’1A’,1,1,10,’N’,C2,TRUE);

ZM_DrawBarcodeEx (50,30,0,’1A’,1,1,10,’N’,V1,TRUE);

ZM_DrawBarcodeEx (50,30,0,’1A’,1,1,10,’N’,C1” is ”V2,TRUE);

ZM_DrawBar2D_DATAMATRIX

Description:

This function is used to print a DataMatrix barcode.

Syntax:

int ZM_DrawBar2D_DATAMATRIX(

unsigned int x,
unsigned int y,
unsigned int w,
unsigned int v,
unsigned int o,
unsigned int m,
LPTSTR pstr

);

Parameters:

x

X coordinate in dots.

y

Y coordinate in dots.

w

Maximum print width in dots.

v

Maximum print height in dots.

o

Print direction positioning.

‘0’means 0°，’1’means 90°,‘2’ means 180°，’3’means 270°

m

Module width in dots.

Value: 1 - 9.

pstr

ASCII data or Binary data bytes Represents a fixed data field.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

ZM_DrawBar2D_QR

Description:

This function is used to print a DataMatrix barcode.

Syntax:

int ZM_DrawBar2D_QR(

unsigned int x,
unsigned int y,
unsigned int w,
unsigned int v,
unsigned int o,
unsigned int r,
unsigned int m,
unsigned int g,
unsigned int s,
LPTSTR pstr

);

Parameters:

x

X coordinate in dots.

y

Y coordinate in dots.

w

Maximum print width in dots.

v

Maximum print height in dots.

o

Print direction positioning.

‘0’means 0°，’1’means 90°,‘2’ means 180°，’3’means 270°

r

Module width in dots.

Value: 1 - 9.

m

Start mode.

Value: 0 – 4.

0: Numeric

1: AlphaNumeric
2: Binary
3: Kanji
4: AUTO

g

ECC.

Value: 0 – 3.

0: L
1: M
2: Q1
3: H1

s

Mask

Value: 0 – 8.

0: mask 000
1: mask 001
2: mask 010
3: mask 011
4: mask 100
5: mask 101
6: mask 110
7: mask 111
8: AUTO

pstr

ASCII data or Binary data bytes Represents a fixed data field.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

ZM_DrawBar2D_MaxiCode

Description:

This function is used to print a MatrixCode barcode.

Syntax:

```
int   ZM_DrawBar2D_MaxiCode(
      unsigned int x,
      unsigned int   y,
      unsigned int m,
      unsigned int u,
      LPTSTR pstr
);
```

Parameters:

x

X coordinate in dots.

y

Y coordinate in dots.

m

Mode.

Value: 2 - 4

u

UPS format selection.

Value: 1 It's UPS format, other number means It isn't UPS format.

pstr

Mode Dependent Data Format.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

ZM_DrawBar2D_Pdf417

Description:

This function is used to print a PDF417 barcode.

Syntax:

int ZM_DrawBar2D_Pdf417(

unsigned int x, unsigned int y,
unsigned int w, unsigned int v,
unsigned int s, unsigned int c,
unsigned int px, unsigned int py,
unsigned int r, unsigned int l,
unsigned int t, unsigned int o,
LPTSTR pstr

);

Parameters:

x

X coordinate in dots.

y

Y coordinate in dots.

w

Maximum printing width, in dots.

v

Maximum printing height, in dots.

s

correction degrees.
Value: 0 - 8

c

compression degrees.
Value: 0 or 1。

px

Module width
Value: 2 - 9

py

Module height.
Value: 4 – 99.

r

Max row count.

l

Max column count.

t

Truncation flag

‘0’ means normal and

‘1’ means truncated.

o

Select printing Direction.

0 - No rotation; 1 - 90°rotation; 2 - 180°rotation; 3 - 270°rotation.

pstr

A character string (length is 1 to 100)， using

“DATA”, Cn and Vn parameters.

“DATA”: A data fixed string, it must begin and end with “”

Example:“123456”.

Cn: A counter value. Refer to C command.

Vn: A variable string. Refer to V command.

Example:“data1”CnVn“data2”.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

```
unsigned int x,y,w,v,s,c,px,py,r,l,t,o;
LPCTSTR pstr = "ZMININFO";
x=10;y=10;w=400;v=300;s=0;c=0;px=3;py=7;r=10;l=2;t=0;o=0;
ZM_DrawBar2D_Pdf417 (x,y,w,v,s,c,px,py,r,l,t,o,pstr);
```

ZM_DrawTextTrueTypeW

Note:
Be sure to install the ZMIN printer driver prior to using ZM_DrawTextTrueTypeW()

Description:
This function is used to print a line of TrueType Font string, and the character width and height can be adjusted.

Syntax:
int ZM_DrawTextTrueTypeW(
int x,
int y,
int FHeight,
int FWidth,
LPCTSTR FType,
int Fspin,
int FWeight,
BOOL FItalic,
BOOL FUnline,
BOOL FStrikeOut,
LPCTSTR id_name,
LPCTSTR data
);

Parameters:
x
X coordinate in dots.
y
Y coordinate in dots.
FHeight
Font type height in dots.
FWidth
Font type width in dots.
*** If you want to print the normal scale font, set FWidth to 0.**
FType
Font type name.
Fspin

Font rotation.

1 - No rotation; 2 - 90°rotation; 3 - 180°rotation; 4 - 270°rotation.

