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 PTCPCLNewPaperType

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLNewPaperType) {
    PTCPCLNewPaperContinuoue          = 0,  ///< continuous paper
    PTCPCLNewPaperLabel               = 2,  ///< label paper
    PTCPCLNewBlackMarkInch2           = 4,  ///< 2 inch black mark
    PTCPCLNewBlackMarkInch3           = 5,  ///< 3 inch black mark
    PTCPCLNewBlackMarkInch4           = 6   ///< 4 inch black mark
};
```

1.3 PTCPCLLabelResolution

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLLabelResolution) {
    PTCPCLLabelResolution100   = 100,  ///< 100
    PTCPCLLabelResolution200   = 200   ///< 200
};
```

1.4 PTCPCLBarcodeStyle

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLBarcodeStyle) {
    PTCPCLBarcodeStyleUPCA       = 0,
    PTCPCLBarcodeStyleUPCE       = 1,
    PTCPCLBarcodeStyleEAN13      = 2,
    PTCPCLBarcodeStyleEAN8       = 3,
    PTCPCLBarcodeStyleCode39     = 4,
    PTCPCLBarcodeStyleCode93     = 5,
    PTCPCLBarcodeStyleCode128    = 6,
    PTCPCLBarcodeStyleCodeBAR    = 7
};
```

1.5 PTCPCLBarcodeBarRatio

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLBarcodeBarRatio) {
    PTCPCLBarcodeBarRatio0     = 0,
    PTCPCLBarcodeBarRatio1     = 1,
    PTCPCLBarcodeBarRatio2     = 2,
    PTCPCLBarcodeBarRatio3     = 3,
    PTCPCLBarcodeBarRatio4     = 4,
    PTCPCLBarcodeBarRatio20    = 20,
    PTCPCLBarcodeBarRatio21    = 21,
    PTCPCLBarcodeBarRatio22    = 22,
    PTCPCLBarcodeBarRatio23    = 23,
    PTCPCLBarcodeBarRatio24    = 24,
    PTCPCLBarcodeBarRatio25    = 25,
    PTCPCLBarcodeBarRatio26    = 26,
    PTCPCLBarcodeBarRatio27    = 27,
    PTCPCLBarcodeBarRatio28    = 28,
    PTCPCLBarcodeBarRatio29    = 29,
    PTCPCLBarcodeBarRatio30    = 30
};
```

1.6 PTCPCLQRCodeModel

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLQRCodeModel) {
    PTCPCLQRCodeModel1     = 1,
    PTCPCLQRCodeModel2     = 2   ///< default
};
```

1.7 PTCPCLQRCodeUnitWidth

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLQRCodeUnitWidth) {
    PTCPCLQRCodeUnitWidth_1 = 1,
    PTCPCLQRCodeUnitWidth_2,
    PTCPCLQRCodeUnitWidth_3,
    PTCPCLQRCodeUnitWidth_4,
    PTCPCLQRCodeUnitWidth_5,
    PTCPCLQRCodeUnitWidth_6,           ///< default
    PTCPCLQRCodeUnitWidth_7,
    PTCPCLQRCodeUnitWidth_8,
    PTCPCLQRCodeUnitWidth_9,
    PTCPCLQRCodeUnitWidth_10,
    PTCPCLQRCodeUnitWidth_11,
    PTCPCLQRCodeUnitWidth_12,
    PTCPCLQRCodeUnitWidth_13,
    PTCPCLQRCodeUnitWidth_14,
    PTCPCLQRCodeUnitWidth_15,
    PTCPCLQRCodeUnitWidth_16,
    PTCPCLQRCodeUnitWidth_17,
    PTCPCLQRCodeUnitWidth_18,
    PTCPCLQRCodeUnitWidth_19,
    PTCPCLQRCodeUnitWidth_20,
    PTCPCLQRCodeUnitWidth_21,
    PTCPCLQRCodeUnitWidth_22,
    PTCPCLQRCodeUnitWidth_23,
    PTCPCLQRCodeUnitWidth_24,
    PTCPCLQRCodeUnitWidth_25,
    PTCPCLQRCodeUnitWidth_26,
    PTCPCLQRCodeUnitWidth_27,
    PTCPCLQRCodeUnitWidth_28,
    PTCPCLQRCodeUnitWidth_29,
    PTCPCLQRCodeUnitWidth_30,
    PTCPCLQRCodeUnitWidth_31,
```

```
            PTCPCLQRCodeUnitWidth_32
    };
```

1.8 PTCPCLQRCodeCorrectionLevel

- Code

```
    typedef NS_ENUM(NSUInteger, PTCPCLQRCodeCorrectionLevel) {
        PTCPCLQRCodeCorrectionLevelH      = 0,  ///< Ultra high
    reliability level
        PTCPCLQRCodeCorrectionLevelQ      = 1,  ///< High reliability
    level
        PTCPCLQRCodeCorrectionLevelM      = 2,  ///< Standard level
        PTCPCLQRCodeCorrectionLevelL      = 3 ///< High density level
    };
```

