
iOS Module Program Manual

ESCPOS

Thermal Printer

Rev. 1.80b

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1. Instruction

This iOS Module Program Manual describes the method which is exposed from Library and Header file needed in developing iOS Mobile application.

The library contains bitcode.

2. Method.

Defined in the ESCPOSPrinter Class.

2.1 OpenPort

Connect a Printer.

- (long) openPort:(NSString*)portName withPortParam:(int) port

[Parameter]

- portName : IP Address

- port : Port Numer (Default 9100)

[Return value]

0 Connection established.

-1 , -2 Connection failed

-3 Invalid device

2.2 ClosePort

Disconnect a Printer.

- (long) closePort

2.3 PrintText

This method is used for supporting text printing.

It can be apply character option and size using by OR operation(|).

- (long) printText:(NSString *) data withAlign:(int) alignment withOption:(int) option

withSize:(int) size

[Parameter]

- data : Text data to print

- alignment : This value is alignment. It sets text alignment.

Variable	Description
ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

- option : This value is text attributes. It sets text attributes to print.

Variable	Description
FNT_DEFAULT	FontA, Set up as a standard
FNT_FONTB	Set up as FontB
FNT_BOLD	Set up as Bold attribute
FNT_UNDERLINE	Set up as Underline attribute

FNT_UNDERLINE2	Underline attribute (2 Dot)
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- size : This value is text size. It sets text size to print.

Variable (Set up width ratio)	Description
TXT_1WIDTH	Set up width ratio as x1
TXT_2WIDTH	Set up width ratio as x2
TXT_3WIDTH	Set up width ratio as x3
TXT_4WIDTH	Set up width ratio as x4
TXT_5WIDTH	Set up width ratio as x5
TXT_6WIDTH	Set up width ratio as x6
TXT_7WIDTH	Set up width ratio as x7
TXT_8WIDTH	Set up width ratio as x8

Variable (Set up height ratio)	Description
TXT_1HEIGHT	Set up height ratio as x1
TXT_2HEIGHT	Set up height ratio as x2
TXT_3HEIGHT	Set up height ratio as x3
TXT_4HEIGHT	Set up height ratio as x4
TXT_5HEIGHT	Set up height ratio as x5
TXT_6HEIGHT	Set up height ratio as x6
TXT_7HEIGHT	Set up height ratio as x7
TXT_8HEIGHT	Set up height ratio as x8

[Return value]

Number of bytes written Success

-1 Failure

2.4 PrintString

This method is used for supporting text printing.

- (long) printString:(NSString *) data

[Parameter]

- data : Text data to print

[Return value]

Number of bytes written Success

-1 Failure

2.5 PrintData

This method is used for supporting data printing.

It is used for supporting text printing with ESC command.

- (long) printData:(unsigned char *) data withLength:(int) length

[Parameter]

- data : Data to print
- length : Data length

[Return value]

- 0 Success
- 1 Failure

2.6 PrintNVBitmap

This method is used for printing NVBitmap images that stored in a printer.

- (long) printNVBitmap:(int) imageNumber withAlignment:(int) align withSize:(int) size

[Parameter]

- imageNumber : Image number that stored in a printer. (1 – 255)
- align : This value is alignment. It sets image alignment.

Variable	Description
ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

- size : This value is image size. It sets image size to print.

Variable	Description
BITMAP_NORMAL	Normal size
BITMAP_DOUBLE_WIDTH	Double width
BITMAP_DOUBLE_HEIGHT	Double height
BITMAP_QUADRUPLE	Double size

2.7 PrintBitmap

This method is used for printing image files.

- (long) printBitmap:(NSString *) filePath withAlignment:(int) align withSize:(int) size
withBrightness:(int) bright

[Parameter]

- filePath : Path of image file. (BMP, JPG, PNG, GIF)
- align : This value is alignment. It sets image alignment.

Variable	Description
ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

- size : This value is image size. It sets image size to print.

