API Reference Guide
SDK for UPOS Compliant
iOS

Ver. 1.01

AP3

Table of Contents

1. About This Manual

SDK for iOS_UPOS Compliant complies with UnifiedPOS.

SDK for iOS_UPOS Compliant provides iOS framework that allows applications' software to access printers.

This manual contains instructions, specifications and limitations of SDK for iOS_UPOS Compliant, and it is intended for developers who make application systems using UPOS devices.

You should set the device using UPOS Setup included in SDK for iOS_UPOS Compliant before using the printer.

2. Operating Environment

2-1 Operating System

This software supports the following operating systems.

- iOS 8.0 and later

2-2 Supported Devices and Interfaces

Models	Interface
AP3	Ethernet
AP3-3	Ethernet

3. Development Environment

3-1 Setting Development Environment

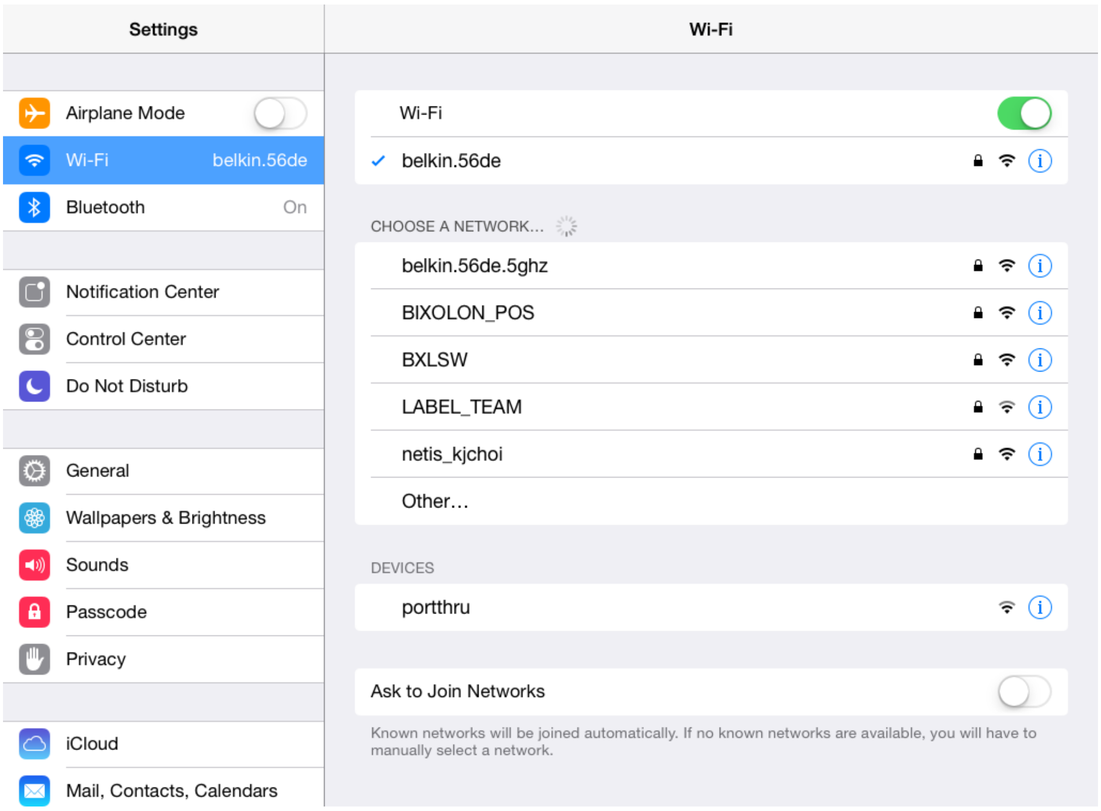
- Xcode 8.0 and later
- iOS SDK
- Reference: http://developer.apple.com/devcenter/ios/index.action

3-2 Connecting iOS Device

The following screen shot was captured from iOS.
Some details and names of specific items could be different depending on the iOS version or device.

3-2-1 Network–Infra structure Mode

1. Select [Settings].
2. Wi-Fi should be turned on.
3. Connect the device to the same network that the printer is connected to.



Known networks will be joined automatically. If no known networks are available, you will have to manually select a network.

4. Package Contents

- Manual in English
  Manual_AP3_SDK for iOS_UPOS Compliant API Reference Guide_english_
  Rev_x_xx.pdf
- Libs/lib/libUPOS.a: UPOS SDK – Library type.
- samples/Sample: UPOS sample application Based on iOS

5. Constants (Defines)

5-1 Result Code

- These constants are used for the results returned from methods after executing specific functions.