1.9 PTCPCLQRCodeDataInputMode

- Code

```
    typedef NS_ENUM(NSUInteger, PTCPCLQRCodeDataInputMode) {
        PTCPCLQRCodeDataInputModeA      = 0,  ///< Automatic(default)
        PTCPCLQRCodeDataInputModeM      = 1 ///< manual(ignore it,pls
    select ModeA)
    };
```

1.10 PTCPCLTextFontName

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLTextFontName) {
    PTCPCLTextFont0          = 0,  ///< khmer:12x24
    PTCPCLTextFont1          = 1,  ///< chinese:24x24   english:9x17
    PTCPCLTextFont2          = 2,  ///< chinese:24x24   english:12x24
    PTCPCLTextFont3          = 3,  ///< chinese:20x20   english:10x20
    PTCPCLTextFont4          = 4,  ///< chinese:32x32   english:16x32
    PTCPCLTextFont5          = 5,  ///< chinese:24x24   english:12x24
    PTCPCLTextFont7          = 7,  ///< chinese:24x24   english:12x24
    PTCPCLTextFont8          = 8,  ///< chinese:24x24   english:12x24
    PTCPCLTextFont20         = 20, ///< chinese:16x16   english:8x16
    PTCPCLTextFont28         = 28, ///< chinese:28x28   english:14x28
    PTCPCLTextFont55         = 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 PTCPCLTextLineFontStyle

- Code

```
    typedef NS_ENUM(NSUInteger, PTCPCLTextLineFontStyle) {
        PTCPCLTextLineFontStyle0    = 0,    ///< big font
        PTCPCLTextLineFontStyle1    = 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 PTCPCLRFIDMemory

- Code

```
typedef NS_ENUM(NSUInteger, PTCPCLRFIDMemory) {
    PTCPCLRFIDMemoryReserved    = 0,
    PTCPCLRFIDMemoryEPC         = 1,
    PTCPCLRFIDMemoryTID         = 2,
    PTCPCLRFIDMemoryUser        = 3
};
```

- Specification

Enum Name	Enum Value	Description
PTCPCLRFIDMemoryReserved	0	Reserved, Usually no more than 8 bytes(BeginAddr * 2 + Bytes < 8, same below)
PTCPCLRFIDMemoryEPC	1	EPC, Usually no more than 16 bytes(The starting address starts at 2)
PTCPCLRFIDMemoryTID	2	TID, Usually no more than 128 bytes, Unwritable data
PTCPCLRFIDMemoryUser	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

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

3.3 selfTest.

- Description

  selfTest.

- Code

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

3.4 firmware version.

- Description

  firmware version.

- Code

```objectivec
- (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

```objectivec
- (void)cpclTurnOnPrintStatusCallBack:(BOOL)flag;
```

3.6 Turn on underline.

- Description

  > Turn on underline.

- Code

```
- (void)cpclUnderlineON;
```

3.7 Turn off underline.

- Description

  > Turn off underline.

- Code

```
- (void)cpclUnderlineOFF;
```

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)cpclLabelWithOffset:(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)cpclPageWidth:(NSInteger)pageWidth;
```

3.10 horizonal barcode.

- Description

  | horizonal 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)cpclBarcode:(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)cpclBarcodeVertical:(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)cpclBarcodeTextWithFont:(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)cpclBarcodeTextWithTrueTypeFont:(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)cpclBarcodeTextOff;
```

3.15 horizonal QR barcode.

- Description

    horizonal 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)cpclBarcodeQRcodeWithXPos:(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)cpclBarcodeVerticalQRcodeWithXPos:(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)cpclBarcodeQRCodeCorrectionLecel:
(PTCPCLQRCodeCorrectionLevel)level characterMode:
(PTCPCLQRCodeDataInputMode)characterMode context:(NSString
*_Nonnull)context;
```

3.18 The QR code terminator.

- Description

  The QR code terminator.

- Code

```
- (void)cpclBarcodeQRcodeEnd;
```

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)cpclPDF417CodeWithDirection:(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)cpclPDF417CodeAddContext:(NSString *_Nullable)context;
```

3.21 The PDF417 code terminator.

- Description

  The PDF417 code terminator.

