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1.Enum

1.1 PTCPCLPaperType

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLPaperType) {
    PTCPCLPaperContinuoue      = 0,    ///< continuous paper
    PTCPCLPaperLabel           = 1,    ///< label paper
    PTCPCLPaperBackBlackMark   = 2,    ///< back black mark
    PTCPCLPaperFrontBlackMark  = 3,    ///< front black mark
    PTCPCLPaperBlackMarkInch3  = 4,    ///< 3 inch black mark
    PTCPCLPaperBlackMarkInch2  = 5,    ///< 2 inch black mark
};
```

1.2 PTCPCLPNewPaperType

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLENewPaperType) {
    PTCPCLENewPaperContinuous = 0, ///< continuous paper
    PTCPCLENewPaperLabel = 2, ///< label paper
    PTCPCLENewBlackMarkInch2 = 4, ///< 2 inch black mark
    PTCPCLENewBlackMarkInch3 = 5, ///< 3 inch black mark
    PTCPCLENewBlackMarkInch4 = 6 ///< 4 inch black mark
};
```

1.3 PTCPCLELabelResolution

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLELabelResolution) {
    PTCPCLELabelResolution100 = 100, ///< 100
    PTCPCLELabelResolution200 = 200 ///< 200
};
```

1.4 PTCPCLEBarcodeStyle

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLEBarcodeStyle) {
    PTCPCLEBarcodeStyleUPCA = 0,
    PTCPCLEBarcodeStyleUPCE = 1,
    PTCPCLEBarcodeStyleEAN13 = 2,
    PTCPCLEBarcodeStyleEAN8 = 3,
    PTCPCLEBarcodeStyleCode39 = 4,
    PTCPCLEBarcodeStyleCode93 = 5,
    PTCPCLEBarcodeStyleCode128 = 6,
    PTCPCLEBarcodeStyleCodeBAR = 7
};
```

1.5 PTCPCLEBarcodeBarRatio

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLEBarcodeBarRatio) {
    PTCPCLEBarcodeBarRatio0 = 0,
    PTCPCLEBarcodeBarRatio1 = 1,
    PTCPCLEBarcodeBarRatio2 = 2,
    PTCPCLEBarcodeBarRatio3 = 3,
    PTCPCLEBarcodeBarRatio4 = 4,
    PTCPCLEBarcodeBarRatio20 = 20,
    PTCPCLEBarcodeBarRatio21 = 21,
    PTCPCLEBarcodeBarRatio22 = 22,
    PTCPCLEBarcodeBarRatio23 = 23,
    PTCPCLEBarcodeBarRatio24 = 24,
};
```

```

PTCPCLBarcodeBarRatio25    = 25,
PTCPCLBarcodeBarRatio26    = 26,
PTCPCLBarcodeBarRatio27    = 27,
PTCPCLBarcodeBarRatio28    = 28,
PTCPCLBarcodeBarRatio29    = 29,
PTCPCLBarcodeBarRatio30    = 30
};

```

1.6 PTCPLQRCodeModel

- Code

```

typedef NS_ENUM(NSUInteger, PTCPLQRCodeModel) {
    PTCPLQRCodeModel1      = 1,
    PTCPLQRCodeModel2      = 2    ///< default
};

```

1.7 PTCPLQRCodeUnitWidth

- Code

```

typedef NS_ENUM(NSUInteger, PTCPLQRCodeUnitwidth) {
    PTCPLQRCodeUnitwidth_1 = 1,
    PTCPLQRCodeUnitwidth_2,
    PTCPLQRCodeUnitwidth_3,
    PTCPLQRCodeUnitwidth_4,
    PTCPLQRCodeUnitwidth_5,
    PTCPLQRCodeUnitwidth_6,    ///< default
    PTCPLQRCodeUnitwidth_7,
    PTCPLQRCodeUnitwidth_8,
    PTCPLQRCodeUnitwidth_9,
    PTCPLQRCodeUnitwidth_10,
    PTCPLQRCodeUnitwidth_11,
    PTCPLQRCodeUnitwidth_12,
    PTCPLQRCodeUnitwidth_13,
    PTCPLQRCodeUnitwidth_14,
    PTCPLQRCodeUnitwidth_15,
    PTCPLQRCodeUnitwidth_16,
    PTCPLQRCodeUnitwidth_17,
    PTCPLQRCodeUnitwidth_18,
    PTCPLQRCodeUnitwidth_19,
    PTCPLQRCodeUnitwidth_20,
    PTCPLQRCodeUnitwidth_21,
    PTCPLQRCodeUnitwidth_22,
    PTCPLQRCodeUnitwidth_23,
    PTCPLQRCodeUnitwidth_24,
    PTCPLQRCodeUnitwidth_25,
    PTCPLQRCodeUnitwidth_26,
};

```

```
PTCPCLQRCodeUnitwidth_27,
PTCPCLQRCodeUnitwidth_28,
PTCPCLQRCodeUnitwidth_29,
PTCPCLQRCodeUnitwidth_30,
PTCPCLQRCodeUnitwidth_31,
PTCPCLQRCodeUnitwidth_32
};
```

1.8 PTCPLQRCodeCorrectionLevel

- Code

```
typedef NS_ENUM(NSUInteger, PTCPLQRCodeCorrectionLevel) {
    PTCPLQRCodeCorrectionLevelH = 0, ///< Ultra high reliability
    level
    PTCPLQRCodeCorrectionLevelQ = 1, ///< High reliability level
    PTCPLQRCodeCorrectionLevelM = 2, ///< Standard level
    PTCPLQRCodeCorrectionLevelL = 3 ///< High density level
};
```

1.9 PTCPLQRCodeDataInputMode

- Code