Code DEFINE	Description
UPOS_SUCCESS	Operation is successful.
UPOS_E_CLOSED	Device to access is closed.
UPOS_E_CLAIMED	Claim method should be called first.
UPOS_E_NOTCLAIMED	Device is not in Claim state.
UPOS_E_NOSERVICE	Function is not supported.
UPOS_E_DISABLED	Not enabled.
UPOS_E_ILLEGAL	Illegal access or unsupported function
UPOS_E_NOHARDWARE	Device is not connected.
UPOS_E_OFFLINE	Device is off-line.
UPOS_E_NOEXIST	Target does not exist.
UPOS_E_EXISTS	Target already exists.
UPOS_E_FAILURE	The requested operation failed.
UPOS_E_TIMEOUT	Timeout
UPOS_E_BUSY	Device is busy executing previously requested operation.
UPOS_E_EXTENDED	Device error. Refer to the ResultCode Extended section for more details.
UPOS_E_DEPRECATED	The function is currently not used.

5-2 OpenResult Code

- These constants are the results returned by the Open method.

Code DEFINE	Description
UPOS_SUCCESS	Open operation is successful.
UPOS_OR_ALREADYOPEN	Device is already open.
UPOS_OR_REGBADNAME	The specified device name cannot be found in the stored device list.
UPOS_OR_FAILEDOPEN	The execution of the Open method failed, but specific reason is unknown.

5-3 State Code

- These are the constants that are used for the property of State.

Code DEFINE	Description
UPOS_S_CLOSED	Device is closed.
UPOS_S_IDLE	Device is in standby state without error.
UPOS_S_BUSY	Device is currently busy executing another method.
UPOS_S_ERROR	There is an error.

5-4 Transaction Print

- These are the constants for setting the Transaction mode.

Code DEFINE	Description
PTR_TR_TRANSACTION	Initialize the buffer to Empty state and start the Transaction mode.
PTR_TR_NORMAL	Terminate the Transaction mode and print the data stored in the buffer.

5-5 Alignment

- These are the constants required for specifying alignment.
(For Barcodes)

Code DEFINE	Description
PTR_BC_LEFT	Align to left
PTR_BC_CENTER	Align to center
PTR_BC_RIGHT	Align to right

(For Images)

Code DEFINE	Description
PTR_BM_LEFT	Align to left
PTR_BM_CENTER	Align to center
PTR_BM_RIGHT	Align to right

5-6 Barcode Type

- These are the constants required for specifying barcode type when printing a barcode

<table>
<tr><th>Code DEFINE</th><th>Description</th></tr>
<tr><td>PTR_BCS_UPCA</td><td>UPCA</td></tr>
<tr><td>PTR_BCS_UPCE</td><td>UPCE</td></tr>
<tr><td>PTR_BCS_JAN8</td><td>JAN8</td></tr>
<tr><td>PTR_BCS_EAN8</td><td>EAN8</td></tr>
<tr><td>PTR_BCS_JAN13</td><td>JAN13</td></tr>
<tr><td>PTR_BCS_EAN13</td><td>EAN13</td></tr>
<tr><td>PTR_BCS_TF</td><td>Standard(ordiscrete) 2 of 5</td></tr>
<tr><td>PTR_BCS_ITF</td><td>Interleaved 2 of 5</td></tr>
<tr><td>PTR_BCS_Codabar</td><td>Codabar</td></tr>
<tr><td>PTR_BCS_Code39</td><td>Code39</td></tr>
<tr><td>PTR_BCS_Code93</td><td>Code93</td></tr>
<tr><td>PTR_BCS_Code128</td><td>Code 128
※ Special Character of Code 128
<table>
<tr><td>Special Characters</td><td>Ascii Representation</td></tr>
<tr><td>Code A</td><td>{A</td></tr>
<tr><td>Code B</td><td>{B</td></tr>
<tr><td>Code C</td><td>{C</td></tr>
</table></td></tr>
<tr><td>PTR_BCS_UPCA_S</td><td>UPC-A with supplemental barcode</td></tr>
<tr><td>PTR_BCS_UPCE_S</td><td>UPC-E with supplemental barcode</td></tr>
<tr><td>PTR_BCS_UPCD1</td><td>UPC-D1</td></tr>
<tr><td>PTR_BCS_UPCD2</td><td>UPC-D2</td></tr>
<tr><td>PTR_BCS_UPCD3</td><td>UPC-D3</td></tr>
<tr><td>PTR_BCS_UPCD4</td><td>UPC-D4</td></tr>
<tr><td>PTR_BCS_UPCD5</td><td>UPC-D5</td></tr>
<tr><td>PTR_BCS_EAN8_S</td><td>EAN8 with supplemental barcode</td></tr>
<tr><td>PTR_BCS_EAN13_S</td><td>EAN13 with supplemental barcode</td></tr>
<tr><td>PTR_BCS_EAN128</td><td>EAN128</td></tr>
<tr><td>PTR_BCS_OCRA</td><td>OCR “A”</td></tr>
<tr><td>PTR_BCS_OCRB</td><td>OCR “B”</td></tr>
<tr><td>PTR_BCS_Code128_Parsed</td><td>Code 128 with parsing</td></tr>
<tr><td>PTR_BCS_GS1DATABAR</td><td>GS1 DataBar Omnidirectional</td></tr>
<tr><td>PTR_BCS_GS1DATABAR_E</td><td>GS1 DataBar Stacked Omnidirectional</td></tr>
<tr><td>PTR_BCS_GS1DATABAR_S</td><td>GS1 DataBar Expanded</td></tr>
<tr><td>PTR_BCS_GS1DATABAR_E_S</td><td>GS1 DataBar Expanded Stacked</td></tr>
<tr><td>PTR_BCS_PDF417</td><td>PDF 417</td></tr>
<tr><td>PTR_BCS_MAXICODE</td><td>MAXI Code</td></tr>
<tr><td>PTR_BCS_DATAMATRIX</td><td>Data Matrix</td></tr>
<tr><td>PTR_BCS_QRCODE</td><td>QR Code</td></tr>
<tr><td>PTR_BCS_UQRCODE</td><td>Micro QR Code</td></tr>
<tr><td>PTR_BCS_AZTEC</td><td>Aztec</td></tr>
<tr><td>PTR_BCS_UPDF417</td><td>Micro PDF 417</td></tr>
</table>

