



TSC Auto ID Technology Co., Ltd.

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Instructions for TSC OPOS SDK functions

Prior to use the Dynamic Link Library, please make sure the barcode printer driver is installed on your PC.

1. Open(a)

Description: Opens a device for subsequent I/O.

Parameter:

	Type	Description	Value
a	String	Printer driver name	Such as: "TDM-30"

2. ClaimDevice (a)

Description: Request exclusive access to the device.

Parameter:

	Type	Description	Value
a	Integer	Timeout parameter (millisecond)	Such as: 1000

Remark:

※Also need to set **DeviceEnabled** to true.

3. CheckHealth (a)

Description: Tests the state of a device.

Parameter:

	Type	Description	Value
a	Integer	Check if the printer is ready	OPOS_CH_INTERNAL=1

4. TransactionPrint (a,b)

Description: Enters or exits transaction mode.

Parameter:

	Type	Description	Value
a	Integer	The printer station to be used	PTR_S_RECEIPT=2
b	Integer	Transaction control	PTR_TP_TRANSACTION=11 (Begin a transaction)
			PTR_TP_NORMAL=12 (End a transaction by printing the buffered data)



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Remark:

※If control is *PTR_TP_TRANSACTION*, then Transaction Mode is entered. The print data will buffered until **transactionPrint** is called with the control parameter set to *PTR_TP_NORMAL*.

5. PageModePrint (a)

Description: Enters or exits Page Mode.

Parameter:

	Type	Description	Value
a	Integer	Page Mode control	<i>PTR_PM_PAGE_MODE=1</i> (Enter Page Mode)
			<i>PTR_PM_PRINT_SAVE=2</i> (Print PageModePrintArea and save the canvas. Page Mode is not exited. Use for printing of repeated pages)
			<i>PTR_PM_NORMAL=3</i> (Print PageModePrintArea and destroy the canvas and exit Page Mode)
			<i>PTR_PM_CANCEL=4</i> (Clear the page and exit the Page Mode without any printing of any print area)

Remark:

※If control is *PTR_PM_PAGE_MODE*, then Page Mode is entered. The print data will buffered until **pageModePrint** is called with the control parameter set to *PTR_PM_PRINT_SAVE*, *PTR_PM_NORMAL*, or *PTR_PM_CANCEL*.

※Need to set **PageModePrintArea** property to set print area.

※Need to set **PageModePrintDirection** property to set print direction.

PTR_PD_LEFT_TO_RIGHT=1

PTR_PD_BOTTOM_TO_TOP=2

PTR_PD_RIGHT_TO_LEFT=3

PTR_PD_TOP_TO_BOTTOM=4



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6. RotatePrint (a,b)

Description: Enters or exits rotated print mode.

Parameter:

	Type	Description	Value
a	Integer	The printer station to be used	<i>PTR_S_RECEIPT=2</i>
b	Integer	Direction of rotation	<i>PTR_RP_RIGHT90=0x0101</i> (Start rotated printing 90° to the right (clockwise))
			<i>PTR_RP_LEFT90=0x0102</i> (Start rotated printing 90° to the left (counter-clockwise))
			<i>PTR_RP_ROTATE180=0x0103</i> (Start rotated printing 180°, that is, print upside-down)
			<i>PTR_RP_BITMAP=0x2000</i> (Start rotated bitmap printing. This value is used after one of the above start rotated print values)
			<i>PTR_RP_NORMAL=0x0001</i> (End rotated print mode by printing the buffered data)

Remark:

※Refer to **PageModePrint**.

7. PrintNormal (a,b)

Description: Prints data.

Parameter:

	Type	Description	Value
a	Integer	The printer station to be used	<i>PTR_S_RECEIPT=2</i>
b	String	The characters to be printed	Such as <i>"TestData"</i>

Remark:

※Send **ESC #B** as parameter b to print the pre-stored bitmap. The placeholder '#' is replaced by the bitmap number. Also check **SetBitmap**.



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8. PrintImmediate (a,b)

Description: Prints data immediately.

Parameter:

	Type	Description	Value
a	Integer	The printer station to be used	<i>PTR_S_RECEIPT=2</i>
b	String	The characters to be printed	Such as <i>"TestData"</i>

Remark:

※ Send **ESC |#B** as parameter b to print the pre-stored bitmap. The placeholder '#' is replaced by the bitmap number. Also check **SetBitmap**.

9. PrintBarCode (a,b,c,d,e,f,g)

Description: Prints a barcode.