```
typedef NS_ENUM(NSUInteger, PTCPLQRCodeDataInputMode) {
    PTCPLQRCodeDataInputModeA = 0, ///< Automatic(default)
    PTCPLQRCodeDataInputModeM = 1 ///< manual(ignore it,pls select
    ModeA)
};
```

1.10 PTCPLTextFontName

- Code

```
typedef NS_ENUM(NSUInteger, PTCPLTextFontName) {
    PTCPLTextFont0 = 0, ///< khmer:12x24
    PTCPLTextFont1 = 1, ///< chinese:24x24 english:9x17
    PTCPLTextFont2 = 2, ///< chinese:24x24 english:12x24
    PTCPLTextFont3 = 3, ///< chinese:20x20 english:10x20
    PTCPLTextFont4 = 4, ///< chinese:32x32 english:16x32
    PTCPLTextFont5 = 5, ///< chinese:24x24 english:12x24
    PTCPLTextFont7 = 7, ///< chinese:24x24 english:12x24
    PTCPLTextFont8 = 8, ///< chinese:24x24 english:12x24
    PTCPLTextFont20 = 20, ///< chinese:16x16 english:8x16
    PTCPLTextFont28 = 28, ///< chinese:28x28 english:14x28
    PTCPLTextFont55 = 55 ///< chinese:16x16 english:8x16
};
```

1.11 PTCPCLTextFontSize

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLTextFontSize) {  
    PTCPCLTextFontSize0      = 0, ///< scale-> width:1 height:1,  
    default  
    PTCPCLTextFontSize1      = 1, ///< scale-> width:1 height:2  
    PTCPCLTextFontSize2      = 2, ///< scale-> width:2 height:1  
    PTCPCLTextFontSize3      = 3, ///< scale-> width:2 height:2  
    PTCPCLTextFontSize4      = 4, ///< scale-> width:2 height:3  
    PTCPCLTextFontSize5      = 5, ///< scale-> width:3 height:2  
    PTCPCLTextFontSize6      = 6, ///< scale-> width:3 height:3  
    PTCPCLTextFontSize7      = 7, ///< scale-> width:3 height:4  
};
```

1.12 PTCPCLScaledFontName

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLScaledFontName) {  
    PTCPCLScaledFontNameTTF    = 0, ///< default  
    PTCPCLScaledFontNameCSF    = 1,  
    PTCPCLScaledFontNameFNT    = 2  
};
```

1.13 PTCPCLFontGroupNumber

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLFontGroupNumber) {  
    PTCPCLFontGroupNumber0      = 0,  
    PTCPCLFontGroupNumber1      = 1,  
    PTCPCLFontGroupNumber2      = 2,  
    PTCPCLFontGroupNumber3      = 3,  
    PTCPCLFontGroupNumber4      = 4,  
    PTCPCLFontGroupNumber5      = 5,  
    PTCPCLFontGroupNumber6      = 6,  
    PTCPCLFontGroupNumber7      = 7,  
    PTCPCLFontGroupNumber8      = 8,  
    PTCPCLFontGroupNumber9      = 9,  
    PTCPCLFontGroupNumber10     = 10  
};
```

1.14 PTCPCLTextBold

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLTextBold) {
    PTCPCLTextBold0    = 0, ///< default,not bold
    PTCPCLTextBold1    = 1,
    PTCPCLTextBold2    = 2,
    PTCPCLTextBold3    = 3,
    PTCPCLTextBold4    = 4,
    PTCPCLTextBold5    = 5
};
```

1.15 PTCPCLStyleRotation

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLStyleRotation) {
    PTCPCLStyleRotation0    = 0,    ///< Counterclockwise rotation,default
    PTCPCLStyleRotation90   = 90,    ///< Counterclockwise rotation 90
    PTCPCLStyleRotation180  = 180,   ///< Counterclockwise rotation 180
    PTCPCLStyleRotation270  = 270    ///< Counterclockwise rotation 270
};
```

1.16 PTCPCLFontScale

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLFontScale) {
    PTCPCLFontScale_1  = 1,
    PTCPCLFontScale_2,
    PTCPCLFontScale_3,
    PTCPCLFontScale_4,
    PTCPCLFontScale_5,
    PTCPCLFontScale_6,
    PTCPCLFontScale_7,
    PTCPCLFontScale_8,
    PTCPCLFontScale_9,
    PTCPCLFontScale_10,
    PTCPCLFontScale_11,
    PTCPCLFontScale_12,
    PTCPCLFontScale_13,
    PTCPCLFontScale_14,
    PTCPCLFontScale_15,
    PTCPCLFontScale_16
};
```


1.17 PTCPClTextLineStyle

- Code

```
typedef NS_ENUM(NSUInteger, PTCPClTextLineStyle) {  
    PTCPClTextLineStyle0    = 0,    ///< big font  
    PTCPClTextLineStyle1    = 1    ///< small font  
};
```

1.18 PTCPClPDF417ErrLevel

- Code

```
typedef NS_ENUM(NSUInteger, PTCPClPDF417ErrLevel) {  
    PTCPClPDF417ErrLevel_0  = 0,  
    PTCPClPDF417ErrLevel_1  = 1,    ///< default  
    PTCPClPDF417ErrLevel_2,  
    PTCPClPDF417ErrLevel_3,  
    PTCPClPDF417ErrLevel_4,  
    PTCPClPDF417ErrLevel_5,  
    PTCPClPDF417ErrLevel_6,  
    PTCPClPDF417ErrLevel_7,  
    PTCPClPDF417ErrLevel_8  
};
```

1.19 PTCPClPDF417Direction

- Code