Variable	Description
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BITMAP_NORMAL	Normal size
BITMAP_DOUBLE_WIDTH	Double width
BITMAP_DOUBLE_HEIGHT	Double height
BITMAP_QUADRUPLE	Double size

- bright : It sets brightness of image. (1-10)

2.8 PrintBarcode

This method is used for supporting barcode printing.

- (long) printBarCode:(NSString*) data withSymbology:(int) symbol withHeight:(int) height
withWidth:(int) width withAlignment:(int) align withHRI:(int) textPos
[Parameter]

- data : Barcode data to print.

- symbol : This value is barcode symbol type. It sets barcode type to print.

Variable	Description
BCS_UPCA	UPC-A Barcode
BCS_UPCE	UPC-E Barcode
BCS_EAN13	EAN-13 Barcode
BCS_JAN13	JAN-13 Barcode
BCS_EAN8	EAN-8 Barcode
BCS_JAN8	JAN-8 Barcode
BCS_CODE39	CODE 39 Barcode
BCS_ITF	Interleaved 2 of 5 Barcode
BCS_CODABAR	CODABAR Barcode
BCS_CODE93	CODE 93 Barcode
BCS_CODE128	CODE 128 Barcode

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

- width : This value is barcode width [2 <= value <= 6]. It sets total barcode width to print.

- align : This value is alignment. It sets barcode alignment.

Variable	Description
ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

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

Variable	Description
HRI_TEXT_NONE	Do not print barcode data
HRI_TEXT_ABOVE	Print barcode data above the barcode
HRI_TEXT_BELOW	Print barcode data below the barcode

2.9 PrintPDF417

This method is used for supporting PDF417 barcode printing.

- (long) printPDF417:(NSString *) data withLength:(int) dataLength withColumns:(int) columns
withCellWidth:(int) cWidth withAlignment:(int) align

[Parameter]

- data : Barcode data to print.
- dataLength : Length of Barcode data.
- columns : Columns. (1 – 20)
- cWidth : Cell Width. (2 - 6)
- align : This value is alignment. It sets barcode alignment.

Variable	Description
ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

2.10 QRCode

This method is used for supporting QRCode barcode printing.

- (long) printQRCode:(NSString*) data withLength:(int) dataLength
withModuleSize:(int) moduleSize withECLevel:(int) ECLevel withAlignment:(int) align

[Parameter]

- data : Barcode data to print.
- dataLength : Length of barcode data.
- moduleSize : Module size. (1 – 20)
- ECLevel : Error Correction Level.

Variable	Description
QRCODE_EC_LEVEL_L	Error correction Level L (7%)
QRCODE_EC_LEVEL_M	Error correction Level M (15%)
QRCODE_EC_LEVEL_Q	Error correction Level Q (25%)
QRCODE_EC_LEVEL_H	Error correction Level H (30%)

- align : This value is alignment. It sets barcode alignment.

Variable	Description
ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

2.11 ASBOn

Enable ASB Mode. (ASB : Auto Status Back)

If ASB Mode enabled, printer automatically transmits the status when printer status changed.

Callback method must be registered using registerCallback before call this method.

ASB Mode cannot be used simultaneously with MSR Card Read or printCheck method.

-
- (long) asbOn

2.12 ASBOff

Disable ASB Mode.

- (long) asbOff

2.13 RegisterCallback

Register Callback method that used in ASB Mode.

Only one method(MSR, ASB callback) can be registered by using this method.

For more information, refer to the sample application.

- (void) registerCallback:(id) object withSelector:(SEL) selector

object : Instance to call Callback method.

selector : Callback method.

2.14 UnregisterCallback

Unregister Callback method that used in ASB Mode.

- (void) unregisterCallback

2.15 PrintPageModeData

Print and return to standard mode in page mode.

- (long) printPageModeData

2.16 ClearPageModeData

Cancel print data in page mode.

- (long) clearPageModeData

2.17 SetPageMode

Change to page mode or standard mode.

- (long) setPageMode:(BOOL) pagemode

[Parameter]

- pagemode :TRUE, FALSE Page mode status

2.18 SetPrintDirection

Select print direction in page mode.