Fweight

Font thickness.

0 and 400 : 400 standard,

100 : extra thin,

200 : tiny thin,

300 : thin,

500 : middling,

600 : half thick,

700 : thick,

800 : extra thick,

900 : bolder.

Fitalic：

Italic.

0: FALSE,

1: TRUE.

Funline

Add base line.

0: FALSE,

1: TRUE.

FstrikeOut

Add strikethrough

0: FALSE,

1: TRUE.

id_name

Identify the name. True type characters will be transferred to PCX data and store to the printer as the name of id_name. users can Call id_name to print this true type characters by ZM_DrawPcxGraphics( )for several times before powering off.

Note: It don't allow setting the same id_name for different strings.

data

The contents of string.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

Print "Arial" fonts for 3mm height:

For the 203 DPI models printer, FHeight is 3 / 0.125 = 24dots;
For the 300 DPI models printer, FHeight is 3 / 0.08 = 38dots (round).

ZM_DrawTextTrueTypeW (30,35,24,0,"Arial",4,400,0,0,0,"A1","AaBbCc");

ZM_DrawText

Description:

This function is used to print text , the content must be a constant string.

Syntax:

int ZM_DrawText (

unsigned int px,
unsigned int py,
unsigned int pdirec,
unsigned int pFont,
unsigned int pHorizontal,
unsigned int pVertical,
char ptext,
LPTSTR pstr

);

Parameters:

x

X coordinate in dots.

y

Y coordinate in dots.

pdirec

pdirec

Select printing Direction.

0 - No rotation; 1 - 90°rotation; 2 - 180°rotation; 3 - 270°rotation.

pFont

Selects internal fonts or soft fonts.

1 - 5: internal fonts; ‘a’: 24*24 simple Chinese fonts in printer.

Value	Description
1	Font 1
2	Font 2
3	Font 3
4	Font 4
5	Font 5
‘a’	24*24 dot matrix Chinese font

pHorizontal

Horizontal multiplier expands the text horizontally.

Value : 1-24

pVertical

Vertical multiplier expands the text vertically.

Value: 1-24

ptext

Choosing 'N' prints normal text (i.e. black characters on a white background)

Choosing 'R' prints reversed text (i.e. white characters on a black background)

pstr

A character string (length is 1 to 100) It must begin and ended with “”.

Example: “123456”.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DrawText (50,30,0,2,1,1,’N’,”123456789”);

ZM_DrawTextEx

Description:

This function is used to print text, the content can be constant, counter value, variable or combined string.

Syntax:

int ZM_DrawTextEx(

unsigned int px,

unsigned int py,

unsigned int pdirec,

unsigned int pFont,

unsigned int pHorizontal,

unsigned int pVertical,

char ptext,

LPTSTR pstr ,

BOOL Varible

);

Parameters:

x

X coordinate in dots.

y

Y coordinate in dots.

pdirec

pdirec

Select printing Direction.

0 - No rotation; 1 - 90°rotation; 2 - 180°rotation; 3 - 270°rotation.

pFont

Selects internal fonts or soft fonts.

1 - 5: internal fonts; ‘a’: 24*24 simple Chinese fonts in printer.

Value	Description
1	Font 1
2	Font 2
3	Font 3
4	Font 4
5	Font 5
‘a’	24*24 dot matrix Chinese font

pHorizontal

Horizontal multiplier expands the text horizontally.

Value : 1-24

pVertical

Vertical multiplier expands the text vertically.

Value: 1-24

ptext

Choosing 'N' prints normal text (i.e. black characters on a white background)

Choosing 'R' prints reversed text (i.e. white characters on a black background)

pstr

A combined character string (length is 1 to 100) , it can be combined with “DATA” , Cn, Vn.

“DATA”: A data field string, it must begin and ended with “”.

Example: “123456”.

Cn: A counter value. Refer to C command.

Vn: A variable string. Refer to V command.

Example: “data1”CnVn“data2”.

Varible

TRUE: Indicating the string contain the Counter value or Variables string data.

Example: ZM_DrawTextEx (50,30,0,2,1,1,’N’,” “Printer”C2V1“is ok.””,TRUE);

FALSE: It’s a fixed data string.

Example: ZM_DrawTextEx (50,30,0,2,1,1,’N’,” 123456789”,FALSE);

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

```
ZM_DrawTextEx (50,30,0,2,1,1,’N’,”\”123456789\””,TRUE);
ZM_DrawTextEx (50,30,0,2,1,1,’N’,” 123456789”,FALSE);
ZM_DrawTextEx (50,30,0,2,1,1,’N’,C1,TRUE);
ZM_DrawTextEx (50,30,0,2,1,1,’N’,V3,TRUE);
ZM_DrawTextEx (50,30,0,2,1,1,’N’,” “Printer”C2V1“is ok.””,TRUE);
```

Print out combined character string which contain the counter value and variable string.(Be used in Form format)

```
ZM_FormDel("TEST");                              //Delete the Form "TEST"
ZM_FormDownload("TEST");                         //Download the Form "TEST"
ZM_DefineCounter(0, 6, 'N', "+1", "Enter Start"); //Define a Counter name C0
ZM_DefineVariable(0,16,'N',"Variable");          //Define a Variable name V0
```

```
ZM_DrawTextEx (50,30,0,5,1,1,'N',V0,TRUE);      //Print the string of V0
ZM_DrawText (100,70,0,5,1,1,'N',C0,TRUE);       //Print the value of C0
ZM_FormEnd();                                   //Ends Form downloading.

ZM_ClearBuffer();
ZM_ExecForm("TEST");                            //Run Form
ZM_Download();                                  //Beginning to downloading data.
ZM_DownloadInitVar("123");                      //Set the value of C0.
ZM_DownloadInitVar("456");                  //Set the string of V0
ZM_PrintLabel(2, 1);                            //Print out label.
```

ZM_PcxGraphicsList

Description:

This function force the printer to print out the list of PCX graphics that stored to RAM or flash memory from host.