```
typedef NS_ENUM(NSUInteger, PTCPClPDF417Direction) {  
    PTCPClPDF417DirectionH  = 0,    ///< horizontal  
    PTCPClPDF417DirectionV  = 1    ///< vertical  
};
```

1.20 PTCPClPDF417Binary

- Code

```
typedef NS_ENUM(NSUInteger, PTCPClPDF417Binary) {  
    PTCPClPDF417BinaryA      = 0,    ///< automatic  
    PTCPClPDF417BinaryF      = 1    ///< forced  
};
```

1.21 PTCPLRFIDMemory

- Code

```
typedef NS_ENUM(NSUInteger, PTCPLRFIDMemory) {  
    PTCPLRFIDMemoryReserved    = 0,  
    PTCPLRFIDMemoryEPC        = 1,  
    PTCPLRFIDMemoryTID        = 2,  
    PTCPLRFIDMemoryUser       = 3  
};
```

- Specification

Enum Name	Enum Value	Description
PTCPLRFIDMemoryReserved	0	Reserved, Usually no more than 8 bytes(BeginAddr * 2 + Bytes < 8, same below)
PTCPLRFIDMemoryEPC	1	EPC, Usually no more than 16 bytes(The starting address starts at 2)
PTCPLRFIDMemoryTID	2	TID, Usually no more than 128 bytes, Unwritable data
PTCPLRFIDMemoryUser	3	User, Usually no more than 128 bytes

2.Property

2.1 cmdData

- Code

```
@property (nonatomic, strong) NSMutableData * _Nonnull cmdData;
```

- Specification

Data sent to the printer.

2.2 isZTO

- Code

```
@property (nonatomic, assign) BOOL isZTO;
```

- Specification

Whether ZTO invoke,default is NO, This parameter only applies to the firmware of ZTO

2.3 encoding

- Code

```
@property (nonatomic, assign) NSStringEncoding encoding;
```

- Specification

encode, default is GBK.

3.Method

3.1 append command.

- Description

append command.

- Paramater

Paramater	Description
cmd	command text. encode with encoding property.

- Code

```
- (void)appendCommand:(NSString * _Nonnull)cmd;
```

3.2 append command.

- Description

append command.

- Paramater

Paramater	Description
cmd	command data.

- Code

```
- (void)appendCommandData:(NSData * _Nonnull)data;
```

3.3 selfTest.

- Description

selfTest.

- Code

```
- (void)printSelfInspectionPage;
```

3.4 firmware version.

- Description

firmware version.

- Code

```
- (void)getFirmwareVersion;
```

3.5 Turn on/off print status callback.

- Description

Turn on/off print status callback, the state of printer completion can be obtained by calling the printStateBlock interface.

- Code

```
- (void)cpc1TurnOnPrintStatusCallback:(BOOL)flag;
```

3.6 Turn on underline.

- Description

Turn on underline.

- Code

```
- (void)cpc1UnderlineON;
```

3.7 Turn off underline.

- Description

Turn off underline.

- Code

```
- (void)cpc1UnderlineOFF;
```

3.8 start label session.

- Description

start label session.

- Paramater

Paramater	Description
offset	The number of units to offset all fields from the left side of the label horizontally. 0-65535
hRes	The horizontal resolution of this label, expressed in dots per inch. 100 or 200
vRes	The vertical resolution of this label, expressed in dots per inch. 100 or 200
height	The height of the label in units. 0-65535
quantity	The number of copies of the label to print. 0-1024

- Code

```
- (void)cpc1LabelWithOffset:(NSInteger)offset
                        hRes:(PTCPCLLabelResolution)hRes
                        vRes:(PTCPCLLabelResolution)vRes
                        height:(NSInteger)height
                        quantity:(NSInteger)quantity;
```

3.9 used to specify the width a label session.

- Description

used to specify the width a label session, Set the width you want to print.

- Paramater

Paramater	Description
pageWidth	width of a label session in dots.

- Code

```
- (void)cpc1Pagewidth:(NSInteger)pagewidth;
```

3.10 horizontal barcode.

- Description

 horizontal barcode.

- Paramater

Paramater	Description
type	The type of barcode to print. UPCA/UPCE/EAN13/EAN8/39/93/128/CODABAR
width	The width of a narrow bar.
ratio	The ratio of wide to narrow bars. 0-4, 20-30
height	The height of the barcode.
x	The X position where the barcode begins
y	The Y position where the barcode begins
barcode	The data to be encoded into a barcode

- Code

```
- (void)cpc1Barcode:(PTCPCLBarcodeStyle)type
    width:(NSInteger)width
    ratio:(PTCPCLBarcodeBarRatio)ratio
    height:(NSInteger)height
    x:(NSInteger)x
    y:(NSInteger)y
    barcode:(NSString * _Nonnull)barcode;
```

3.11 vertical barcode.

- Description

 vertical barcode.

- Paramater

Paramater	Description
type	The type of barcode to print.
width	The width of a narrow bar.
ratio	The ratio of wide to narrow bars. 0-4, 20-30
height	The height of the barcode.
x	The X position where the barcode begins
y	The Y position where the barcode begins
barcode	The data to be encoded into a barcode

- Code

```
- (void)cpc1BarcodeVertical:(PTCPCLBarcodeStyle)type
    width:(NSInteger)width
    ratio:(PTCPCLBarcodeBarRatio)ratio
    height:(NSInteger)height
    x:(NSInteger)x
    y:(NSInteger)y
    barcode:(NSString * _Nonnull)barcode;
```

3.12 Specify the barcode below the text format

- Description

used to specify if a human-readable text representation of barcode data should be printed below 1D barcodes.

- Paramater

Paramater	Description
font	A font name or number to create the representation
fontSize	The size of the font: 0-999
offset	How far in units the text is from the barcode:0-999

- Code