Parameter:

	Type	Description	Value
a	Integer	The printer station to be used	<i>PTR_S_RECEIPT=2</i>
b	String	The characters to be barcoded.	Such as <i>"1234567"</i>
c	Integer	Barcode Type	<i>PTR_BCS_UPCA=101</i> (UPC-A)
			<i>PTR_BCS_UPCE=102</i> (UPC-E)
			<i>PTR_BCS_EAN8=103</i> (EAN 8)
			<i>PTR_BCS_EAN13=104</i> (EAN 13)
			<i>PTR_BCS_ITF=105</i> (Interleaved 2 of 5)
			<i>PTR_BCS_Codabar=107</i> (Codabar)
			<i>PTR_BCS_Code39=108</i> (Code39)
			<i>PTR_BCS_Code93=109</i> (Code93)
			<i>PTR_BCS_Code128=110</i> (Code128)
d	Integer	Barcode height. (1/1000 inch)	Such as <i>100</i>
e	Integer	Barcode width. (1/1000 inch)	Such as <i>200</i>
f	Integer	Placement of the barcode	<i>PTR_BC_LEFT=-1</i> (Align with the left-most print column)
			<i>PTR_BC_CENTER=-2</i> (Align in the center of the column)
			<i>PTR_BC_RIGHT=-3</i>



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			(Align with the right-most print column)
g	Integer	Placement of the readable character string	<i>PTR_BC_TEXT_NONE=-11</i> (No text is printed. Only print the barcode)
			<i>PTR_BC_TEXT_BELOW=-13</i> (Print the text below the barcode)

10. SetBitmap (a,b,c,d,e)

Description: Set a bitmap for later printing.

Parameter:

	Type	Description	Value
a	Integer	The number to be assigned to this bitmap. Valid bitmap numbers are 1 through 20.	Such as 1
b	Integer	The printer station to be used	<i>PTR_S_RECEIPT=2</i>
c	String	File name or URL of bitmap file. Only support monochrome bitmap.	Such as <i>"TSC.bmp"</i>
d	Integer	Printed width of the bitmap to be performed.	<i>PTR_BM_ASIS=-11</i> (Print the bitmap with one bitmap pixel per printer dot)
			<i>Other Values</i> (Bitmap width expressed in 1/1000 inch unit of measure) Such as 200
e	Integer	Placement of the image.	<i>PTR_BM_LEFT=-1</i> (Align with the left-most print column)
			<i>PTR_BM_CENTER=-2</i> (Align in the center of the column)
			<i>PTR_BM_RIGHT=-3</i> (Align with the right-most print column)

Remark:

- ✳ The bitmap may then be printed by calling the **printNormal** or **printImmediate** method with the print bitmap escape sequence in the print data. Also check **printNormal**, **printImmediate**.



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11. PrintBitmap (a,b,c,d)

Description: Prints a bitmap.

Parameter:

	Type	Description	Value
a	Integer	The printer station to be used	<i>PTR_S_RECEIPT=2</i>
b	String	File name or URL of bitmap file. Only support monochrome bitmap.	Such as <i>"TSC.bmp"</i>
c	Integer	Printed width of the bitmap to be performed.	<i>PTR_BM_ASIS=-11</i> (Print the bitmap with one bitmap pixel per printer dot)
			<i>Other Values</i> (Bitmap width expressed in 1/1000 inch unit of measure) Such as <i>200</i>
d	Integer	Placement of the image.	<i>PTR_BM_LEFT=-1</i> (Align with the left-most print column)
			<i>PTR_BM_CENTER=-2</i> (Align in the center of the column)
			<i>PTR_BM_RIGHT=-3</i> (Align with the right-most print column)

12. PrintMemoryBitmap (a,b,c,d,e)

Description: Prints a bitmap by nibble bytes array data.

Parameter:

	Type	Description	Value
a	Integer	The printer station to be used	<i>PTR_S_RECEIPT=2</i>
b	String	Memory byte array representation of the bitmap. Only support nibble bytes array	Example of Nibble Bytes: Hex byte value 154 = 0x9A is converted into the nibble bytes 0x39 0x3A .
c	Integer	Bitmap formats	<i>PTR_BMT_BMP=1</i>
d	Integer	Printed width of the bitmap to be performed.	<i>PTR_BM_ASIS=-11</i> (Print the bitmap with one bitmap pixel per printer dot)

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			Other Values (Bitmap width expressed in 1/1000 inch unit of measure) Such as 200
e	Integer	Placement of the image.	PTR_BM_LEFT=-1 (Align with the left-most print column)
			PTR_BM_CENTER=-2 (Align in the center of the column)
			PTR_BM_RIGHT=-3 (Align with the right-most print column)

Remark:

※Need to set **BinaryConversion** to 1 before calling this function, and set to 0 after calling this function.

13. ClearOutput ()

Description: Clears all outputs that have been buffered

Parameter: None

14. clearPrintArea ()

Description: Clear the area defined by the **PageModePrintArea** property.

