

iOS Module Program Manual

CPCL

Mobile Printer

Rev. 1.74

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1. Instruction.
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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 CPCLPrinter 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. SetForm

This function is used for defining paper form.

- (long) setForm:(int) horizonOffset withResX:(int) resolX withResY:(int) resolY
withLabelHeight:(int) labelHeight withQuantity:(int) quantity

[Parameter]

* horizonOffset

- It receives the horizontal offset of the total label as a factor. You can understand it as an absolute location value of left printing.

* resolX

- It receives the horizontal resolution as a factor.

* resolY

- It receives vertical resolution.

* labelHeight

- It receives the value of label height for printing as a factor.

* quantity

- It receives label q'ty to print as a factor.[Max. =< 1024]

[Return value]

0 Success

-1 Failure

2.4. PrintForm

This function is used for setting the paper at the top of the form after printing.

- (long) printForm

[Return value]

0 Success

-1 Failure

2.5. PrinterCheck

This function is used for printer status checking.

- (long) printCheck

[Return Values]

0 : This value returns when a function succeeds.

-1 : This value returns when a function fails.

2.6. status

This function is used for getting the printer status.

- (long) status

[Return Values]

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

STS_CPCL_BUSY : Printer Status is busy status.

STS_CPCL_PAPER_EMPTY : Printer Status is no paper.

STS_CPCL_COVER_OPEN : Printer Cover is open.

STS_CPCL_BATTERY_LOW : Printer battery capacity is low.

2.7. SetMeasure

This function is used for setting measure of command.

- (long) setMeasure:(int) measure

[Parameter]

* measure

- It receives measure set command as a factor.

Variable	Description
CPCL_INCH	Set up measure as inch.
CPCL_CENTI	Set up measure as centimeter
CPCL_MILLI	Set up measure as millimeter
CPCL_DOTS	Set up measure as dot(Default)

[Return value]

0 Success

-1 Failure

2.8. SetJustification

This function is used for setting justification of fields.

- (long) setJustification:(int) justify

[Parameter]

* justify

- It receives as a factor for setting justification of fields.

Variable	Description
CPCL_LEFT	Left justification
CPCL_CENTER	Center justification
CPCL_RIGHT	Right justification

[Return value]

0 Success

-1 Failure

2.9. PrintCPCLText

This function is used for printing text in a specified location on the form.

- (long) printCPCLText:(int) rotation withFontType:(int) fontType withFontSize:(int) fontSize
withPrintX:(int) printX withPrintY:(int) printY withData:(NSString *) data withCount:(int) count

[Parameter]

* rotation

- It received the printing direction value of the text for printing as a factor.

Variable	Description
CPCL_0_ROTATION	Print text with no rotation.
CPCL_90_ROTATION	Print text with 90 rotation.(counterclockwise)
CPCL_180_ROTATION	Print text with 180 rotation.(counterclockwise)
CPCL_270_ROTATION	Print text with 270 rotation.(counterclockwise)

* fontType

- It receives the font type of the text to print as a factor.

* fontSize

- It receives the font size value of the text to print as a factor.

* printX

- It receives the x-coordinates value of the text to print as a factor.

* printY

- It receives the y-coordinates value of the text to print as a factor.

* data

- Unicode which has a null-terminated string. It receives text to print as a factor.

* count

- It receives the count function of the text to print as a factor.

[Return value]

0 Success

-1 Failure

2.10. SetConcat

This function is used for defining the start of the text concatenation and the printing position.

- (long) setConcat:(int) concatMode withPrintX:(int) printX withPrintY:(int) printY

[Parameter]

* concatMode

- It receives the concatenation method of the text to concatenate as a factor.

Variable	Description
CPCL_CONCAT	It concatenates text as horizontal
CPCL_VCONCAT	It concatenates text as vertical

* printX

- It receives the x-coordinates value of the text to print as a factor.

* printY

- It receives the y-coordinates value of the text to print as a factor.

[Return value]

0 Success

-1 Failure

2.11. ConcatText

This function is used for defining the font to concatenate.