```
- (void)cpc1BarcodeTextWithFont:(PTCPCLTextFontName)font
    fontSize:(NSInteger)fontSize
    offset:(NSInteger)offset;
```

3.13 Specify the barcode below the text format

- Description

used to specify if a human-readable text representation of barcode data should be printed below 1D barcodes.

- Paramater

Paramater	Description
font	The filename of the TTF font with extension.
xScale	The X size of the font, in dots: 0-999.
yScale	The Y size of the font, in dots: 0-999.
offset	How far in units the text is from the barcode:0-999.

- Code

```
- (void)cpc1BarcodeTextwithTrueTypeFont:(PTCPCLTextFontName) font
    xScale:(NSInteger)xScale
    yScale:(NSInteger)yScale
    offset:(NSInteger)offset;
```

3.14 turn off the addition of the text representation.

- Description

turn off the addition of the text representation.

- Code

```
- (void)cpc1BarcodeTextOff;
```

3.15 horizontal QR barcode.

- Description

horizontal QR barcode.

- Paramater

Paramater	Description
xPos	The X position where the barcode begins
yPos	The Y position where the barcode begins
model	Specifies the model of QR code to print.1 or 2
unitWidth	Unit-width of the barcode in dots. 1-32,default: 6.

- Code

```
- (void)cpc1BarcodeQRcodewithXPos:(NSInteger)xPos
    yPos:(NSInteger)yPos
    model:(PTCPCLQRCodeModel)model
    unitwidth:(PTCPCLQRCodeUnitwidth)unitwidth;
```

3.16 vertical QR barcode.

- Description

vertical QR barcode.

- Paramater

Paramater	Description
xPos	The X position where the barcode begins
yPos	The Y position where the barcode begins
model	Specifies the model of QR code to print.1 or 2
unitWidth	Unit-width of the barcode in dots. 1-32,default: 6.

- Code

```
- (void)cpc1BarcodeverticalQRcodewithXPos:(NSInteger)xPos
    yPos:(NSInteger)yPos
    model:(PTCPCLQRCodeModel)model
    unitwidth:
(PTCPCLQRCodeUnitwidth)unitwidth;
```

3.17 QR Data.

- Description

QR Data.

- Paramater

Paramater	Description
level	Error Correction
characterMode	Data Input Mode
context	Data for barcode

- Code

```
- (void)cpc1BarcodeQRCodeCorrectionLevel:
(PTCPCLQRCodeCorrectionLevel)level characterMode:
(PTCPCLQRCodeDataInputMode)characterMode context:(NSString
*_Nonnull)context;
```

3.18 The QR code terminator.

- Description

The QR code terminator.

- Code

```
- (void)cpc1BarcodeQRcodeEnd;
```

3.19 Config PDF417 parameters

- Description

Config PDF417 parameters

- Paramater

Paramater	Description
directon	horizontal or vertical
xPos	The X position where the barcode begins (0 to 65535 units)
yPos	The Y position where the barcode begins (0 to 65535 units)
xDot	The X size of a single element in dots,the default value is 2 (0 to 65535)
yDot	The Y size of a single element in dots,the default value is 6(0 to 65535)
columns	Specifies the number of columns to use,the default value is 3 (1 to 30)
rows	Specifies the number of rows to use,the default value is 0 (0 to 90)
ecc	Specifies the error recovery level,the default value is 1 (0 to 8)
binaryModel	Force binary compaction mode,the default value is 0 (0 or 1)

- Code

```
- (void)cpc1PDF417CodewithDirection:(PTCPCLPDF417Direction)directon
                        xPos:(NSInteger)xPos
                        yPos:(NSInteger)yPos
                        xDot:(NSInteger)xDot
                        yDot:(NSInteger)yDot
                        columns:(NSInteger)columns
                        rows:(NSInteger)rows
                        ecc:(PTCPCLPDF417ErrLevel)ecc
                        binaryModel:(PTCPCLPDF417Binary)binaryModel;
```

3.20 PDF417 Data.

- Description

PDF417 Data.

- Paramater

Paramater	Description
context	data

- Code

```
- (void)cpc1PDF417CodeAddContext:(NSString *_Nullable)context;
```

3.21 The PDF417 code terminator.

- Description

The PDF417 code terminator.

- Code

```
- (void)cpc1PDF417codeEnd;
```

3.22 draw box.

- Description

draw box.

- Paramater

Paramater	Description
xPos	The X origin of the box.(0~65535)
yPos	The Y origin of the box.(0~65535)
xEnd	The X coordinate where the box ends.(0~65535)
yEnd	The Y coordinate where the box ends.(0~65535)
thickness	The thickness of the lines in the box.(0~65535)

- Code

```
- (void)cpc1BoxWithXPos:(NSInteger)xPos  
    yPos:(NSInteger)yPos  
    xEnd:(NSInteger)xEnd  
    yEnd:(NSInteger)yEnd  
    thickness:(NSInteger)thickness;
```

3.23 draw line.

- Description

draw line.

- Paramater

Paramater	Description
xPos	The X origin of the line.
yPos	The Y origin of the line.
xEnd	The X coordinate where the line ends.
yEnd	The Y coordinate where the line ends.
thickness	The thickness of the line.

- Code

```
- (void)cpc1LineWithXPos:(NSInteger)xPos
    yPos:(NSInteger)yPos
    xEnd:(NSInteger)xEnd
    yEnd:(NSInteger)yEnd
    thickness:(NSInteger)thickness;
```

3.24 draw inverse line.

- Description

draw inverse line.

- Paramater

Paramater	Description
xPos	The X origin of the box.(0~65535)
yPos	The Y origin of the box.(0~65535)
xEnd	The X coordinate where the box ends.(0~65535)
yEnd	The Y coordinate where the box ends.(0~65535)
thickness	The thickness of the lines in the box.(0~65535)

- Code