5-7 Barcode Text Position

- These are the constants for specifying the text printing option and printing position when the specific barcode supports text printing.

Code DEFINE	Description
PTR_BC_TEXT_NONE	Do not print text. Print barcode only.
PTR_BC_TEXT_ABOVE	Print text above the barcode.
PTR_BC_TEXT_BELOW	Print text below the barcode.

5-8 StatusUpdateEvent

- These are the constants for specifying parameters in the event of StatusUpdateEvent Delegate.

Code DEFINE	Description
PTR_SUE_IDLE	Printer is in the idle state.
UPOS_SUE_POWER_ONLINE	Printer is in the online state.
UPOS_SUE_POWER_OFF	Printer is in the offline state. All of them have the same effects in this SDK unless there is a separate comment.
UPOS_SUE_POWER_OFFLINE	
UPOS_SUE_POWER_OFF_OFFLINE	
PTR_SUE_COVER_OPEN	Printer cover is open.
PTR_SUE_COVER_OK	Printer cover is closed.
PTR_SUE_REC_EMPTY	Printer paper is empty.
PTR_SUE_REC_NEAREMPTY	Printer is almost out of paper.
PTR_SUE_REC_PAPEROK	There is sufficient printing paper.
PTR_SUE_REC_BATTERY_NORMAL	The Printer Battery is enough.
PTR_SUE_REC_BATTERY_LOW	The Printer Battery is low.

6. Summary of Classes

6-1 Classes supported by this SDK

Class Type	Description	Related Classes
(1) Single Device	Information about each device is contained.	- Device Class Reference (Common Device) - [Printer] Printer Class Reference - [CashDrawer] Cash Drawer Class Reference
(2) Device List Manager	Multiple "(1) Single Device" can be stored as an array.	- [Common] Device Controller Class Reference - [Printer] Printer List Class Reference - [CashDrawer] Cash Drawer List Class Reference
(3) Device Controller	One of the devices stored in iDevice as "(2) Device List Manager" can be controlled. Example: Text printing, image/barcode printing in case of printer	- Device Controller Class Reference (Common Controller) - [Printer] Printer Controller Class Reference - [CashDrawer] Cash Drawer Controller Class Reference
(4) Delegate	Events can be delegated from each device to the application level, and this class should be used in order to use this function.	- [Common] Delegater Class Reference

6-2 Support Table

This table contains the list of methods supported by each device controller.

6-2-1 Printer Method

Method	Value	Pre-task
open	O	-
claim	O	open
releaseDevice	O	open – claim
close	O	open
beginInsertion	X	open – claim – deviceEnabled
beginRemoval	X	open – claim – deviceEnabled
changePrintSide	X	open – claim – deviceEnabled
clearPrintArea	O	open – claim – deviceEnabled
cutPaper	O	open – claim – deviceEnabled
drawRuledLine	X	open – claim – deviceEnabled
endInsertion	X	open – claim – deviceEnabled
endRemoval	X	open – claim – deviceEnabled
markFeed	X	open – claim – deviceEnabled
pageModePrint	O	open – claim – deviceEnabled
printBarCode	O	open – claim – deviceEnabled
printBitmap	O	open – claim – deviceEnabled
printImmediate	O	open – claim – deviceEnabled
printMemoryBitmap	X	open – claim – deviceEnabled
printNormal	O	open – claim – deviceEnabled
printTwoNormal	X	open – claim – deviceEnabled
rotatePrint	X	open – claim – deviceEnabled
setBitmap	X	open – claim – deviceEnabled
setLogo	X	open – claim – deviceEnabled
transactionPrint	O	open – claim – deviceEnabled
validateData	X	open – claim – deviceEnabled

O: Supported X: Not supported

6-2-2 CashDrawer Method

Method	Value	Pre-task
open	O	-
claim	O	open
releaseDevice	O	open – claim
close	O	open
openDrawer	O	open – claim – deviceEnabled

O: Supported X: Not supported

7. [Common] Device Class Reference

Inherits from	NSObject
Framework	libUPOS.a
[Availability]	iOS 8.0 and later
Class name	UPOSDevice
Declared	UPOSDevices.h

7-1 Overview

UPOSDevice Class is an object that contains the common information about all target control devices controlled by the controller of each device.