- (long) concatText:(int) fontType withFontSize:(int) fontSize withOffset:(int) offset
withData:(NSString *) data

[Parameter]

* fontType

- It receives the font type of the text to print as a factor.

* fontSize

- It receives the font size value of the text to print as a factor.

* offset

- It receives Unit-value at the starting point.

* data

- Unicode which has a null-terminated string. It receives the text to print as a factor.

[Return value]

0 Success

-1 Failure

2.12. ResetConcat

This function is used for canceling text concatenation.

- (long) resetConcat

[Return value]

0 Success

-1 Failure

2.13. SetMultiLine

This function is used for defining multi-line printing with same line length and same font.

- (long) setMultiLine:(int) lineHeight

[Parameter]

* lineHeight

- It receives the line height value of the text to print as a factor.

[Return value]

0 Success

-1 Failure

2.14. MultiLineText

This function is used for printing text which is defined as SetMultiLine(). It received the font, the size and the printing location of the text to print as a factor.

- (long) multiLineText:(int) rotation withFontType:(int) fontType withFontSize:(int) fontSize
withPrintX:(int) printX withPrintY:(int) printY

[Parameter]

* rotation

- It receives the printing direction value of the text to print as a factor.

Variable	Description
CPCL_0_ROTATION	Print text with no rotation.
CPCL_90_ROTATION	Print text with 90 rotation.(counterclockwise)
CPCL_180_ROTATION	Print text with 180 rotation.(counterclockwise)
CPCL_270_ROTATION	Print text with 270 rotation.(counterclockwise)

* fontType

- It receives the font type of the text to print as a factor.

* fontSize

- It receives the font size value of the text to print as a factor.

* printX

- It receives the x-coordinates value of the text to print as a factor.

* printY

- It receives the y-coordinates value of the text to print as a factor.

[Return value]

0 Success

-1 Failure

2.15. MultiLineData

This function is used for printing text to print the value which is defined in MultiLineText().

- (long) multiLineData:(NSString *) data

[Parameter]

* data

- Unicode which has a null-terminated string. It receives text to print as a factor.

[Return value]

0 Success

-1 Failure

2.16. ResetMultiLine

This function is used for canceling the defined function in SetMultiLine().

- (long) resetMultiLine

[Return value]

0 Success

-1 Failure

2.17. SetMagnify

This function is used for setting the magnification of text.

- (long) setMagnify:(int) width withHeight:(int) height

[Parameter]

* width

- It received the width ratio of text as a factor.

Variable (Set up width ratio)	Description
CPCL_TXT_1WIDTH	Set up width ratio as x1
CPCL_TXT_2WIDTH	Set up width ratio as x2
CPCL_TXT_3WIDTH	Set up width ratio as x3

CPCL_TXT_4WIDTH	Set up width ratio as x4
CPCL_TXT_5WIDTH	Set up width ratio as x5
CPCL_TXT_6WIDTH	Set up width ratio as x6
CPCL_TXT_7WIDTH	Set up width ratio as x7
CPCL_TXT_8WIDTH	Set up width ratio as x8
CPCL_TXT_9WIDTH	Set up width ratio as x9
CPCL_TXT_10WIDTH	Set up width ratio as x10
CPCL_TXT_11WIDTH	Set up width ratio as x11
CPCL_TXT_12WIDTH	Set up width ratio as x12
CPCL_TXT_13WIDTH	Set up width ratio as x13
CPCL_TXT_14WIDTH	Set up width ratio as x14
CPCL_TXT_15WIDTH	Set up width ratio as x15
CPCL_TXT_16WIDTH	Set up width ratio as x16

* height

- It received the height ratio of text as a factor.