```
- (void)cpc1InverseLineWithXPos:(NSInteger)xPos
    yPos:(NSInteger)yPos
    xEnd:(NSInteger)xEnd
    yEnd:(NSInteger)yEnd
    thickness:(NSInteger)thickness;
```

3.25 Print Image

- Description

Print Image

- Paramater

Paramater	Description
Xpos	Horizontal starting position.
Ypos	Vertical starting position.
image	Print image
bitmapMode	Bitmap type
compress	The type of compression supported by the printer
isPackage	Whether the pictures need to be subcontracted

- Code

```
- (void)cpclPrintBitmapWithXPos:(NSInteger)xPos  
    yPos:(NSInteger)yPos  
    image:(CGImageRef _Nullable )image  
    bitmapMode:(PTBitmapMode)bitmapMode  
    compress:(PTBitmapCompressMode)compress  
    isPackage:(BOOL)isPackage;
```

3.26 Horizontal text series

- Description

concatenate multiple fonts and sizes of text on to a single line, and to align their top-lines in a specific way.

- Paramater

Paramater	Description
xPos	The X origin of the text string.
yPos	The Y origin of the text string.

- Code

```
- (void)cpclConcatStartWithXPos:(NSInteger)xPos yPos:(NSInteger)yPos;
```

3.27 Vertical text series.

- Description

concatenate multiple fonts and sizes of text on to a single line, and to align their top-lines in a specific way.

- Paramater

Paramater	Description
xPos	The X origin of the text string.
yPos	The Y origin of the text string.

- Code

```
- (void)cpc1ConcatVerticalStartWithXPos:(NSInteger)xPos yPos:
(NSInteger)yPos;
```

3.28 concat text.

- Description

concat text.

- Paramater

Paramater	Description
font	font.
fontSize	font size.
offset	How far from Y is the top of this text.
text	The text data to be concatenated.

- Code

```
- (void)cpc1ConcatTextWithFont:(PTCPCLTextFontName)font
    fontSize:(NSInteger)fontSize
    offset:(NSInteger)offset
    text:(NSString * _Nonnull)text;
```

3.29 concat scaled text.

- Description

concat scaled text.

- Paramater

Paramater	Description
scaledFont	A scaled font used to create the text.
xScale	The X size of the scaled font, in points.
yScale	The Y size of the scaled font, in points.
offset	offset How far from Y is the top of this text.
text	The text data to be concatenated.

- Code

```
- (void)cpc1ConcatScaleTextWithScaledFont:(NSInteger)scaledFont
    xScale:(NSInteger)xScale
    yScale:(NSInteger)yScale
    offset:(NSInteger)offset
    text:(NSString * _Nonnull)text;
```

3.30 concat scaled Vertical text.

- Description

concat scaled Vertical text.

- Paramater

Paramater	Description
scaledFont	A scaled font used to create the text.
xScale	The X size of the scaled font, in points.
yScale	The Y size of the scaled font, in points.
offset	offset How far from Y is the top of this text.
text	The text data to be concatenated.

- Code


```
- (void)cpc1ConcatVerticalScaleTextwithScaledFont:(NSInteger)scaledFont
                                     xScale:(NSInteger)xScale
                                     yScale:(NSInteger)yScale
                                     offset:(NSInteger)offset
                                     text:(NSString *
                                     _Nonnull)text;
```

3.31 concat font group.

- Description

concat font group.

- Paramater

Paramater	Description
fontGroup	Font group number.(0-10)
offset	offset How far from Y is the top of this text.
text	The text data to be concatenated.

- Code

```
- (void)cpc1ConcatTextwithFontGroup:(PTCPCLFontGroupNumber)fontGroup
                                     offset:(NSInteger)offset
                                     text:(NSString *
                                     _Nonnull)text;
```

3.32 terminate concat command.

- Description

terminate concat command.

- Code

```
- (void)cpc1ConcatEnd;
```

3.33 The tag end of the session

- Description

terminate a CPCL label session, and create the resulting print out.

- Code

```
- (void)cpc1Print;
```

3.34 Reverse print,Rotate the label 180.

- Description

Reverse print,Rotate the label 180.

- Code

```
- (void)cpc1PoPrint;
```

3.35 center justification.

- Description

center justification.

- Paramater

Paramater	Description
range	The width of the area to center on from the left side.

- Code

```
- (void)cpc1CenterWithRange:(NSInteger)range;
```

3.36 center justification.

- Description

center justification.

- Code

```
- (void)cpc1Center;
```

3.37 left justification.

- Description

left justification.

- Paramater

Paramater	Description
range	When used with LEFT, the only function Range performs is a field specification function for FONT-GROUP.

- Code

```
- (void)cpc1Left:(NSInteger)range;
```

3.38 left justification.

- Description

left justification.

- Code

```
- (void)cpc1Left;
```

3.39 right justification.

- Description

right justification.

- Paramater

Paramater	Description
right	the location of the right side to justify to.

- Code

```
- (void)cpc1Right:(NSInteger)right;
```

3.40 right justification.

- Description

right justification.

- Code

```
- (void)cpc1Right;
```

3.41 Start multiline text printing.

- Description

print a number of lines of text using the same font without having to manually specify the spacing or positioning of each line.

- Paramater

Paramater	Description
lineHeight	Spacing between each line in units.

- Code

```
- (void)cpc1MultiLineStartwithLineHeight:(NSInteger)lineHeight;
```

3.42 terminated multi line command.

- Description

terminated multi line command.

- Code