- Code

```
- (void)cpclPDF417codeEnd;
```

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)cpclBoxWithXPos:(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)cpclLineWithXPos:(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)cpclInverseLineWithXPos:(NSInteger)xPos
                               yPos:(NSInteger)yPos
                               xEnd:(NSInteger)xEnd
                               yEnd:(NSInteger)yEnd
                          thickness:(NSInteger)thickness;
```

3.25 set print color

- Description

  set print color

- Paramater

Paramater	Description
color	print color, 0=>red, 1=>black

- Code

```
    - (void)cpclSetPrintColor:(NSInteger)color;
```

3.26 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

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

3.27 Print Image

- Description

  | Print Image

- Paramater

Paramater	Description
Xpos	Horizontal starting position.
Ypos	Vertical starting position.
base64String	base64 string
bitmapMode	Bitmap type
compress	The type of compression supported by the printer
isPackage	Whether the pictures need to be subcontracted

- Code

```
- (BOOL)cpclPrintBitmapWithXPos:(NSInteger)xPos
                          yPos:(NSInteger)yPos
                   base64String:(NSString *_Nullable)base64String
                      bitmapMode:(PTBitmapMode)bitmapMode
                        compress:(PTBitmapCompressMode)compress
                       isPackage:(BOOL)isPackage;
```

3.28 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;
```

3.29 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)cpclConcatVerticalStartWithXPos:(NSInteger)xPos yPos:
  (NSInteger)yPos;
```

3.30 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)cpclConcatTextWithFont:(PTCPCLTextFontName)font
                      fontSize:(NSInteger)fontSize
                        offset:(NSInteger)offset
                          text:(NSString * _Nonnull)text;
```

3.31 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)cpclConcatScaleTextWithScaledFont:(NSInteger)scaledFont
                                    xScale:(NSInteger)xScale
                                    yScale:(NSInteger)yScale
                                    offset:(NSInteger)offset
                                      text:(NSString * _Nonnull)text;
```

3.32 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)cpclConcatVerticalScaleTextWithScaledFont:
(NSInteger)scaledFont

                                      xScale:(NSInteger)xScale
                                      yScale:(NSInteger)yScale
                                      offset:(NSInteger)offset
                                        text:(NSString *

_Nonnull)text;
```

3.33 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)cpclConcatTextWithFontGroup:(PTCPCLFontGroupNumber)fontGroup
                             offset:(NSInteger)offset
                               text:(NSString * _Nonnull)text;
```

3.34 terminate concat command.

- Description

  terminate concat command.

- Code

```
- (void)cpclConcatEnd;
```

3.35 The tag end of the session

- Description

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

- Code

```
- (void)cpclPrint;
```

3.36 Reverse print

- Description

  Reverse print,Rotate the label 180.

- Code

```
- (void)cpclPoPrint;
```

3.37 center justification.

- Description

  center justification.

- Paramater

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

- Code

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

3.38 center justification.

- Description

  | center justification.

- Code

```
- (void)cpclCenter;
```

3.39 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)cpclLeft:(NSInteger)range;
```

3.40 left justification.

- Description

  | left justification.

- Code

```
- (void)cpclLeft;
```

3.41 right justification.

- Description

  > right justification.

- Paramater

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

- Code

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

3.42 right justification.

- Description

  > right justification.

- Code

```
- (void)cpclRight;
```

3.43 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)cpclMultiLineStartWithLineHeight:(NSInteger)lineHeight;
```

3.44 terminated multi line command.

- Description

  terminated multi line command.

- Code

```
    - (void)cpclMultiLineEnd;
```

3.45 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)cpclRotate:(NSInteger)degrees;
```

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

- Description

  print Vector Fonts text

- Paramater

Paramater	Description
fontName	font name eg: SIMSUN.TTF \TT0003M_.TTF
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)cpclTrueTypeText:(NSString *_Nullable)fontName xScale:
(NSInteger)xScale yScale:(NSInteger)yScale x:(NSInteger)x y:
(NSInteger)y text:(NSString * _Nonnull)text;
```

3.47 print scaled text in CPCL from either a scaled

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

3.48 print scaled text in CPCL from either a scaled

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

3.49 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)cpclScaleToFit:(PTCPCLScaledFontName)scaleFont
                 width:(NSInteger)width
                height:(NSInteger)height
                     x:(NSInteger)x
                     y:(NSInteger)y
                  text:(NSString * _Nonnull)text;
```

3.50 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)cpclSetBold:(PTCPCLTextBold)boldness;
```

3.51 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)cpclSetSpacing:(NSInteger)spacing;
```

3.52 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)cpclSetMagWithWidth:(PTCPCLFontScale)width height:
    (PTCPCLFontScale)height;
```

3.53 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;
```