Syntax:

int ZM_PcxGraphicsList (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_PcxGraphicsList ( );

ZM_PcxGraphicsDel

Description:

This function force the printer to delete PCX graphics currently stored in RAM or flash memory.

Syntax:

int ZM_PcxGraphicsDel (LPTSTR pid);

Parameters:

pid:

Graphics name with a maximum of 16 characters or “*”.

if pid = “*”, all graphics will be deleted from RAM or flash memory.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_PcxGraphics Del (“PCX2”);

ZM_PcxGraphicsDownload

Description:

This function force the printer to store a PCX graphics to printer.

Syntax:

```
int ZM_PcxGraphicsDownload (
    char*   pcxname,
    char* pcxpath
);
```

Parameters:

pcxname

User-defined graphics name with a maximum of 16 characters. graphics can only be printed by using this name in ZM_DrawPcxGraphics（）after the graphics being stored to the printer

pcxpath

The path of the PCX graphics in memory.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_PcxGraphicsDownload (“PCXA”, “c:\\test1111.pcx”);

ZM_BmpGraphicsDownload

Description:

This function Convert a BMP graphics to PCX graphics, then store this PCX graphics to printer.

Syntax:

int ZM_BmpGraphicsDownload (

char* pcxname,

char* pcxpath,

int iDire

);

Parameters:

pcxname

User-defined graphics name with a maximum of 16 characters. graphics can only be printed by using this name in ZM_DrawPcxGraphics（）after the graphics being stored to the printer

pcxpath

The path of the BMP graphics in memory.

iDire

Select BMP graphics' rotation.

0 - No rotation; 1 - 90°rotation; 2 - 180°rotation; 3 - 270°rotation.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_BmpGraphicsDownload ("PCXA", "c:\\test1111.bmp", 0);

ZM_DrawPcxGraphics

Description:

This function is used to print the designated PCX graphics.

Note: The graphics must store in the printer by using ZM_PcxGraphicsDownload before it to be printed.

Syntax:

int ZM_DrawPcxGraphics (

unsigned int px,

unsigned int py,

LPTSTR gname

);

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

game

Graphics name with a maximum of 16 characters, it must be user-defined name in the ZM_PcxGraphicsDownload().

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DrawPcxGraphics (100,50,“PCX1”);

ZM_PrintPCX

Description:

This function is used to print a PCX graphics.

Using this function is equal to use together with ZM_PcxGraphicsDownload()and ZM_DrawPcxGraphics().

Syntax:

int ZM_PrintPCX (

unsigned int px,

unsigned int py,

char* filename

);

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

filename

The path of the PCX graphics in memory.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_PrintPCX(10,100,"c:\\phone.pcx");

ZM_DrawBinGraphics

Description:

This function is used to print binary graphics.

Binary graphics is non-compressed graphics data. Each bit represents a dot., 0 represent print. a value of “0” prints a dot; a value of “1” does not print a dot.

Syntax:

int ZM_DrawBinGraphics (

unsigned int px,

unsigned int py,

unsigned int pbyte,

unsigned int pH,

UCHAR* Gdata

);

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

pbyte

Bytes for one line data. If 8 cannot divide the bits of one line data, then the bytes equal to the result add 1.

Example: the bytes of one line data is 2(14 bits data),

pH

Height of graphic, in dots.

Gdata

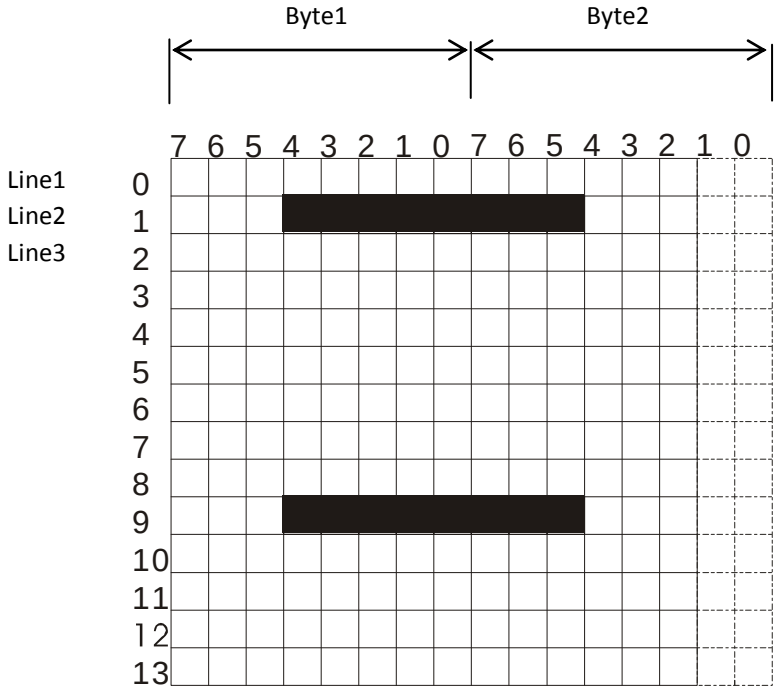
([…raster data…])

Binary graphic data; data size = pbyte * pH (Bytes).