Variable (Set up height ratio)	Description
CPCL_TXT_1HEIGHT	Set up height ratio as x1
CPCL_TXT_2HEIGHT	Set up height ratio as x2
CPCL_TXT_3HEIGHT	Set up height ratio as x3
CPCL_TXT_4HEIGHT	Set up height ratio as x4
CPCL_TXT_5HEIGHT	Set up height ratio as x5
CPCL_TXT_6HEIGHT	Set up height ratio as x6
CPCL_TXT_7HEIGHT	Set up height ratio as x7
CPCL_TXT_8HEIGHT	Set up height ratio as x8
CPCL_TXT_9HEIGHT	Set up height ratio as x9
CPCL_TXT_10HEIGHT	Set up height ratio as x10
CPCL_TXT_11HEIGHT	Set up height ratio as x11
CPCL_TXT_12HEIGHT	Set up height ratio as x12
CPCL_TXT_13HEIGHT	Set up height ratio as x13
CPCL_TXT_14HEIGHT	Set up height ratio as x14
CPCL_TXT_15HEIGHT	Set up height ratio as x15
CPCL_TXT_16HEIGHT	Set up height ratio as x16

[Return value]

0 Success

-1 Failure

2.18. ResetMagnify

This function is used for canceling the defined function in SetMagnify().

- (long) resetMagnify

[Return value]

0 Success
-1 Failure

2.19. PrintCPCLBarcode

This function is used for printing barcode.

- (long) printCPCLBarcode:(int) rotation withBarcodeType:(NSString *) barcodeType
withNarrowBar:(int) NB withRatio:(int) ratio withBarHeight:(int) barHeight withPrintX:(int) printX
withPrintY:(int) printY withData:(NSString *) data withCount:(int) count

[Parameter]

* rotation

- It receives the printing direction value of the barcode to print as a factor.

Variable	Description
CPCL_0_ROTATION	Print barcode with no rotation.
CPCL_90_ROTATION	Print barcode with 90 rotation.(counterclockwise)
CPCL_180_ROTATION	Print barcode with 180 rotation. (counterclockwise)
CPCL_270_ROTATION	Print text with 270 rotation.(counterclockwise)

* barCodeType

- It receives the barcode type to print as a factor.

Variable	Description
CPCL_BCS_39	Barcode 3 of 9 Standard.
CPCL_BCS_39C	Barcode 3 of 9 Standard with Check Digit.
CPCL_BCS_39F	Barcode 3 of 9 Full ASCII.
CPCL_BCS_39FC	Barcode 3 of 9 Full ASCII with Check Digit.
CPCL_BCS_93	Barcode Code 93.
CPCL_BCS_128	Barcode Code 128.
CPCL_BCS_EAN128	Barcode UCC-128.
CPCL_BCS_CODABAR	Barcode Codabar.
CPCL_BCS_CODABARC	Barcode Codabar with Check Digit.
CPCL_BCS_EAN8	Barcode EAN8.
CPCL_BCS_EAN82	Barcode EAN8 2-Digit Add-On.
CPCL_BCS_EAN85	Barcode EAN8 5-Digit Add-On.
CPCL_BCS_EAN13	Barcode EAN13.
CPCL_BCS_EAN132	Barcode EAN13 2-Digit Add-On.
CPCL_BCS_EAN135	Barcode EAN13 5-Digit Add-On.
CPCL_BCS_I2OF5	Barcode Interleaved 2 of 5.
CPCL_BCS_POSTNET	Barcode Postnet
CPCL_BCS_UPCA	Barcode UPCA.
CPCL_BCS_UPCA2	Barcode UPCA 2-Digit Add-On.
CPCL_BCS_UPCA5	Barcode UPCA 5-Digit Add-On.

CPCL_BCS_UPCE	Barcode UPCE.
CPCL_BCS_UPCE2	Barcode UPCE 2-Digit Add-On.
CPCL_BCS_UPCE5	Barcode UPCE 5-Digit Add-On.
CPCL_BCS_MSI	Barcode Plessey(MSI-1).
CPCL_BCS_MSI1C	Barcode Plessey(MSI-1) with Check Digit.
CPCL_BCS_MSI2C	Barcode Plessey(MSI-2) with Check Digit.
CPCL_BCS_MSI11C	Barcode Plessey(MSI-11) with Check Digit.