3.54 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)cpclAutoTextWithRotate:(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;
```

3.55 Text wraps automatically

- Description

  Text wrap automatically, recommended

- Paramater

Paramater	Description
font	text font，chinese：PTCPCLThaiFontStyle1，other：PTCPCLThaiFontStyle0
fontSize	text font size.deault 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)cpclPrintAutoTextWithFont:(PTCPCLTextLineFontStyle)font
                         fontSize:(NSInteger)fontSize
                                x:(NSInteger)x
                                y:(NSInteger)y
                        lineSpace:(NSInteger)lineSpace
                            width:(NSInteger)width
                             text:(NSString * _Nonnull)text;
```

3.56 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)cpclCenterTextWithRotate:(PTCPCLStyleRotation)rotate
                            font:(PTCPCLTextFontName)font
                        fontSize:(NSInteger)fontSize
                               x:(NSInteger)x
                               y:(NSInteger)y
                           width:(NSInteger)width
                            text:(NSString * _Nonnull)text;
```

3.57 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 (cpclSetMagWithWidth: height:) interface
x	orgin x of text.
y	origin y of text.
text	text.

- Code

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

3.58 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;
```

3.59 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;
```

3.60 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)cpclBackTextWithFont:(PTCPCLTextFontName)font
                    rotate:(PTCPCLStyleRotation)rotate
                 fontSize:(NSInteger)fontSize
                     xPos:(NSInteger)xPos
                     yPos:(NSInteger)yPos
                     text:(NSString *_Nonnull)text;
```

3.61 get printer serial number.

- Description

  get printer serial number.

- Code

```
- (void)cpclGetPrinterSN;
```

3.62 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)cpclPaperTypeWithType:(PTCPCLPaperType)type;
```

3.63 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;
```

3.64 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;
```

3.65 get printer density.

- Description

  get printer density.

- Code

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

3.66 get Printer Battery1

- Description

  get Printer Battery, This interface is a custom function, which is only supported by some models, <000902> is 92%

- Code

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

3.67 get Printer Battery2

- Description

  > get Printer Battery, This interface is a custom function, which is only supported by some models,eg:A400, ,<38360000> is 86%

- Code

```objc
- (void)getPrinterBatteryLevel;
```

3.68 get Printer Battery2

- Description

  > Obtain the voltage, eg: 7.12V

- Code

```objc
- (void)getPrinterVoltage;
```

3.69 Set Bluetooth name

- Description

  > set Bluetooth name, This interface is a custom function, which is only supported by some models,eg:A400

- Code

```objc
- (void)setBluetoothName:(NSString *_Nullable)name;
```

3.70 start utilities sessions.

- Description

  > start utilities sessions.

- Code

```
- (void)cpclUtilitySession;
```

3.71 prefix if a single line utilities session.

- Description

  prefix if a single line utilities session.

- Code

```
- (void)cpclLineMode;
```

3.72 Set margin

- Description

  Set margin

- Paramater

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

- Code

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

3.73 feed

- Description

  feed

- Code

```
- (void)cpclLineFeed;
```

3.74 Set feed

- Description

  Set feed

- Paramater

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

- Code

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

3.75 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)cpclReverse:(NSInteger)amount;
```

3.76 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

```objc
- (void)cpclSpeed:(NSInteger)value;
```

3.77 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

```objc
- (void)cpclForm;
```

3.78 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

```objc
- (void)cpclTone:(NSInteger)value;
```

3.79 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)cpclTurn:(NSInteger)degrees;
```

3.80 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;
```

3.81 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;
```

3.82 Get the QRCode version

- Description

  Get the QRCode version, some models are supported

- Code

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

3.83 Get printer model

- Description

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

- Code

```
- (void)cpclGetPrinterModel;
```

3.84 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)cpclSetCharacterCodePage:(NSString *_Nonnull)codepage;
```

3.85 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 'cpclSetKhmerCodepage'

- Paramater

Paramater	Description
state	0：close; 1:open

- Code

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

3.86 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 cpclExitKhmerMode

- Code

```
- (void)cpclSetKhmerCodepage;
```

3.87

- Description

  > @brief Exit Khmer language mode

- Code

  ```
  - (void)cpclExitKhmerMode;
  ```

3.88 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)cpclSetArabicTransformFunction:(NSInteger)function;
  ```

3.89 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)cpclGetArabicTransformStatus;
  ```

3.90 Thai transform status

- Description

  Thai transform status

- Paramater

Paramater	Description
status	48：close 49:open

- Code

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

3.91 Set Vietnamese Transform

- Description

  Set Vietnamese Transform

- Parameter

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

- Code

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

3.92 get Vietnamese status

- Description

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

- Code

```
- (void)cpclGetVietnameseTransformStatus;
```

3.93 RFID Calibration

- Description

  > Calibration RFID

- Code

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

3.94 RFID Print

- Description

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

- Code

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

3.95 Write RFID

- Description

  > Write RFID;The data length range refers to the storage area enumeration;The TID
  > section is read-only and not writable, The length of the read can be used directly
  > by the maximum value of the region

- 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

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