Binary data transmission sequence is left to right, up to down, example:

data transmission sequence: Line1’s Byte1(0xff), Line1’s Byte2(0xff)，Line2’s Byte1(0xe0),Line2’s Byte2(0x1f), Line3’s Byte1(0xff), Line3’s Byte2(0xff)…

The part of the broken line is non-graphic area, and then the corresponding bit is 0.



Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

char buf[] = {0xff,0xff,0xe0,0x1f,0xff,0xff…};

ZM_DrawBinGraphics (20,30,4,14,buf);

ZM_DrawLineXor

Description:

This function is used to draw straight-line (If two straight-lines intersects, use an exclusive or operation).

Syntax:

int ZM_DrawLineXor(

unsigned int px,

unsigned int py,

unsigned int pbyte,

unsigned int pH

);

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

pbyte

Horizontal length in dots.

pH

Vertical length in dots.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DrawLineXor (100,20,5,110);

ZM_DrawLineOr

Description:

This function is used to draw straight-line (If two straight-lines intersects, use Or operation).

Syntax:

int ZM_DrawLineOr(

unsigned int px,

unsigned int py,

unsigned int plength,

unsigned int pH

);

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

plength

Horizontal length in dots.

pH

Vertical length in dots.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DrawLineOr (100,20,5,110);

ZM_DrawDiagonal

Description:

This function is to draw diagonal.

Syntax:

int ZM_DrawDiagonal (

```
    unsigned int    px,
    unsigned int    py,
    unsigned int    thickness,
    unsigned int    pEx,
    unsigned int    pEy
);
```

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

thickness

Set Thickness in dots.

pEx

End X coordinate in dots.

pEy

End Y coordinate in dots.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DrawDiagonal (50,30,10,100,80);

ZM_DrawWhiteLine

Description:

This function is used to draw a whit line.

Syntax:

int ZM_DrawWhiteLine(

unsigned int px,

unsigned int py,

unsigned int plength,

unsigned int pH

);

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

plength

Horizontal length in dots.

pH

Vertical length in dots.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DrawWhiteLine (100,20,5,110);

ZM_DrawRectangle

Description:

This function is used to draw rectangle.

Syntax:

int ZM_DrawRectangle (

unsigned int px,

unsigned int py,

unsigned int thickness,

unsigned int pEx,

unsigned int pEy

);

Parameters:

px

Horizontal start position (X) in dots.

py

Vertical start position (Y) in dots.

thickness

Line thickness in dots.

pEx

Horizontal end position (X) in dots.

pEy

Vertical end position (Y) in dots.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DrawRectangle (50,120,5,250,150);

ZM_PrintLabel

Description:

This function is used to order the printer to print out label.

Notes:

Please don’t use this function during editing the FORM, use ZM_PrintLabelAuto() instead of it.

Syntax:

int ZM_PrintLabel (
unsigned int number,
unsigned int cpnumber
);

Parameters:

number

number of labels to print.

Value:1 - 65535

cpnumber

number of copies pre label. the default value is 1 if this cpnumber have no set value.

Value:1 - 65535

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_PrintLabel (2,3);

ZM_SoftFontList

Description:

This function will cause the printer to print out a list of all soft fonts that are stored in RAM or FLASH memory.

Syntax:

int ZM_SoftFontList (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_SoftFontList ();

ZM_SoftFontDel

Description:

This function force the printer to remove one or all, soft fonts stored in RAM and/or Flash memory.

Syntax:

int ZM_SoftFontDel (char pid);

Parameters:

pid:

Soft font ID.

Value: A—Z or *

If pid = '*',all fonts will be deleted from RAM or flash memory.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_SoftFontDel ('A');

ZM_FormEnd

Description:

This function is used to end a form store, it must be used together with the ZM_FormDownload.

Syntax:

int ZM_FormEnd (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

```
ZM_FormDownload（“Form1”）;
…
ZM_FormEnd ( );
```

ZM_FormList

Description:

This function force the printer to print out a list of forms that have been stored.

Syntax:

int ZM_FormList (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_FormList ( );

ZM_FormDel

Description:

This function force the printer to delete forms currently stored.

Syntax:

int ZM_FormDel (

LPTSTR pid

);

Parameters:

pid

Form name with a maximum of 16 characters.

If pid = “*”,all forms will be deleted from RAM or flash memory.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_FormDel (“FORMNAME”);

ZM_FormDownload

Description:

This function is used to store a form to the printer, it must be used together with the ZMIN_FormEnd.

Syntax:

int ZM_FormDownload (

LPTSTR pid

);

Parameters:

pid

User-defined form name with a maximum of 16 characters. Use this form prior to execute this function after storing the form to the printer

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_FormDownload (“FORMNAME”);

ZM_ExecForm

Description:

This function is used to execute the designated form.