* NB

- It receives the width of the little bar of barcode as a factor.

* ratio

- It receives the ratio value of the barcode as a factor.

Variable	Description
CPCL_BCS_0RATIO	Set up the barcode ratio as 1.5 : 1.
CPCL_BCS_1RATIO	Set up the barcode ratio as 2.0 : 1.
CPCL_BCS_2RATIO	Set up the barcode ratio as 2.5 : 1.
CPCL_BCS_3RATIO	Set up the barcode ratio as 3.0 : 1.
CPCL_BCS_4RATIO	Set up the barcode ratio as 3.5 : 1.
CPCL_BCS_20RATIO	Set up the barcode ratio as 2.0 : 1.
CPCL_BCS_21RATIO	Set up the barcode ratio as 2.1 : 1.
CPCL_BCS_22RATIO	Set up the barcode ratio as 2.2 : 1.
CPCL_BCS_23RATIO	Set up the barcode ratio as 2.3 : 1.
CPCL_BCS_24RATIO	Set up the barcode ratio as 2.4 : 1.
CPCL_BCS_25RATIO	Set up the barcode ratio as 2.5 : 1.
CPCL_BCS_26RATIO	Set up the barcode ratio as 2.6 : 1.
CPCL_BCS_27RATIO	Set up the barcode ratio as 2.7 : 1.
CPCL_BCS_28RATIO	Set up the barcode ratio as 2.8 : 1.
CPCL_BCS_29RATIO	Set up the barcode ratio as 2.9 : 1.
CPCL_BCS_30RATIO	Set up the barcode ratio as 3.0 : 1.

* barHeight

- It receives the height value of the barcode to print as a factor.

* printX

- It receives the starting point of x-coordinates of the barcode to print as a factor.

* printY

- It receives the starting point of y-coordinates of the barcode to print as a factor.

* data

- It receives the barcode data to print as a factor.

* count

- It receives the count function of the barcode to print as a factor.

[Return value]

0	Success
-1	Failure

2.20. PrintBox

This function is used for printing box image.

- (long) printBox:(int) xs withYs:(int) ys withXx:(int) xx withYX:(int) yx withThickness:(int) thickness

[Parameter]

* xs

- It receives the starting point of x-coordinates for box printing as a factor.

* ys

- It receives the starting point of y-coordinates for box printing as a factor.

* xx

- It receives the ending point of x-coordinates for box printing as a factor.

* yx

- It receives the ending point of y-coordinates for box printing as a factor.

* thickness

- It receives the thickness of the box line to print as a factor.

[Return value]

0	Success
-1	Failure

2.21. PrintLine

This function is used for printing line image.

- (long) printLine:(int) xs withYs:(int) ys withXx:(int) xx withYx:(int) yx withThickness:(int) thickness

[Parameter]

* xs

- It receives the starting point of x-coordinates for line printing as a factor.

* ys

- It receives the starting point of y-coordinates for line printing as a factor.

* xx

- It receives the ending point of x-coordinates for line printing as a factor.

* yx

- It receives the ending point of y-coordinates for line printing as a factor.

* thickness

- It receives the thickness of the line to print as a factor.

[Return value]

0 Success

-1 Failure

2.22. InverseLine

This function is used for the inverse image in special area. It has Syntax like PrintLine() Method.

- (long) inverseLine:(int) xs withYs:(int) ys withXx:(int) xx withYx:(int) yx

withThickness:(int) thickness

[Parameter]

* xs

- It receives the starting point of x-coordinates for inverse image printing as a factor.

* ys

- It receives the starting point of y-coordinates for inverse image printing as a factor.

* xx

- It receives the ending point of x-coordinates for inverse image printing as a factor.

* yx

- It receives the ending point of y-coordinates for inverse image printing as a factor.

* thickness

- It receives the thickness of the line for inverse image printing as a factor.

[Return value]

0 Success

-1 Failure

2.23. SetPattern

This function is used for pattern printing.