7-2 Available Properties

7-2-1 modelName

This property defines the model name of each device.

[Declare]

```
@property (retain)   NSString            *modelName;
```

[Availability]
SDK 1.0.0 and later

7-2-2 ldn (Logical Device Name)

This property defines the logical name of each device.
It can be used by the Open method.

[Declare]

```
@property (retain)   NSString            *ldn;
```

[Availability]
SDK 1.0.0 and later

7-2-3 InterfaceType

This property defines the method of connecting each device.

[Declare]

```
@property (retain)   NSString            *interfaceType;
```

[Availability]
SDK 1.0.0 and later

7-2-4 address

This is the property and the address value of each device.
The value will be the IP address instead of the MAC address if the Interface Type is _CONNECT_BLUETOOTH.

[Declare]

```
@property (retain)   NSString            *interfaceType;
```

[Availability]
SDK 1.0.0 and later

7-2-5 port

This property is used for the Network Port that is used for socket (Wi-Fi / Ethernet) Communication.This property may be ignored if the Interface Type is _CONNECT_BLUETOOTH.

[Declare]

```
@property (retain)   NSString            *port;
```

[Availability]
SDK 1.0.0 and later

7-3 Available Method

- Not applicable

8. [Common] Device List Class Reference

Inherits from	NSObject
Framework	libUPOS.a
[Availability]	iOS 8.0 and later
Class name	UPOSDevices
Declared	UPOSDevices.h

8-1 Overview

UPOSDevices Class is an object that contains the device list in the iDevice.

8-2 Available Properties

- Not applicable

8-3 Available Method

8-3-1 getList

This method reads the stored device list.

[See Also]

- Device Class Reference (Common Device)
- Device Controller Class Reference (Common Controller)
- [Printer] Printer Controller Class Reference
- [CashDrawer] Cash Drawer Controller Class Reference
- [Printer] Printer Class Reference
- [CashDrawer] Cash Drawer Class Reference
- [Printer] Printer List Class Reference

[CashDrawer] Cash Drawer List Class Reference

[Declare]

```
-(NSMutableArray*)getList;
```

[Parameters]

None

[Return Value]

- NSMutableArray*:
  The list of devices is stored as an array.
  Each object is stored as a Device Class.

[Example]

Calling the methods of this class directly may not work correctly. In this case, use the methods defined for each device.

[Availability]

SDK 1.0.0 and later

8-3-2 getDeviceIdentity

This method obtains the Identity string of the current device.

[Declare]

```
-(NSString*)getDeviceIdentity;
```

[Parameters]

None

[Return Value]

- NSString*:
  The identity of the current device is returned as string type.

[Example]

Calling the methods of this class directly may not work correctly. In this case, use the methods defined for each device.

[Availability]

SDK 1.0.0 and later

8-3-3 save

This method saves the current list of devices.

[Declare]

```
-(BOOL) save;
```

[Parameters]

None

[Return Value]

- BOOL:
  YES if operation is successful.

[Example]

Calling the methods of this class directly may not work correctly.

[Availability]

SDK 1.0.0 and later

8-3-4 addDevice

This method adds a device to the current device list.
The device's addition may not be reflected to the device list when the list is refreshed if the data is not saved with the save method after using this method.

[See Also]

- Refer to Device List Class Reference (stored device list) :: save

[Declare]

```
-(BOOL) addDevice:(UPOSDevice*)device;
```

[Parameters]

- (UPOSDevice*) device
  Object that contains the information about the device to add

[Return Value]

- BOOL:
  YES if the operation is successful.

[Example]

Calling the methods of this class directly may not work correctly.

[Availability]

SDK 1.0.0 and later

8-3-5 removeDevice

This method deletes a device from the device list.
The deleted device may not be reflected to the device list when the list is refreshed if the data is not saved with save method after using this method.

[See Also]

- Refer to Device List Class Reference (stored device list) :: save

[Declare]

```
-(BOOL) removeDevice:(UPOSDevice*)device;
```

[Parameters]

- (UPOSDevice*) device
  Object that contains the information about the device to add

[Return Value]

- BOOL:
  YES if the operation is successful.

[Example]

Calling the methods of this class directly may not work correctly.

[Availability]

SDK 1.0.0 and later

9. [Common] Device Controller Class Reference

Inherits from	NSObject
Framework	libUPOS.a
[Availability]	iOS 8.0 and later
Class name	UPOSDeviceController
Declared	UPOSDeviceController.h

9-1 Overview

UPOSDeviceController Class is the main object to control the common functions of the devices supported by this SDK.

9-2 Available Properties

9-2-1 CheckHealthText

This is the content that is printed when using the checkHealth function of each device.
This value may not have any meaning if the device is not an output device.

