

iOS Module Program Manual

ESC/POS

Mobile Printer

Rev. 1.74

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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.

2. Method.

Defined in the ESCPOSPrinter Class.

2.1 OpenPort

Connect a Printer.

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

[Parameter]

- portName : IP Address or “**bluetooth**” for using Bluetooth.

- 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

[Return value]

0 Success

-1 Failure

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
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- 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

- 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 [Wi-Fi]
0	Success [Bluetooth]
-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 [Wi-Fi]
0	Success [Bluetooth]
-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]

Number of bytes written	Success [Wi-Fi]
0	Success [Bluetooth]
-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

[Return value]

0 Success
-1 Failure

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.
- 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

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

[Return value]

0 Success
-1 Failure

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
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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

[Return value]

0 Success

-1 Failure

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 : - Number of Data Cordwords. (1 – 20)

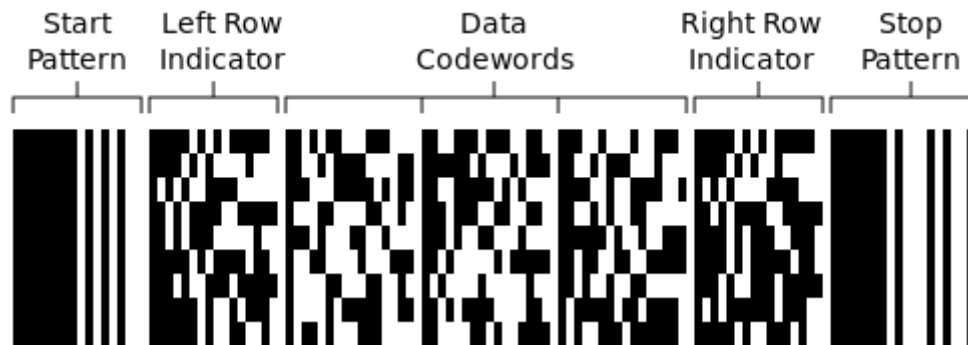
- cWidth : Cell(Black or White bar) Width. (2 - 6)

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

Variable	Description
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ALIGNMENT_LEFT	Left alignment
ALIGNMENT_CENTER	Center alignment
ALIGNMENT_RIGHT	Right alignment

(Example) Columns = 3



Columns : number of Data Codewords

cWidth : size of bar(black or White).

[Return value]

0 Success

-1 Failure

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

[Return value]

0 Success

-1 Failure

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

[Return value]

0 Success

-1 Failure

2.12 ASBOff

Disable ASB Mode.

- (long) asbOff

[Return value]

0 Success

-1 Failure

2.13 RegisterCallback

Register Callback method for ASB status reading or MSR data reading.

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.

- (void) unregisterCallback

2.15 PrintPageModeData

Print and return to standard mode in page mode.

- (long) printPageModeData

[Return value]

0 Success

-1 Failure

2.16 ClearPageModeData

Cancel print data in page mode.

- (long) clearPageModeData

[Return value]

0 Success

-1 Failure

2.17 SetPageMode

Change to page mode or standard mode.

- (long) setPageMode:(BOOL) pagemode

[Parameter]

- pagemode :TRUE, FALSE Page mode status

[Return value]

0 Success

-1 Failure

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

[Return value]

0 Success

-1 Failure

2.19 SetPrintingArea

Set printing area in page mode.

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

[Parameter]

- startX : Horizontal starting position.
- startY : Vertical starting position.
- width : Printing area width.
- height : Printing area height.

[Return value]

0 Success

-1 Failure

2.20 SetAbsoluteVertical

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

- (long) setAbsoluteVertical:(int) absolutePosition

[Parameter]

- absolutePosition : Starting position.

[Return value]

0 Success

-1 Failure

2.21 SetRelativeVertical

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

- (long) setRelativeVertical:(int) relativePosition

[Parameter]

- relativePosition : Starting position.

[Return value]

0 Success

-1 Failure

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.

Refer to below url to gain to more information. (StringEncoding section)

http://developer.apple.com/library/mac/#documentation/Cocoa/Reference/Foundation/Classes/NSString_Class/Reference/NSString.html#//apple_ref/doc/uid/20000154-BAJJAICE

- (void) setEncoding:(NSStringEncoding)

[Parameter]

- (NSStringEncoding) : Charset to encoding.

2.25 LineFeed

This method is used for line feeding.

- (long) lineFeed:(int) IfCount

[Parameter]

- (int) : Count to line feed.

[Return value]

0 Success

-1 Failure

2.26 PrinterCheck

This function is used for printer status checking.

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.

This function cannot be used in ASB Mode.

- (long) 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
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[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

[Return value]

0 Success

-1 Failure

2.29 SetDithering ← Added in 1.71

This method sets the dithering algorithm for the image.

- (long) setDithering:(int) iDither

[Parameter]

* iDither

Variable(Value)	Description
THRESHOLDING_DITHERING(0)	Thresholding algorithm
ERROR_DIFFUSION_DITHERING(1)	Error diffusion algorithm
ORDERED_2x2_DITHERING(2)	2x2 Indexed order algorithm
ORDERED_4x4_DITHERING(3)	4x4 Indexed order algorithm
ORDERED_8x8_DITHERING(4)	8x8 Indexed order algorithm
ORDERED_12x12_DITHERING(5)	12x12 Indexed order algorithm