```
- (void)cpc1MultiLineEnd;
```

3.43 specify the rotation of a scalable or TrueType font within the printer.

- Description

specify the rotation of a scalable or TrueType font within the printer.

- Paramater

Paramater	Description
degrees	The number of degrees to rotate counter-clockwise.

- Code

```
- (void)cpc1Rotate:(NSInteger)degrees;
```

3.44 print scaled text in CPCL from either a scaled or TrueType font.

- Description

print scaled text in CPCL from either a scaled or TrueType font.

- Paramater

Paramater	Description
scaledFont	A scaled font used to create the text.
xScale	The X size of the scaled font, in points.
yScale	The Y size of the scaled font, in points.
x	The X origin of the scaled text in units.
y	The Y origin of the scaled text in units.
text	The text data to be printed.

- Code

```
- (void)cpc1ScaleText:(PTCPCLScaledFontName)scaledFont
    xScale:(NSInteger)xScale
    yScale:(NSInteger)yScale
    x:(NSInteger)x
    y:(NSInteger)y
    text:(NSString * _Nonnull)text;
```

3.45 print scaled text in CPCL from either a scaled or TrueType font. rotated 90 degrees.

- Description

print scaled text in CPCL from either a scaled or TrueType font. rotated 90 degrees.

- Paramater

Paramater	Description
scaledFont	A scaled font used to create the text.
xScale	The X size of the scaled font, in points.
yScale	The Y size of the scaled font, in points.
x	The X origin of the scaled text in units.
y	The Y origin of the scaled text in units.
text	The text data to be printed.

- Code

```
- (void)cpc1ScaleTextVertical:(PTCPCLScaledFontName)scaledFont
    xScale:(NSInteger)xScale
    yScale:(NSInteger)yScale
    x:(NSInteger)x
    y:(NSInteger)y
    text:(NSString * _Nonnull)text;
```

3.46 print scaled text which is to fit within a particular bounding box

- Description

print scaled text which is to fit within a particular bounding box. It can be used with TrueType or scaled fonts.

- Paramater

Paramater	Description
scaledFont	A scaled font used to create the text.
width	The width of the box to contain the text.
height	The height of the box to contain the text.
x	The X origin of the scaled text in units.
y	The Y origin of the scaled text in units.
text	The text data to be printed.

- Code

```
- (void)cpc1ScaleToFit:(PTCPCLScaledFontName)scaleFont
    width:(NSInteger)width
    height:(NSInteger)height
    x:(NSInteger)x
    y:(NSInteger)y
    text:(NSString * _Nonnull)text;
```

3.47 add a faux bolding effect to pre-scaled fonts.

- Description

add a faux bolding effect to pre-scaled fonts.

- Paramater

Paramater	Description
boldness	the boldness of the text.

- Code

```
- (void)cpc1SetBold:(PTCPCLTextBold)boldness;
```

3.48 set the horizontal spacing between characters.

- Description

set the horizontal spacing between characters.

- Paramater

Paramater	Description
spacing	the spacing between characters of a font.

- Code

```
- (void)cpc1SetSpacing:(NSInteger)spacing;
```

3.49 set the output scaling of pre-scaled fonts

- Description

set the output scaling of pre-scaled fonts

- Paramater

Paramater	Description
width	the width multiplier of the font, 1-16.
height	the height multiplier of the font, 1-16.

- Code

```
- (void)cpc1SetMagwithwidth:(PTCPCLFontScale)width height:
(PTCPCLFontScale)height;
```

3.50 print text that feed line automatically.

- Description

| print text that feed line automatically.

- Paramater

Paramater	Description
rotate	text rotate.
font	text font.
fontSize	text font scale, deault is 0, other values are invalid
x	orgin x of text.
y	origin y of text.
safeHeight	height of text field.Part will not print more than height
width	width of text field.if width is 0,not auto line
lineSpacing	line space.
fontScale	Font magnification factor
text	text.

- Code

```
- (NSInteger)cpclAutoTextWithRotate:(PTCPCLStyleRotation)rotate
    font:(PTCPCLTextFontName)font
    fontSize:(NSInteger)fontSize
    x:(NSInteger)x
    y:(NSInteger)y
    safeHeight:(NSInteger)safeHeight
    width:(NSInteger)width
    lineSpacing:(NSInteger)lineSpacing
    fontScale:(PTCPCLFontScale)fontScale
    text:(NSString * _Nonnull)text;
```

3.51 print text that feed line automatically

- Description

| print text that feed line automatically.rotate 90\270,the cpclCenter interface is invalid

- Paramater

Paramater	Description
rotate	text rotate.
font	text font.
fontSize	text font scale,deault is 0, other values are invalid
xPos	orgin x of text.
yPos	origin y of text.
center	Whether in the middle
safeHeight	height of text field.Part will not print more than height
width	width of text field.if width is 0,not auto line
lineSpacing	line space.
fontScale	Font magnification factor.
text	text.

- Code

```
- (NSInteger)cpc1AutoTextWithRotate:(PTCPCLStyleRotation)rotate
    font:(PTCPCLTextFontName)font
    fontSize:(NSInteger)fontSize
    xPos:(NSInteger)xPos
    yPos:(NSInteger)yPos
    center:(BOOL)center
    safeHeight:(NSInteger)safeHeight
    width:(NSInteger)width
    lineSpacing:(NSInteger)lineSpacing
    fontScale:(PTCPCLFontScale)fontScale
    text:(NSString * _Nonnull)text;
```

3.52 Text wraps automatically

- Description

Text wrap automatically, recommended

- Paramater

Paramater	Description
font	text font, chinese: PTCPLThaiFontStyle1, other: PTCPLThaiFontStyle0
fontSize	text font size.default 0
x	orgin x of text.
y	origin y of text.
lineSpace	Line spacing for automatic line feed.default 30
width	width of text field.
text	text.

- Code