- (long) setPattern:(int) patternNum

[Parameter]

* PatternNum

- It receives the value of the pattern to print as a factor.

Variable	Description
CPCL_DEFAULT_PATTERN	Filled(Black/default value)
CPCL_HORIZON_PATTERN	It prints the pattern as a horizontal line.
CPCL_VERTICAL_PATTERN	It prints the pattern as a vertical line.
CPCL_RDIAGON_PATTERN	It prints the diagonal pattern to the right.
CPCL_LDIAGON_PATTERN	It prints the diagonal pattern to the left.
CPCL_SQUARE_PATTERN	It prints the pattern as a square.
CPCL_CROSS_PATTERN	It prints the pattern as a diagonal line to right and left.

[Return value]

0 Success

-1 Failure

2.24. PrintBitmap

This function is used for Bit-mapped image printing.

- (long) printBitmap:(NSString *) filePath withPrintX:(int) printX withPrintY:(int) printY
withBrightness:(int) bright

[Parameter]

* filePath

- It receives the filepath of the image to print as a factor.

* printX

- It receives the starting point of x-coordinates on the image to print as a factor.

* printY

- It receives the starting point of y-coordinates on the image to print as a factor.

* bright

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

[Return value]

0 Success

-1 Failure

2.25. SetContrast

This function is used for adjusting contrast of the whole label to print.

- (long) setContrast:(int) darkness

[Parameter]

* darkness

- It receives the contrast value of the whole label to print as a factor. [0 <= Darkness <=3]

Variable	Description
CPCL_CONT_DEFAULT	Set up as default
CPCL_CONT_MEDIUM	Print as middle brightness
CPCL_CONT_DARK	Print as dark
CPCL_CONT_VERY_DARK	Print as very dark.

[Return value]

0 Success

-1 Failure

2.26. SetPageWidth

This function is used for defining the width of the paper form.

- (long) setPageWidth:(int) pageWidth

[Parameter]

* pageWidth

- It receives the page width value of the label to print as a factor.

[Return value]

0 Success

-1 Failure

2.27. PrintCPCLImage

This function is used for printing pcx image stored in flash file system of the printer. Reference to Desktop Application Manual.

- (long) printCPCLImage:(NSString *) imageName withPrintX:(int) printX withPrintY:(int) printY

[Parameter]

* imageName

- Unicode which has a null-terminated string.

It receives the pcx file name stored in flash file system as a factor.

* printX

- It receives the starting point of x-coordinates to print as a factor.

* printY

- It receives the starting point of y-coordinates to print as a factor.

[Return value]

0 Success
-1 Failure

2.28. SetSpeed

This function is used for defining printing speed.

- (long) setSpeed:(int) speed

[Parameter]

* speed

- It receives the printing speed as a factor. [0 =< Speed =<5]

[Return value]

0 Success
-1 Failure

2.29. SetTone

This function is the Method which is used instead of SetContrast() and it is used for adjusting the darkness of the whole label to print

- (long) setTone:(int) tone

[Parameter]

* tone

- It receives the tone of darkness of the whole label as a factor. [-99 =< Tone=< 200]

[Return value]

0 Success
-1 Failure

2.30. SetCPCLBarcode

This function is used for setting HRI character information.

- (long) setCPCLBarcode:(int) fontNum withFontSize:(int) fontSize withOffset:(int) offset

[Parameter]

* fontNum

- It receives the font type of the text to print as a factor.

* fontSize

- It receives the font size value of the text to print as a factor.

* offset

- It receive the offset between barcode and font of the text to print as as factor.

[Return value]

0 Success

-1 Failure

2.31. SetMedia

This function is used to set Label Type to print.

- (long) setMedia:(int) mode

[Parameter]

* mode

- It sets the Label Type.

Variable	Description
CPCL_LABEL	Label with Gap.
CPCL_BLACKMARK	Label with Black Mark.
CPCL_CONTINUOUS	Continuous Label

[Return value]

0 Success

-1 Failure

2.32. 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.