- (long) setPrintDirection:(int) direction

[Parameter]

- direction : Print direction

Variable	Description
DIRECTION_LEFT_RIGHT	Starting upper left
DIRECTION_BOTTOM_TOP	Starting lower left
DIRECTION_RIGHT_LEFT	Starting lower right
DIRECTION_TOP_BOTTOM	Starting upper right

2.19 SetPrintingArea

Set printing area in page mode.

- (long) setPrintingArea:(int) startX withStartY:(int) startY withWidth:(int) width
withHeight:(int) height

[Parameter]

- startX : Starting X position.
- startY : Starting Y position.
- width : Width of printing area. (Motion unit)
- height : Height of printing area. (Motion unit)

2.20 SetAbsoluteVertical

Set absolute vertical print position in page mode. (Y axis)

- (long) setAbsoluteVertical:(int) absolutePosition

[Parameter]

- absolutePosition : Starting position. (Motion unit)

2.21 SetRelativeVertical

Set relative vertical print position in page mode. (Y axis)

- (long) setRelativeVertical:(int) relativePosition

[Parameter]

- relativePosition : Starting position. (Motion unit)

2.22 SetMotionUnit

Set horizontal and vertical motion units. (25.4mm / x {1/x Inches} , 25.4mm/y {1/y Inches})

- (long) setMotionUnit:(int) hUnit withVUnit:(int) vUnit

[Parameters]

- hUnit : horizontal motion unit.
- vUnit : vertical motion unit.

[Return value]

0 Success

-1 Failure

2.23 ASBMode

Returns ASB Mode status.

- (BOOL) asbMode

[Return value]

TRUE, FALSE ASB Mode Status

2.24 SetEncoding

This method is used for setting charset.

- (void) setEncoding:(NSStringEncoding)

[Parameter]

- (NSStringEncoding) : Charset to encoding. (Refer to the iOS codepage manual.)

2.25 LineFeed

This method is used for line feeding.

- (long) lineFeed:(int) IfCount

[Parameter]

- (int) : Count to line feed.

2.26 PrinterCheck [MobilePrinter Only]

This function is used for printer status checking.

If you using for bluetooth interface, please refer to the bluetooth programming manual.

If ASB mode is on, this function cannot be used.

- (long) PrinterCheck

[Return Values]

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

STS_PAPEREMPTY : Printer Status is no paper.

STS_COVEROPEN : Printer Cover is open.

STS_BATTERY_LOW : Printer battery capacity is low.

STS_MSR_READ : Currently MSR in read mode, printing is impossible.

2.27 ReadMSR

This function change MSR Status to Ready status and sets the request of MSR data

transmission according to arguments.

Callback method must be registered using registerCallback before call this method.

If you using for bluetooth interface, please refer to the bluetooth programming manual.

This function cannot be used in ASB Mode.

- (Int) readMSR:(int) mode

[Parameter]

* mode

SelectTrack	MSR Track
MSR_TRACK_1	Track 1
MSR_TRACK_2	Track 2
MSR_TRACK_12	Track 1,2
MSR_TRACK_3	Track 3
MSR_TRACK_23	Track 2,3

[Return Values]

STS_MSR_READ : This value returns when a function succeeds.

STS_NORMAL : This value returns when a function fails to change the MSR mode.

2.28 CancelMSR

This function is used for changing MSR Ready status to normal status.

- (long) cancelMSR

2.29 CutPaper [POSPrinter Only]

This method is used for supporting Paper cutting.

- (long) cutPaper

2.30 PrinterSts [POSPrinter Only]

This method returns printer status. It can't used in ASB Mode.

- (long) printerSts

[Return value]

STS_NORMAL	Normal Status
STS_COVEROPEN	Cover Open Status
STS_PAPERNEAREMPTY	Paper Near End Status
STS_PAPEREMPTY	Paper Empty Status

2.31 DrawerSts [POSPrinter Only]

This method returns cash drawer status. It can't used in ASB Mode.