Syntax:

int ZM_ExecForm (

LPTSTR pid

);

Parameters:

pid

Form name with a maximum of 16 characters.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_ExecForm (“FORM1”);

ZM_PrintLabelAuto

Description:

This function is used to execute printing job automatically. It suggests that use this function when variables or counter values exist. The printer prints the form, as soon as all variable data have been input.

Notes: Only use in FORM.

Syntax:

```
int ZM_PrintLabelAuto (
    unsigned int    number,
    unsigned int    cpnumber
);
```

Parameters:

number

number of labels to print.

Value:1 - 65535

cpnumber

number of copies pre label. the default value is 1 if this cpnumber have no set value.

Value:1 - 65535

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

```
ZM_PrintLabelAuto (2,3);
```

ZM_DefineCounter

Description:
This function is used to define a counter variable.

Syntax:
int ZM_DefineCounter (
unsigned int id,
unsigned int maxNum,
char ptext,
LPTSTR pstr,
LPTSTR pMsg
);

Parameters:
id
Counter ID, acceptable values are from 0 to 9.
maxNum
Maximum digit number, acceptable values are from 1 to 40.
ptext
Justification code. L for left justification, R for right justification, C for centralization and N for no justification.
Pstr
Counter change rule : "+"or "-" sign followed by a single digit of 1 – 9, then followed by a change symbol (i.e. D - decimal base, B - binary system, O - octonary number system, H - hexadecimal system, X - user defined pattern, to a maximum of 64 characters.)

Example Step values:

"+1" = Increases each time by 1, according to Decimal base computation. Example: 1234, 1235, 1236, ….

"+3D"= Increases each time by 3, according to Decimal base computation. Example: 1234, 1235, 1236, ….

"-1B"= Decreases each time by 1, according to Binary computation. Example: 1111, 1110, 1101,….

"-4O= Decreases each time by 4, according to Octonary number system computation. Example: 1234,1230,1224, ….

"-6H"= Decreases each time by 1, according to hexadecimal base computation. Example: 1234,122E,1228,….

"+3X"= Increase each time by 3, according to a user-defined pattern. Example: In user-defined rule: TE2DOKLU046MNY37, the starting value is "T062", followed by T062, T06K, T060,….

pMsg

A text string that will be sent to LCD or KDU.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DefineCounter (0,6,'N',"+1","\"Enter\" Code:");

ZM_DefineVariable

Description:

This function is used to define variable in the FORM.

Note: It use this function only when editing FORM.

Syntax:

int ZM_DefineVariable (

unsigned int pid,

unsigned int pmax,

char porder,

LPTSTR pmsg

);

Parameters:

pid

Variable ID number, value range: 00—99；

pmax

Maximum number of characters, value range: 1—99.

If you use KDU, the length should limited to under 16 characters.

porder

Field Justification; L-left justification, R- right justification, C-center, N-no justification.

pmsg

Remind contents. Will be sent to KDU or displayed on LCD display of the printer.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DefineVariable (0,16,L,"\”Enter Title:\"");

ZM_Download

Description:

This function is used to download variable or counter variable to the printer.

Please refer to the command “?” of the PCLE.

Syntax:

int ZM_Download(void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_Download( );

ZM_DownloadInitVar

Description:

This function is used to initialize the Variable or Counter value.

Note: It must be execute ZM_Download() before use this function.

Syntax:

int ZM_DownloadInitVar (

LPTSTR pst

);

Parameters:

pst

a string for Variable;

a numeric string for Counter.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DownloadInitVar("123456");

ZM_PrintConfigunation

Description:

This function is used to print out Self Test label.

Syntax:

int ZM_PrintConfigunation ( );

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_PrintConfigunation ( );

ZM_Reset

Description:

This function is used to reset the printer.

Note: The reset function cannot be used within a stored form.

Syntax:

int ZM_Reset (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_Reset( );

ZM_SetPrinterState

Description:

This function is used to set the printer's working state.

Syntax:

int ZM_SetPrinterState(char state);

Parameters:

state

D: Enable direct thermal printing (without ribbon).

P: Enable continuous printout.(default)

L: After printing a label the printer will stop, requiring user input to print the next label. Input determined by:

1. By pressing the "feed" button for each label to be printed.
2. Will continue automatically after previously printed label is removed (with peeler kit installed)

C: Enable Cutting mode. (Only with cutter kit installed)

N: Enable Peeler mode. (Only with peeler kit installed)

Notes:

1. The cutter and dispenser cannot be enabled at the same time.
2. Once the options are incorrectly selected, the READY light in front panel will flash. Please refer to the trouble-shooting section to correct the errors.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_SetPrinterState ('D');

ZM_FeedMedia

Description:

This Function force the printer to feed out a label.

Syntax:

int ZM_FeedMedia (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_ FeedMedia ( );

ZM_MediaDetect

Description:

This function is used to force a label calibration.

Syntax:

int ZM_MediaDetect (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_ MediaDetect ( );

ZM_CutPage

Description:

This function is used to set cutter's working circle (The cutter will start to cut labels once the numbers of labels have been printed)

Syntax:

int ZM_CutPage (

UINT page

);

Parameters:

page

number of label have printed before cutter work.

Value:1 – 999; default value is 1.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_CutPage(1);

ZM_EnableFlASH

Description:

This function is used to enable Flash memory.

the data sent to the printer will be stored to the flash memory when use this function.

Note: This function is enable Depend on model of printer.