[Declare]

```
@property (strong, readonly)        NSString*     CheckHealthText;
```

[Availability]
SDK 1.0.0 and later

9-2-2 Claimed

This indicates the state of Claim.
If this property is YES, it means that the Claim: API of each device is called and executed successfully. This property is initialized when the Claim method is called.

[See Also]

- Claim

[Declare]

```
@property (readonly)                   BOOL            Claimed;
```

[Availability]
SDK 1.0.0 and later

9-2-3 DeviceEnabled

This property is an option to use the device.
This function may not be available if the property of DeviceEnabled is NO, even when the state if the property of Claimed is YES.

[See Also]

- Claimed

[Declare]

```
@property                              BOOL          DeviceEnabled;
```

[Availability]

SDK 1.0.0 and later

9-2-4 OpenResult

The execution result of the Open method is stored in this property.
This property is initialized when the Open method is called.

[See Also]

- OpenResult Code
- open

[Declare]

```
@property (readonly)                NSInteger     OpenResult;
```

[Availability]

SDK 1.0.0 and later

9-2-5 ResultCode

The result of the last called method is stored in this property.

[See Also]

- Constants_(Defines) :: Result Code

[Declare]

```
@property (readonly)                NSInteger     ResultCode;
```

[Availability]

SDK 1.0.0 and later

9-2-6 ResultCodeExtended

This property contains the detailed error information when a device error occurs.
It is initialized when UPOS_E_EXTENDED is stored as a result of the ResultCode.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Properties :: ResultCode

[Declare]

```
@property (readonly)                NSInteger    ResultCode;
```

[Availability]

SDK 1.0.0 and later

9-2-7 OutputID

OutputComplete: Delegate will be called when the printing operation is executed in the Async Mode. In this case, this property will be incremented by one.

[Declare]

```
@property (readonly)                NSInteger    OutputID;
```

[Availability]

SDK 1.0.0 and later

9-2-8 State

State value of the class is stored in this property.

[See Also]

- Constants (Defines) :: State Code

[Declare]

```
@property (readonly)                NSInteger    State;
```

[Availability]

SDK 1.0.0 and later

9-3 Available Method

9-3-1 open

This method initiates the use of the printer class, and it includes the initialization process such as memory allocation. This method should be called first before calling the claim and other subsequent methods.

[See Also]

- Constants (Defines) :: OpenResult Code
- OpenResult
- ldn (Logical Device Name)

[Declare]

```
-(NSInteger) open : (NSString*)logicalDeviceName;
```

[Parameters]

(NSString*) logicalDeviceName

- Model name of the device to open or stored device name.
  Refer to ldn (Logical Device Name)

[Return Value]

NSInteger

- UPOS_SUCCESS when successful.

[Example]

Calling the methods of this class directly may not work correctly.

[Availability]

SDK 1.0.0 and later

9-3-2 claim

This method tries to open the port specified in the device information, and it includes some initialization processes such as memory allocation and initialization.

This method should be called before using the device.

[See Also]

- Constants (Defines) :: Result Code
- Claimed
- open

[Declare]

```
-(NSInteger) claim : (NSInteger)timeout;
```

[Parameters]

(NSInteger) timeout

- This system tries to open the port for the duration specified in this parameter.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

Calling the methods of this class directly may not work correctly.

[Availability]

SDK 1.0.0 and later

9-3-3 releaseDevice

This method terminates the use of the port of the claimed device and releases the physical resources. Some of the memory resources may also be released as a result.

[See Also]

- claim
- Claimed

[Declare]

```
-(NSInteger) open : (NSString*)logicalDeviceName;
```

[Parameters]

(NSString*) logicalDeviceName

- Model name of the device to open or stored device name
  Refer to ldn (Logical Device Name)

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

Calling the methods of this class directly may not work correctly.

[Availability]

SDK 1.0.0 and later

9-3-4 close

This method terminates the use of the open device.
Some of the memory resources may also be released as a result.

[See Also]

- Constants (Defines) :: Result Code
- open

[Declare]

```
-(NSInteger) claim : (NSInteger)timeout;
```

[Parameters]

(NSInteger) timeout

- The system will try to execute the corresponding operation for the duration specified by this parameter.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

Calling the methods of this class directly may not work correctly.

[Availability]

SDK 1.0.0 and later

9-3-5 checkHealth

This method checks whether the device is operating correctly.
This method only works after Open / Claim / DeviceEnabled are executed correctly.

[See Also]

- Constants (Defines) :: Result Code
- open
- claim
- DeviceEnabled

[Declare]

```
-(NSInteger) checkHealth : (NSInteger) level;
```

[Parameters]

(NSInteger) level

- Fixed Value: UPOS_CH_INTERNAL

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

Calling the methods of this class directly may not work correctly.

[Availability]

SDK 1.0.0 and later

10. [Printer] Printer Class Reference

Inherits from	NSObject
Framework	libUPOS.a
[Availability]	iOS 8.0 and later
Class name	UPOSPrinter
Declared	UPOSDevices.h

10-1 Overview

The UPOSPrinter Class is the object that contains the information of the target device controlled by the UPOSPrinterController.