```
- (void)cpc1PrintAutoTextWithFont:(PTCPCLTextLineStyle)font
    fontSize:(NSInteger)fontSize
    x:(NSInteger)x
    y:(NSInteger)y
    lineSpace:(NSInteger)lineSpace
    width:(NSInteger)width
    text:(NSString * _Nonnull)text;
```

3.53 Print center text

- Description

Print center text

- Paramater

Paramater	Description
rotate	text rotate.
font	text font.
fontSize	This parameter is invalid, default is 0
x	orgin x of text.
y	origin y of text.
width	width of textbox
text	content of text.

- Code

```
- (void)cpc1CenterTextWithRotate:(PTCPCLStyleRotation)rotate
    font:(PTCPCLTextFontName)font
    fontSize:(NSInteger)fontSize
    x:(NSInteger)x
    y:(NSInteger)y
    width:(NSInteger)width
    text:(NSString * _Nonnull)text;
```

3.54 print text.

- Description

 print text.

- Paramater

Paramater	Description
rotate	text rotate.
font	text font.
fontSize	text font scale, This parameter is 0 by default. If other enumeration values are selected, printer firmware support is required. In cases where the firmware is not supported, the zoom font can be used (cpc1SetMagWithWidth: height:) interface
x	orgin x of text.
y	origin y of text.
text	text.

- Code

```
- (void)cpc1TextWithRotate:(PTCPCLStyleRotation)rotate
    font:(PTCPCLTextFontName)font
    fontSize:(PTCPCLTextFontSize)fontSize
    x:(NSInteger)x
    y:(NSInteger)y
    text:(NSString * _Nonnull)text;
```

3.55 print reverse bold text.

- Description

 print reverse bold text.

- Paramater

Paramater	Description
font	text font.
rotate	text rotate.
fontSize	text font scale, This parameter is 0 by default. If other enumeration values are selected, printer firmware support is required. In cases where the firmware is not supported, the zoom font can be used (cpclSetMagWithWidth: height:) interface
reverse	Whether it is reversed
bold	bold
x	origin x of text.
y	origin y of text.
text	text.

- Code

```
- (void)appendTextWithFont:(PTCPCLTextFontName)font
    rotate:(PTCPCLStyleRotation)rotate
    fontSize:(PTCPCLTextFontSize)fontSize
    reverse:(BOOL)reverse
    bold:(PTCPCLTextBold)bold
    x:(NSInteger)x
    y:(NSInteger)y
    text:(NSString * _Nonnull)text;
```

3.56 Set the background blackness value

- Description

Set the background blackness value.(0-255) 0: normal

- Paramater

Paramater	Description
value	Set the background blackness value

- Code

```
- (void)cpclSetBackgroundBlacknessValue:(NSInteger)value;
```

3.57 set back text.

- Description

set back text, Some models are not supported.

- Paramater

Paramater	Description
font	text font.
rotate	text rotate.
fontSize	Size identifier for the font
xPos	x-coordinate of start point
yPos	y-coordinate of start point
text	The text data to be printed

- Code

```
- (void)cpc1BackTextWithFont:(PTCPCLTextFontName)font
    rotate:(PTCPCLStyleRotation)rotate
    fontSize:(NSInteger)fontSize
    xPos:(NSInteger)xPos
    yPos:(NSInteger)yPos
    text:(NSString *_Nonnull)text;
```

3.58 get printer serial number.

- Description

get printer serial number.

- Code

```
- (void)cpc1GetPrinterSN;
```

3.59 set the paper type1.

- Description

set the paper type1, A400\A300S\A300L does not support this interface

- Paramater

Paramater	Description
type	paper type.

- Code

```
- (void)cpc1PaperTypeWithType:(PTCPCLPaperType) type;
```

3.60 set the paper type2

- Description

set the paper type2, A400\A300S\A300L supports this interface

- Paramater

Paramater	Description
type	paper type.

- Code

```
- (void)setPrinterPaperTypeFor4Inch:(PTCPCLNewPaperType) type;
```

3.61 set the darkness of the printout from the printer

- Description

set the darkness of the printout from the printer

- Paramater

Paramater	Description
density	0-2

- Code

```
- (void)setPrinterDensity:(NSInteger) density;
```

3.62 get printer density.

- Description

get printer density.

- Code

```
- (void)getPrinterDensity;
```

3.63 get Printer Battery,<000902> is 92%

- Description

get Printer Battery, This interface is a custom function, which is only supported by some models

- Code

```
- (void)getPrinterBattery;
```

3.64 start utilities sessions.

- Description

start utilities sessions.

- Code

```
- (void)cpc1UtilitySession;
```

3.65 prefix if a single line utilities session.

- Description

prefix if a single line utilities session.

- Code

```
- (void)cpc1LineMode;
```

3.66 Set margin

- Description

Set margin

- Paramater

Paramater	Description
offset	Specifics the distance from the left edge in units

- Code

```
- (void)cpc1LineMargin:(NSInteger)offset;
```

3.67 feed

- Description

feed

- Code

```
- (void)cpc1LineFeed;
```

3.68 Set feed

- Description

Set feed

- Paramater

Paramater	Description
amount	How much to feed in units.-4000~4000dots

- Code

```
- (void)cpc1Feed:(NSInteger)amount;
```

3.69 Set the print label before the offset

- Description

when used in a label session, is used to perform an additional media movement before a label is printed

- Paramater

Paramater	Description
amount	How much to feed in units.0~4000dots

- Code