Syntax:

int ZM_EnableFlASH (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_EnableFlASH ( );

ZM_DisableFLASH

Description:

This function is used to disable Flash memory.

The data sent to the printer will be stored to the SDRAM when use this function.

Syntax:

int ZM_ DisableFLASH (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_ DisableFLASH ( );

ZM_BinGraphicsList

Description:

This function force the printer to print out the list of Binary graphics that stored to RAM or flash memory from host.

Syntax:

int ZM_BinGraphicsList (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_BinGraphicsList ( );

ZM_BinGraphicsDel

Description:

This function force the printer to delete one or all of Binary graphics currently stored in RAM or flash memory.

Syntax:

int ZM_BinGraphicsDel (

LPTSTR pid

);

Parameters:

pid

Graphics name with a maximum of 16 characters or “*”.

if pid = “*”, all graphics will be deleted from RAM or Flash memory.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_BinGraphicsDel (“Bin2”);

ZM_BinGraphicsDownload

Description:

This function force the printer to store a Binary graphics to printer.

Syntax:

int ZM_BinGraphicsDownload (

char* name,

unsigned int pbyte,

unsigned int pH,

UCHAR * Gdata

);

Parameters:

name

User-defined graphics name with a maximum of 16 characters. graphics can only be printed by using this name in ZM_RecallBinGraphics() after the graphics being stored to the printer

pbyte

Bytes for one line data. If 8 cannot divide the bits of one line data, then the bytes equal to the result add 1.

Example: the bytes of one line data is 2(14 bits data),

pH

Height of graphic, in dots.

Gdata

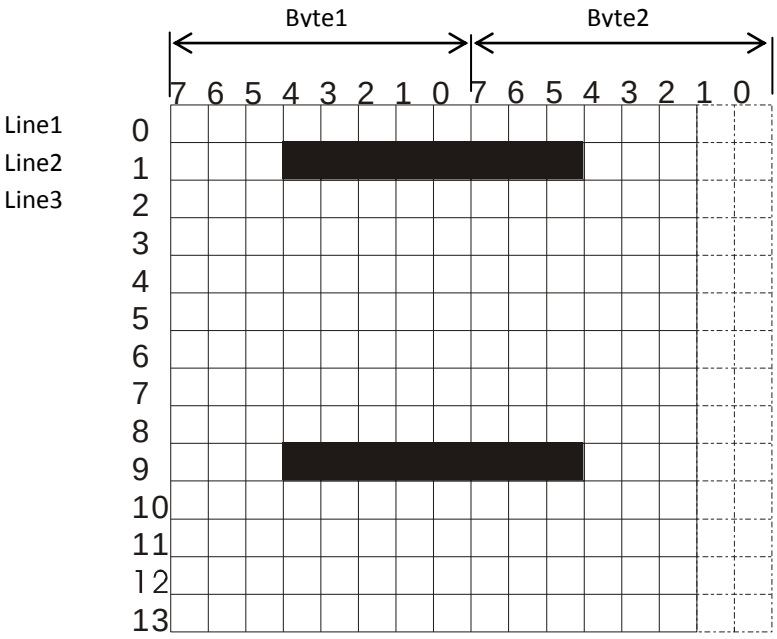
([…raster data…])

Binary graphic data; data size = pbyte * pH (Bytes).

Binary data transmission sequence is left to right, up to down, example:

data transmission sequence：Line1’s Byte1(0xff), Line1’s Byte2(0xff)，Line2’s Byte1(0xe0),Line2’s Byte2(0x1f), Line3’s Byte1(0xff), Line3’s Byte2(0xff)，…

The part of the broken line is non-graphic area, and then the corresponding bit is 0.



Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

```
char buf[] = {0xff,0xff,0xe0,0x1f,0xff,0xff…};
ZM_BinGraphicsDownload (“BinA”, 3, 24, buf);
```

ZM_RecallBinGraphics

Description:

This function is used to print the downloaded Binary graphics.

Note: The graphics must store in the printer by using ZM_BinGraphicsDownload before it to be printed.

Syntax:

int ZM_RecallBinGraphics (

unsigned int px,

unsigned int py,

char* name

);

Parameters:

px

X coordinate in dots.

py

Y coordinate in dots.

name

Graphics name with a maximum of 16 characters, it must be user-defined name in the ZM_BinGraphicsDownload().

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

```
ZM_RecallBinGraphics(10,100,"BinA");
```

ZM_DisableErrorReport

Description:

This function is used to Disable the printer’s status report via the COM port.

Syntax:

int ZM_DisableErrorReport (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

```
ZM_DisableErrorReport( );
```

ZM_EnableErrorReport

Description:

This function is used to Enable the printer's status report via the COM port.

Syntax:

int ZM_EnableErrorReport (void);

Parameters:

None

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_DisableErrorReport( );

Remark:

The printer sends its feedback to the PC via the COM port.

If an error occurs, the printer will send a NACK (15H), followed by the error number, to the host. If no errors occur, the printer will echo ACK (06H) after each P command.