[See Also]

- [Common] Device Class Reference

10-2 Available Properties

- Refer to [Common] Device Class Reference :: Available Properties

10-3 Available Method

- Refer to [Common] Device Class Reference :: Available Method

11. [Printer] Printer List Class Reference

Inherits from	UPOSDevices
Framework	libUPOS.a
[Availability]	iOS 8.0 and later
Class name	UPOSPrinters
Declared	UPOSDevices.h

11-1 Overview

The UPOSPrinters Class is the object that contains the printer list stored in iDevice.
It is a set of UPOSPrinter objects.

[See Also]

- Printer Controller Class Reference

11-2 Available Properties

- Not applicable

11-3 Available Method

11-3-1 getList

This method reads the stored device list.

[See Also]

- Device Class Reference (Common Device)
- Device Controller Class Reference (Common Controller)
- Printer Controller Class Reference

[Declare]

- Refer to Device List Class Reference (stored device list) :: getList

[Parameters]

None

[Return Value]

- NSMutableArray*:
  The list of devices is stored as an array.
  Each object is stored as a Device Class.

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList   = [_uposPrinterController   getRegisteredDevice];


NSMutableArray* printerArray = [printerList getList];

if(printerArray == nil)
{
        NSLog(@"Failed to read the stored printer list.");
}
else
{
        NSLog(@"Stored printer list is read successfully.");
}
```

[Availability]

SDK 1.0.0 and later

11-3-2 getDeviceIdentity

This method reads the Idenitity string of the current device.

[Declare]

- Refer to Device List Class Reference (stored device list) :: getDeviceIdentity

[Parameters]

None

[Return Value]

- NSString*:
  The Identity of the current device is returned as a string.

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList   = [_uposPrinterController   getRegisteredDevice];


NSString* strIdentity = [printerList getDeviceIdentity];

if(printerArray == nil)
{
        NSLog(@"Failed to read the Identity value.");
}
else
{
        NSLog(@" Identity of UPOSPrinterController :%@.", strIdentity);
}
```

[Availability]

SDK 1.0.0 and later

11-3-3 save

This method saves the current list of devices.

[See Also]

- Printer List Class Reference (stored printer list) :: removeDevice
- Printer List Class Reference (stored printer list) :: addDevice

[Declare]

- Refer to Device List Class Reference (stored device list) :: save

[Parameters]

None

[Return Value]

- BOOL:
  YES if the operation is successful.

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList   = [_uposPrinterController   getRegisteredDevice];

UPOSPrinter* newDevice = [UPOSPrinter new];
newDevice.modelName   = @"AP3";
newDevice.ldn                  = @"type1";
newDevice.interfaceType = @"2"; // Ethernet
newDevice.address           = @"192.168.1.1";
newDevice.port                 = @"9100";
[printerList addDevice:newDevice];   // Add device
[newDevice release];
if([printerList save])
{
        NSLog(@"This list is saved successfully.");
}
else
{
        NSLog(@"Failed to save the list.");
}
```

[Availability]

SDK 1.0.0 and later

11-3-4 addDevice

This method adds a device to the current device list.
The device's addition may not be reflected to the list when the list is refreshed if the data is not saved by using the save method after using this method.

[See Also]

- Printer List Class Reference (stored printer list) :: save
- Printer List Class Reference (stored printer list) :: removeDevice

[Declare]

- Refer to Device List Class Reference (stored device list) :: addDevice

[Parameters]

- (UPOSDevice*) device
  This is the object that contains the information about the device to add.

[Return Value]

- BOOL:
  YES if the operation is successful.

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList   = [_uposPrinterController   getRegisteredDevice];

UPOSPrinter* newDevice = [UPOSPrinter new];
newDevice.modelName   = @"AP3";
newDevice.ldn                 = @"type1";
newDevice.interfaceType = @"2"; // Ethernet
newDevice.address          = @"192.168.1.1";
newDevice.port               = @"9100";


if([printerList addDevice:newDevice])     // Add device
{
          NSLog(@"Device is added");
}
else
{
          NSLog(@"Failed to add device.");
}

[newDevice release];
[printerList save];
```

[Availability]

SDK 1.0.0 and later

11-3-5 removeDevice

This method deletes a device from the device list.
The device's deletion may not be reflected to the device list when the list is refreshed if the data is not saved by using the save method after using this method.

[See Also]

- Printer List Class Reference (stored printer list) :: save
- Printer List Class Reference (stored printer list) :: addDevice

[Declare]

- Refer to Device List Class Reference (stored device list) :: removeDevice

[Parameters]

- (UPOSDevice*) device
  This is the object that contains the information about the device to remove.

[Return Value]

- BOOL:
  YES if the operation is successful.