Parameter: None

15. ReleaseDevice ()

Description: Release exclusive access to the device.

Parameter: None

Remark:

※Also need to set **DeviceEnabled** to false

16. Close ()

Description: Releases the device and its resources.

Parameter: None



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Property Table

Property	Type	Description
DeviceEnabled	Boolean	Set to true to enable the signature capture device. This property is initialized to false by the open method.
CapRecBitmap	Boolean	If true, then the receipt can print bitmaps. This property is initialized by the open method.
PageModeStation	Integer	Set the print station for subsequent Page Mode properties. Only support PTR_S_RECEIPT .
PageModePrintArea	String	Holds the print area for the selected PageModeStation . The string consists of four ASCII numbers separated by commas, in the following order: horizontal start, vertical start, horizontal size, vertical size. Example: "0,0,400,100"
PageModeVerticalPosition	Integer	Holds the vertical start position offset within the print area for the selected PageModeStation .
PageModeHorizontalPosition	Integer	Holds the horizontal start position offset within the print area for the selected PageModeStation .



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C# SDK Example

```
using OposPOSPrinter_CCO;
```

```
OposPOSPrinter_CCO.OPOSPOSPrinter TSC = new OposPOSPrinter_CCO.OPOSPOSPrinter();
```

```
string logoFileName = @System.IO.Directory.GetCurrentDirectory() + @"\TSC.bmp";
```

```
byte ESC = 0X1B, vbLf = 0X0A;
```

```
//===== " CheckHealth " Method Constants =====
```

```
int OPOS_CH_INTERNAL=1;
```

```
//===== Printer Station Constants =====
```

```
int PTR_S_RECEIPT=2;
```

```
//===== " TransactionPrint " Method Constants =====
```

```
int PTR_TP_TRANSACTION =11;
```

```
int PTR_TP_NORMAL=12;
```

```
//===== " PrintBarCode " Method Constants =====
```

```
int PTR_BCS_EAN8=103;
```

```
int PTR_BC_CENTER=-2
```

```
int PTR_BC_TEXT_BELOW=-13;
```

```
//===== " SetBitmap " Method Constants =====
```

```
int PTR_BM_ASIS=-11;
```

```
int PTR_BM_CENTER=-2;
```

```
//===== " PageModePrint " Method Constants =====
```

```
int PTR_PM_PAGE_MODE=1;
```

```
int PTR_PM_NORMAL=3;
```

```
//===== " PageModePrintDirection " Property Constants =====
```

```
int PTR_PD_LEFT_TO_RIGHT=1;
```

```
//===== " RotatePrint " Method Constants =====
```

```
int PTR_RP_RIGHT90=(int)0x0101;
```

```
int PTR_RP_NORMAL=(int)0x0001
```



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```
TSC.Open("TDM30");
TSC.ClaimDevice(2500);
TSC.DeviceEnabled = true;
TSC.CheckHealth(OPOS_CH_INTERNAL);

TSC.TransactionPrint(PTR_S_RECEIPT, PTR_TP_TRANSACTION);
TSC.PrintNormal(PTR_S_RECEIPT, "Normal" + (char)vbLf);
TSC.PrintImmediate(PTR_S_RECEIPT, "Immediate"+ (char)vbLf);
TSC.PrintBarCode(PTR_S_RECEIPT, "1234567", PTR_BCS_EAN8, 100, 640, PTR_BC_CENTER,
PTR_BC_TEXT_BELOW);
TSC.SetBitmap(1, PTR_S_RECEIPT, logoFileName, PTR_BM_ASIS, PTR_BM_CENTER);
TSC.PrintNormal(PTR_S_RECEIPT, (char)ESC + "|1B");
TSC.TransactionPrint(PTR_S_RECEIPT, PTR_TP_NORMAL);

TSC.PageModePrint(PTR_PM_PAGE_MODE);.
TSC.PageModePrintArea = "0, 0, 150, 150";
TSC.PageModePrintDirection = PTR_PD_LEFT_TO_RIGHT;
TSC.PrintNormal(PTR_S_RECEIPT, " PageMode" + (char)vbLf);
TSC.PageModePrint(PTR_PM_NORMAL);

TSC.RotatePrint(PTR_S_RECEIPT, PTR_RP_RIGHT90);
TSC.PageModePrintArea = "0, 0, 500, 500";
TSC.PrintNormal(PTR_S_RECEIPT, " Rotate" + (char)vbLf);
TSC.RotatePrint(PTR_S_RECEIPT, PTR_RP_NORMAL);

TSC.DeviceEnabled = false;
TSC.ReleaseDevice();
TSC.Close();
```