Error Code	Description
0x00	No Error
0x01	Object Exceeded Label Border
0x02	Bar Code Data Length Error
0x03	Insufficient Memory to Store Data
0x04	Memory Configuration Error
0x05	RS-232 Interface Error
0x06	Paper or Ribbon Empty
0x07	Duplicate Name: Form, Graphic or Soft Font
0x08	Name Not Found: Form, Graphic or Soft Font
0x09	Not in Data Entry Mode
0x0a	Print Head Up (Open)
0x0b	Pause Mode or Paused in Peel mode
0x0c	Does not fit in area specified
0x0d	Data length too long
0x0c	PDF-417 coded data too large to fit in bar code
0x0d	
0x0e	

ZM_ErrorReport

Description:

Use this function to get printer error/status code immediately. This function must be use the COM port to receive send back status code.

This function must be execute after ZM_ClearBuffer().

Before use the function, please confirm to use ClosePort() to close COM port if other application have opened the COM port.

It strong suggested to use ZM_ErrorReportEx() instead of this function.

Syntax:

int ZM_ErrorReport (int wPort, int rPort, DWORD BaudRate, BOOL HandShake);

Parameters:

wPort

must be 0.

rPort

the COM port of PC which receive the Error/Status code.

Value: 1 – 255

Example:

1 : Receiving codes from COM1;

2 : Receiving codes from COM2;

…

255: Receiving codes from COM255;

BaudRate

Set baud rate value.

value: 9600,19200,38400,57600;

HandShake

HandShaking flag;

TRUE: Enable HandShaking;

FALSE: Disable HandShaking.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

Getting the status code of ZMIN X1DPI printer from COM1 port:

```
OpenPort("ZMIN X1DPI ");
….
ZM_ClearBuffer();
char buff[5] = {0};
ZM_ ErrorReport (0, 1, 38400, FALSE);
…….
ClosePort();
```

Remark:

The printer will report 4 bytes back to host in the following format:

0xXX XX 0x0d 0x0a : Error/Status code <CR><LF>

Error/Status code	Description	ZM_ErrorReport() return value	ErrorCode
00	No Error	0	“00”
01	Error Command	1	“01”
82	Out of Ribbon	82	“82”
83	Out of Media	83	“83”
86	Cutter aren’t installed	86	“86”
87	Print Head Up (Open)	87	“87”
88	Print Pause	88	“88”
99	Other Error	99	“99”

ZM_ErrorReportEx

Description:

Use this function to get printer's error/status code , it will return when timeout , whether the printer send back the codes or no. This function must be use the COM port to receive send back status code.

Before use the function, please confirm to use ClosePort() to close COM port if other application have opened the COM port.

This function must be execute after ZM_ClearBuffer().

Syntax:

int ZM_ErrorReport (

int wPort,

int rPort,

DWORD BaudRate,

BOOL HandShake,

int TimeOut

);

Parameters:

wPort

must be 0.

rPort

the COM port of PC which receive the Error/Status code.

Value: 1 – 255

Example:

1 : Receiving codes from COM1;

2 : Receiving codes from COM2;

…

255: Receiving codes from COM255;

BaudRate

Set baud rate value.

value: 9600,19200,38400,57600;

HandShake

HandShaking flag;

TRUE: Enable HandShaking;

FALSE: Disable HandShaking.

Timeout

Set the receiving time out timer in 100ms.

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

Getting the status code of ZMIN X1DPI printer from COM1 port, waiting 2 second then timeout:

```
OpenPort("ZMIN X1DPI ");
….
ZM_ClearBuffer();
char buff[5] = {0};
ZM_ ErrorReport (0, 1, 38400, FALSE,20);
…….
ClosePort();
```

Remark:

The printer will report 4 bytes back to host in the following format:

0xXX XX 0x0d 0x0a : Error/Status code <CR><LF>

Error/Status code	Description	ZM_ErrorReport() return value	ErrorCode
00	No Error	0	“00”
01	Error Command	1	“01”
82	Out of Ribbon	82	“82”
83	Out of Media	83	“83”
86	Cutter aren’t installed	86	“86”
87	Print Head Up (Open)	87	“87”
88	Print Pause	88	“88”
99	Other Error	99	“99”

ZM_SetPagePrintCount

Description:

Notice: Don't use this function when send PCLE Compatible commands.

This function is used to set windows driver's copies of page.

This function is different to ZM_PrintLable(),ZM_PrintLable().

Use this function only when you want to print image of printer which have encode from other applications.

Syntax:

int ZM_SetPagePrintCount(

unsigned int number,

unsigned int cpnumber

);

Parameters:

number

number of labels to print.

Value:1 - 65535

cpnumber

number of copies pre label. the default value is 1 if this cpnumber have no set value.

Value:1 - 65535

Return Value:

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_SetPagePrintCount(1,1);

ZM_WritePrinter

Description:

This Function force to start send data to printer. The data can be any ascii codes have stored in DLL's buffer.

Syntax:

int ZM_WritePrinter();

Parameters:

None

Return Value

0 : Succeeds.

Other returns: Please refer to chapter: ZMWIN.DLL erroneous return value specification.

Example:

ZM_WritePrinter();

ZMWIN.dll error run return code lists

-1000
to
-1030 : It can't open the communication port.

-1031
to
-1037 : Error occurs while reading data from the COM port.