2.33. PrintPDF417

This function is used for defining printing PDF417 barcode.

- (void) printPDF417:(int) rotation withPrintX:(int) printX withPrintY:(int) printY
withUnitWidth:(int) unitWidth withUnitHeight:(int) unitHeight withNumOfColumns:(int) column
withSecurityLevel:(int) securityLevel withData:(NSString *) data

[Parameter]

* rotation

- It receives the printing direction value of the barcode to print as a factor.

Variable	Description
CPCL_0_ROTATION	Print barcode with no rotation.
CPCL_90_ROTATION	Print barcode with 90 rotation.(counterclockwise)
CPCL_180_ROTATION	Print barcode with 180 rotation. (counterclockwise)
CPCL_270_ROTATION	Print text with 270 rotation.(counterclockwise)

* printX

- It receives the starting point of x-coordinates on the barcode to print as a factor.

* printY

- It receives the starting point of y-coordinates on the barcode to print as a factor.

* unitWidth

- Unit-width of the narrowest element. (1 - 32, default 2)

* unitHeight

- Unit-height of the narrowest element. (1 - 32, default 6)

* column

- Number of column to use. (1 - 30, default 3)

* securityLevel

- Security level indicates maximum amount of errors to be detected and/or corrected.
(0 - 8, default 1)

* data

- Unicode which has a null-terminated string. It receives text to print as a factor.

2.34. PrintDATAMATRIX

This function is used for defining printing DATAMATRIX barcode.

- (void) printDATAMATRIX:(int) rotation withPrintX:(int) printX withPrintY:(int) printY
withECCLevel:(int) eccLevel withCellSize:(int) cellSize withData:(NSString *) data

[Parameter]

* rotation

- It receives the printing direction value of the barcode to print as a factor.

Variable	Description
CPCL_0_ROTATION	Print barcode with no rotation.
CPCL_90_ROTATION	Print barcode with 90 rotation.(counterclockwise)
CPCL_180_ROTATION	Print barcode with 180 rotation. (counterclockwise)
CPCL_270_ROTATION	Print text with 270 rotation.(counterclockwise)

* printX

- It receives the starting point of x-coordinates on the barcode to print as a factor.

* printY

- It receives the starting point of y-coordinates on the barcode to print as a factor.

* eccLevel

- ECC Level of DATAMATRIX. (0, 50, 80, 100, 140, 200, Default 0)

* cellSize

- Cell size. (1-24, Default 4)

* data

- Unicode which has a null-terminated string. It receives text to print as a factor.

2.35. PrintQRCODE

This function is used for defining printing QRCODE barcode.

- (void) printQRCODE:(int) rotation withPrintX:(int) printX withPrintY:(int) printY
withVersion:(int) version withECLLevel:(int) ecLevel withModuleSize:(int) moduleSize
withMaskNo:(int) maskNo withData:(NSString *) data

[Parameter]

* rotation

- It receives the printing direction value of the barcode to print as a factor.

Variable	Description
CPCL_0_ROTATION	Print barcode with no rotation.
CPCL_90_ROTATION	Print barcode with 90 rotation.(counterclockwise)
CPCL_180_ROTATION	Print barcode with 180 rotation. (counterclockwise)
CPCL_270_ROTATION	Print text with 270 rotation.(counterclockwise)

* printX

- It receives the starting point of x-coordinates on the barcode to print as a factor.

* printY

- It receives the starting point of y-coordinates on the barcode to print as a factor.

* version

- Version of QR CODE. (1 - 40)

* ecLevel

- Error Correction Level. (0 - 3, Default 1)

* moduleSize

- Module size. (1 - 24, Default 4)

* maskNo

- Mask no. (0 - 7. if value is more than 8, auto selected).

* data

- Unicode which has a null-terminated string. It receives text to print as a factor.

2.36. ResetCPCLBarCode (Added in 1.61)

This function is used for canceling HRI character information.

- (long) resetCPCLBarcode

[Return value]

0 Success

-1 Failure