```
- (void)cpc1Reverse:(NSInteger)amount;
```


3.70 set the maximum speed at which printout occurs.

- Description

set the maximum speed at which printout occurs.

- Paramater

Paramater	Description
value	speed to print in an arbitrary scale,0-5.

- Code

```
- (void)cpc1Speed:(NSInteger)value;
```

3.71 Positioning label

- Description

the printer should attempt to synchronize to a mark or gap on the media after the label is printed, Used for label paper printing.

- Code

```
- (void)cpc1Form;
```

3.72 set the darkness of the printout from the printer

- Description

set the darkness of the printout from the printer.default:0

- Paramater

Paramater	Description
value	darkness of the printout, -100~200.

- Code

```
- (void)cpc1Tone:(NSInteger)value;
```

3.73 changes the orientation of the printed label or of line print text

- Description

changes the orientation of the printed label or of line print text

- Paramater

Paramater	Description
degrees	The orientation of the label, 0 or 180.

- Code

```
- (void)cpc1Turn:(NSInteger)degrees;
```

3.74 Paper learning instructions

- Description

Paper learning instructions.If the printer shows that the paper is out of paper, send the instruction in the state of closing the paper

- Code

```
- (void)setPaperLearn;
```

3.75 Set the version of QRCode

- Description

Set the QRCode version, the range of version is 0-25, when it is equal to 0, it means that the program uses automatic; 1-25, it means that the size set now, some models are supported

- Paramater

Paramater	Description
density	0-25

- Code

```
- (void)setQRCodeversion:(NSInteger)version;
```

3.76 Get the QRCode version

- Description

Get the QRCode version, some models are supported

- Code

```
- (void)getQRCodeVersion;
```

3.77 Get printer model

- Description

Get printer model, Part of the A300S firmware version is supported

- Code

```
- (void)cpc1GetPrinterModel;
```

3.78 Set Character CodePage

- Description

Set Character CodePage

- Paramater

Paramater	Description
codepage	"USA" "FRANCE" "GERMANY" "UK" "DENMARK" "SWEDEN" "ITALY" "SPAIN" "JAPAN-S" "NORWAY" "DENMARK II" "SPAIN II" "LATIN9" "KOREA" "SLOVENIA" "CHINA" "BIG5" "CP874" "CP850" "CP437" "CP860" "CP863" "CP865" "CP866" "CP852" "CP858" "CP857" "CP737" "CP720" "CP775" "CP855" "CP862" "CP864" "ISO8859-6" "ISO8859-8" "ISO8859-9" "ISO8859-15" "WPC1252" "WPC1250" "WPC1251" "WPC1252" "WPC1254" "WPC1255" "WPC1256" "ISO8859-1" "ISO8859-2" "ISO8859-3" "ISO8859-4" "ISO8859-5" "TIS11" "TIS18" "WPC1258" "UnicodeBigUnmarked"

- Code

```
- (void)cpc1SetCharacterCodePage:(NSString *_Nonnull)codepage;
```

3.79 Set Khmer on/off state

- Description

Set the Khmer language switch. To print other code pages, close the Khmer language mode first and then switch the code page setting mode. When printing Khmer language, open the Khmer language mode first, and invoke 'cpciSetKhmerCodepage'

- Paramater

Paramater	Description
state	0: close; 1:open

- Code

```
- (void)cpciSetKhmerState:(NSInteger)state;
```

3.80 Set Khmer codepage

- Description

Set the Khmer language code page, under which Chinese is printed with font size of 8 and font size of 55. After printing, exit Khmer mode and call cpciExitKhmerMode

- Code

```
- (void)cpciSetKhmerCodepage;
```

3.81

- Description

@brief Exit Khmer language mode

- Code

```
- (void)cpciExitKhmerMode;
```

3.82 Arabic transform

- Description

Arabic transform

- Paramater

Paramater	Description
function	48: close; 49: Sort by word; 50: Phrase sort; 51: Sort by complete rules

- Code

```
- (void)cpc1SetArabicTransformFunction:(NSInteger)function;
```

3.83 get Arabic status

- Description

get Arabic status:00 00: close; 01 00: Sort by word; 02 00: Phrase sort; 03 00: Sort by complete rules

- Code

```
- (void)cpc1GetArabicTransformStatus;
```

3.84 Thai transform status

- Description

Thai transform status

- Paramater

Paramater	Description
status	48: close 49:open

- Code

```
- (void)cpc1SetThaiTransformStatus:(NSInteger)status;
```

3.85 Set Vietnamese Transform

- Description

Set Vietnamese Transform

- Paramater

Paramater	Description
function	48: close; 49: ASCII; 50: UTF-8

- Code

```
- (void)cpc1SetVietnameseTransformFunction:(NSInteger)function;
```

3.86 get Vietnamese status

- Description

get Vietnamese status:00 00: close; 01 00: ASCII; 02 00: UTF-8;

- Code

```
- (void)cpc1GetVietnameseTransformStatus;
```

3.87 RFID Calibration

- Description

Calibration RFID

- Code

```
- (void)rfidCalibrate;
```

3.88 RFID Print

- Description

When writing or reading RFID, you first need to call this interface

- Code

```
- (void)rfidPrint;
```

3.89 Write RFID, The length of the read can be used directly by the maximum value of the region

- Description

Write RFID;The data length range refers to the storage area enumeration;The TID section is read-only and not writable

- Paramater

Paramater	Description
length	The length of the data read can only be an even number
beginAddr	Start position, default is 0; For EPC, default is 2
memory	memory area

- Code

```
- (void)rfidReadDatawithLength:(NSInteger)length beginAddr:
(NSInteger)beginAddr memory:(PTCPCLRFIDMemory)memory;
```