- (long) drawerSts

[Return value]

STS_CD_OPEN	Cashdrawer Open status
STS_CD_CLOSE	Cashdrawer Close status

2.32 OpenDrawer [POSPrinter Only]

Open a cash drawer.

- (long) openDrawer:(int) pinNum withPulseOnTime:(int) onTime withPulseOffTime:(int) offTime

[Parameter]

pinNum : Pin number to generate pulse.

Variable	Description
CD_PIN_TWO	PIN 2
CD_PIN_FIVE	PIN 5

onTime : Start time to generate pulse. (onTime * 2 ms)

offTime : Stop time to generate pulse. (offTime * 2 ms)

2.33 printImage ← Added in 1.76

This method is used for printing UIImage in app.

- (long) printImage:(UIImage *) imgApp withAlignment:(int) align withSize:(int) size
withBrightness:(int) bright

[Parameter]

-
- imgApp: Image from app.
 - align : This value is alignment. It sets image alignment.

Variable	Description
ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

- size : This value is image size. It sets image size to print.
- bright : This value is bright value.

2.34 printNormalWeb ← Added in 1.76

This method is used for printing from web app.

- (long) printNormalWeb:(NSString*) normalData
[Parameter]
- normalData: printing data from app.

2.35 printIOSFont ← Added in 1.77

This function is used for printing font in iOS.

- (long) printIOSFont:(NSString *)fontName withBold:(int)bold withItalic:(int)italic
withUnderline:(int)underline withData:(NSString *)data
withMaxWidth:(int)maxWidth withFontSize:(int)fontdotsize
withAlgin:(int)alignment withReverse:(int)reverse;
[Parameter]
- * fontName
 - It receives font name in iOS as a factor.
- * bold
 - It receives bold attribute as a factor.
- * italic
 - It receives italic attribute as a factor.
- * underline
 - It receives underline attribute as a factor.
- * data
 - Unicode which has a null-terminated string. It receives text to print as a factor.
- * maxWidth
 - It receives the maximum size of printing area as a factor.
- * fontdotsize

-
- It receives size of font as a factor. [Unit : Dot]
 - align : This value is alignment. It sets image alignment.

Variable	Description
ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

* reverse

- It receives reverse printing attribute as a factor.

[Return value]

- 0 Success
- 1 Font is not exist
- 2 buffer size error.

2.36 setBypass ← Added in 1.79

Set the ICR communication.

int setBypass(bool bBypassMode)

[Parameter]

* bBypassMode

- Set the ICR communication mode.

Variable	Description
true	ICR Communication enable
false	ICR Communication disable

[Return value]

LK_SUCCESS , LK_FAIL

2.37 printIcrData ← Added in 1.79

This method is used for supporting data printing.

It is used for supporting icr command.

- (long) printIcrData:(unsigned char *) data withLength:(int) length

[Parameter]

- data : Data to send

Set the ICR Command. Reference to first payment command.

Not include STX, ETX, LRC.

Command ID + Length + command (Length = command length + 4)

- length : Data length

[Return value]

-
- 0 Success
 - 1 Failure

2.38 printPdfFile, printPdfFilePartial ← Added in 1.80

This function is used for printing pdf file.

- (long) printPdfFile:(NSString *) filePath withPage:(int) printPage withPrintWidth:(int) pSize
withAlignment:(int) align
- (long) printPdfFilePartial:(NSString *) filePath withStartPage:(int) startPage
withEndPage:(int) endPage withPrintWidth:(int) pSize withAlignment:(int) align

[Parameter]

- * filePath
 - Path of pdf file.
- * printPage
 - Page number to print.
- * startPage
 - Start page number to print.
- * endPage
 - End page number to print.
- * pSize
 - Printing width.
- align : This value is alignment. It sets printing alignment.

Variable	Description
ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

[Return value]

- 0 Success
- Others Failure

2.39 printFile ← Added in 1.80

This function is used for printing command file.

- (long) printFile:(NSString *)filePath

[Parameter]

* filePath

- Path of command file.