-1040 : Error occurs while reading data from the COM port.
-1041 : Error occurs while reading data from the COM port.
-1042 : The Baud of COM port was an error value.
-2992 : Fail to executed OpenPort(), Please confirm whether the printer driver installed or no!
-3001 : ZM_GetInfo execution error;
-3002 : ZM_DrawText execution error;
-3003 : ZM_DrawText parameter error;
-3004 : ZM_DrawText or ZM_DrawBarcode's pdirec parameter error;
-3005 : ZM_DrawText pFont parameter error;
-3006 : ZM_DrawText's pHorizontal or pVertical parameter error;
-3007 : NULL;
-3008 : ZM_DrawBarcode execution error;
-3009 : ZM_DrawBarcode parameter error;
-3010 : ZM_DefineCounter execution error;
-3011 : ZM_DefineCounter parameter error;
-3012 : ZM_SetDarkness execution error;
-3013 : ZM_DS execution error;
-3014 : ZM_SoftFontList execution error;
-3015 : ZM_SoftFontDel parameter error;
-3016 : ZM_SoftFontDel execution error;
-3017 : ZM_FormEnd execution error;
-3018 : ZM_FormList execution error;
-3019 : ZM_FormDel Allocate memory error;
-3020 : ZM_FormDel parameter error;
-3021 : ZM_FormDel execution error;
-3022 : ZM_ExecForm Allocate memory error;
-3023 : ZM_ExecForm parameter error;
-3024 : ZM_ExecForm execution error;
-3025 : ZM_FormDownload Allocate memory error;

-3026 : ZM_FormDownload parameter error;
-3027 : ZM_FormDownload execution error;
-3028 : ZM_DrawPcxGraphics Allocate memory error;
-3029 : ZM_DrawPcxGraphics parameter error;
-3030 : ZM_DrawPcxGraphics execution error;
-3031 : ZM_PcxGraphicsList execution error;
-3032 : ZM_PcxGraphicsDel Allocate memory error;
-3033 : ZM_PcxGraphicsDel parameter error;
-3034 : ZM_PcxGraphicsDel execution error;
-3035 : ZM_PcxGraphicsDownload Allocate memory error;
-3036 : ZM_PcxGraphicsDownload can’t open the file;
-3037 : ZM_PcxGraphicsDownload execution error;
-3038 : ZM_DrawBinGraphics execution error;
-3039 : ZM_DrawBinGraphics execution error;
-3040 : NULL；
-3041 : ZM_DisableCircumgyrate execution error;
-3042 : ZM_EnableCircumgyrate execution error;
-3043 : ZM_DrawLineXor execution error;
-3044 : ZM_DrawLineOr execution error;
-3045 : ZM_DrawDiagonal execution error;
-3046 : ZM_DrawWhiteLine execution error;
-3047 : ZM_ClearBuffer execution error;
-3048 : ZM_SetPrinterState execution error;
-3049 : ZM_SetPrinterState parameter error;
-3050 : ZM_PrintLabel execution error;
-3051 : ZM_PrintLabel parameter error;
-3052 : ZM_PrintLabelAuto execution error;
-3053 : ZM_PrintLabelAuto parameter error;
-3054 : ZM_SetLabelHeight execution error;
-3055 : ZM_SetLabelWidth execution error;
-3056 : ZM_SetCoordinateOrigin execution error;
-3057 : ZM_SetPrintSpeed execution error;
-3058 : ZM_SetPrintSpeed parameter error;
-3059 : ZM_PrintConfigunation execution error;
-3060 : ZM_DisableErrorReport execution error;
-3061 : ZM_EnableErrorReport execution error;
-3062 : ZM_DefineVariable execution error;
-3063 : ZM_DefineVariable parameter error;
-3064 : ZM_DefineVariable parameter error;

-3065 : ZM_DrawRectangle execution error;
-3066 : ZM_Y execution error;
-3067 : ZM_Y parameter error;
-3068 : ZM_SetDirection execution error;
-3069 : ZM_SetDirection parameter error;
-3070 : ZM_EnableFlASH execution error;
-3071 : ZM_DisableFLASH execution error;
-3072 : ZM_Download execution error;
-3073 : ZM_Reset execution error;
-3074 : ZM_BackFeed execution error;
-3075 : Allocate memory of structure PCX HEAD error；
-3076 : Allocate memory of PCX data error;
-3077 : Can't save current path of file;
-3078 : Can't create PCX graphics file;
-3079 : Can't save PCX data;
-3080 : ZM_PrintPCX execution error;
-3081 : Can't create the PrinterDC;
-3082 : Allocate memory of bitmap error;

-3083 : ZM_BinGraphicsDownload execution error;
-3084 : ZM_BinGraphicsDel execution error;
-3085 : ZM_BinGraphicsList execution error;
-3087 : ZM_RecallBinGraphics execution error;
-3088 : ZM_RecallBinGraphics: The length of "name" was too long;

-3089 : ZM_UserFeed execution error;
-3090 : ZM_UserBackFeed execution error;
-3092 : ZM_ErrorReport can't write data to the communication port;
-3100 : SetCommPort can't modify the parameter of COM port.

-3101 : ZM_CutPage execution error;
-3102 : ZM_FeedMedia execution error;
-3103 : ZM_MediaDetect execution error;

-3200 to -3400 : The communication port isn't opened or has closed;

-3250 : ZM_DrawBar2D_Pdf417() parameter error;
-3251 to -3257 : The communication port isn't opened or has closed;

-3261 : The communication port was opened abnormal before execute ZM_ErrorReport();
-4000 : The communication port was opened abnormal when execute OpenPort ();
-4001 : The COM port was set incorrectly when execute ZM_ErrorReport();
-4002 : Time out error occurred when The ZM_ErrorReportEx() use the COM port.