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList   = [_uposPrinterController   getRegisteredDevice];

UPOSPrinter* willRemoveDevice = [[printerList getList] objectAtIndex:0];
if([printerList removeDevice:willRemoveDevice])     // Remove device
{
        NSLog(@"0th device is removed from the list.");
}
else
{
        NSLog(@"Failed to remove 0th device from the list.");
}

[newDevice release];
[printerList save];
```

[Availability]

SDK 1.0.0 and later

12. [Printer] Printer Controller Class Reference

Inherits from	UPOSDeviceController
Framework	libUPOS.a
[Availability]	iOS 8.0 and later
Class name	UPOSPrinterController
Declared	UPOSPrinterController.h

12-1 Overview

UPOSPrinterController Class is the main object for printer control.

12-2 Properties

Properties are determined based on the following criteria of printer types.
(Some properties like paper setting may vary, depending on the printer model.)

12-2-1 Capability Properties

Capability Name	1 Color Thermal
CapCompareFirmwareVersion	FALSE
CapPowerReporting	TRUE
CapStatisticsReporting	FALSE
CapUpdateFirmware	FALSE
CapUpdateStatistics	FALSE
CapTransaction	TRUE
CapCoverSensor	TRUE
CapConcurrentRecSlp	FALSE
CapConcurrentJrnSlp	FALSE
CapConcurrentJrnRec	FALSE
CapCharacterSet	TRUE
CapRecUnderline	TRUE
CapRecPageMode	FALSE
CapCuncurrentPageMode	FALSE
CapRecStamp	FALSE
CapRecRotate180	FALSE
CapRecRight90	FALSE
CapRecPapercut	TRUE
CapRecNearEndSensor	TRUE
CapRecMarkFeed	FALSE
CapRecLeft90	FALSE
CapRecItalic	FALSE
CapRecEmptySensor	TRUE
CapRecDwideDhigh	TRUE
CapRecDwide	TRUE
CapRecDhigh	TRUE
CapRecColor	FALSE
CapRecCartridgeSensor	FALSE
CapRecBold	TRUE
CapRecBitmap	TRUE
CapRecBarCode	TRUE
CapRec2Color	FALSE
CapRecPresent	TRUE

* Some of the Capability properties may vary, depending on the printer model.

12-2-2 Default values and range of properties

- List Properties

Model	RecLineChars List	RecBarCode RotationList	FontTypeface List	RecBitmapList
AP3	“42,56”	“0”	“”	“0”
AP3-3	“48,64”	“0”	“”	“0”

- CharacterSetList Properties

Model	Value
AP3 / AP3-3	"437,737,775,850,852,855,857,858,860,862,863, 864,865,866,928,Farsi,Thai12,Thai14,Thai16, Thai18,Thai421250,1251,1252,1253,1254,1255, 1256,1257,1258"

- Paper Width and Height Properties

Model	RecLineHeight	RecLineWidth	RecLinePaperCut
AP3	24	512	5
AP3-3	24	576	5

- RecLineSpacing Properties

Property	Range		
	Default Value	Minimum Value	Maximum Value
RecLineSpacing	16	127	0

12-2-3 RecLineChars

This property specifies the number of characters that can be displayed per line.
One of the numbers shown in RecLineCharsList can be selected.

[Declare]

```
@property                         NSInteger          RecLineChars;
```

[Availability]

SDK 1.0.0 and later

12-2-4 RecLineCharsList

This property specifies the number of characters that can be displayed per line.
The number of characters per line depends on the width of the font.

[Declare]

```
@property (strong, readonly)        NSString*            RecLineCharsList;
```

[Availability]
SDK 1.0.0 and later

12-2-5 RecLineSpacing

This is the space between lines.

[Declare]

```
@property                              NSInteger           RecLineSpacing;
```

[Availability]
SDK 1.0.0 and later

12-2-6 RecLineWidth

This is the default width of paper that is supported by the printer.

[Declare]

```
@property (readonly)                 NSInteger            RecLineWidth;
```

[Availability]
SDK 1.0.0 and later

12-2-7 RecEmpty

This indicates whether there is any paper in the printer.
YES means that the printer is out of paper.

[Declare]

```
@property (readonly)                 BOOL                 RecEmpty;
```

[Availability]
SDK 1.0.0 and later

12-2-8 RecNearEnd

This indicates that there is paper in the printer, but more needs to be added soon.
YES means that the printer is nearly out of paper.

[Declare]

```
@property (readonly)            BOOL            RecNearEnd;
```

[Availability]
SDK 1.0.0 and later

12-2-9 AsyncMode

Methods related to printing operate in asynchronous mode if it is set to YES.
If it is set to NO, then printing related methods operate in synchronous mode.

Initial setting is NO, and it is initialized whenever the printer is open.
In case of asynchronous mode, the OutputCompleteEvent can be used to check whether printing operation is completed.

[See Also]

- outputCompleteEvent

[Declare]

```
@property (nonatomic)           BOOL            AsyncMode;
```

[Availability]
SDK 1.0.0 and later

12-2-10 CharacterSet

This is the character set to be used for printing.

[Declare]

```
@property (nonatomic)           NSInteger       CharacterSet;
```

[Availability]
SDK 1.0.0 and later

12-2-11 CharacterSetList

This is the list of character sets supported by the printer.

[Declare]

```
@property (strong, readonly)    NSString*       CharacterSetList;
```

[Availability]
SDK 1.0.0 and later

12-2-12 CoverOpen

This indicates the printer cover status.
YES means that the cover is open.

[Declare]

```
@property                         BOOL              CoverOpen;
```

[Availability]
SDK 1.0.0 and later

12-2-13 ErrorLevel

This indicates the error status.

[Declare]

```
@property (readonly)              NSInteger         ErrorLevel;
```

[Availability]
SDK 1.0.0 and later

12-2-14 ErrorString

Error status can be checked through this string.

[Declare]

```
@property (strong, readonly)      NSString*         ErrorString;
```

[Availability]
SDK 1.0.0 and later

12-2-15 FlagWhenIdle

This property specifies the option whether to receive the statusUpdateEvent when an error condition is cleared. If it is set to YES, then the statusUpdateEvent is generated whenever the error condition is cleared.

The initial setting is NO, and it is initialized whenever the device is open.

[Declare]

```
@property (nonatomic)             BOOL              FlagWhenIdle;
```

[Availability]
SDK 1.0.0 and later

12-3 Available Method

12-3-1 open

This method initiates the use of the printer class, and it includes the initialization process such as memory allocation. This method should be called first before calling the claim and other subsequent methods.

[See Also]

- Constants (Defines) :: OpenResult Code
- [Common] Device Controller Class Reference :: Available Properties :: OpenResult
- [Common] Device Controller Class Reference :: Available Properties :: ldn (Logical Device Name)
- [Printer] Printer List Class Reference :: addDevice

[Declare]

- [Common] Device Controller Class Reference :: Available Method :: open

[Parameters]

(NSString*) logicalDeviceName

- Model name of the device to open or stored device name Refer to ldn (Logical Device Name)
- The device to use should be added in advance using the [Printer] Printer List Class Reference :: addDevice.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList   = [_uposPrinterController   getRegisteredDevice];


if(UPOS_SUCCESS == [_uposPrinterController open:@"type1"])
{
        if(UPOS_SUCCESS == [_uposPrinterController claim:3000])
        {
                _uposDeviceController.deviceEnabled = YES;
                        //   Printer can be used now.

        }
}
```

[Availability]

SDK 1.0.0 and later

12-3-2 claim

This method tries to open the port specified in the device information, and it includes some initialization processes such as memory allocation and initialization.

This method should be called before using the device.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

- [Common] Device Controller Class Reference :: Available Method :: claim

[Parameters]

(NSInteger) timeout

- The system will try to execute the corresponding operation for the duration specified by this parameter.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList    = [_uposPrinterController    getRegisteredDevice];

if(UPOS_SUCCESS == [_uposPrinterController open:@"type1"])
{
        if(UPOS_SUCCESS == [_uposPrinterController claim:3000])
        {
                _uposDeviceController.deviceEnabled = YES;
                        //    Printer can be used now.
        }
}
```

[Availability]

SDK 1.0.0 and later

12-3-3 releaseDevice

This method terminates the use of the port of the claimed device and releases the physical resources. Some of the memory resources may also be released as a result.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed
- [Printer] Printer Controller Class Reference :: Available Method :: releaseDevice

[Declare]

- [Common] Device Controller Class Reference :: Available Method :: releaseDevice

[Parameters]

(NSString*) logicalDeviceName

- Model name of the device to open or stored device name
  Refer to ldn (Logical Device Name)

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList    = [_uposPrinterController    getRegisteredDevice];

///    After using the printer


//    Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availability]

SDK 1.0.0 and later

12-3-4 close

This method terminates the use of the open device.
Some of the memory resources may also be released as a result.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed
- [Common] Device Controller Class Reference :: Available Method :: close

[Declare]

- [Common] Device Controller Class Reference :: Available Method :: close

[Parameters]

(NSInteger) timeout

- The system will try to execute the corresponding operation for the duration specified by this parameter.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList    = [_uposPrinterController    getRegisteredDevice];

///    After using the printer


//    Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availability]

SDK 1.0.0 and later

12-3-5 cutPaper

This method cut the paper if the corresponding model has the Auto Cutter.
This method is available after executing open-claim-enable methods.
The operation is asynchronous if AsyncMode is set to True.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
-(NSInteger) cutPaper : (NSInteger)percentage;
```

[Parameters]

(NSInteger) percentage

- This parameter specifies the paper cutting level.
- Higher number means more cutting.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList   = [_uposPrinterController   getRegisteredDevice];

///   After printer initialization (open-claim-deviceEnable)
[_uposPrinterController cutPaper:100];
//   Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availability]

SDK 1.0.0 and later

12-3-6 markFeed

This method feeds the paper to the next printing position.
This method is available after executing open-claim-enable methods.
The operation is asynchronous if AsyncMode is set to True.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
-(NSInteger) markFeed : (NSInteger)type;
```

[Parameters]

(NSInteger) type

- This parameter specifies the Mark type.

Value	Description
PTR_MF_TO_TAKEUP	The printer keeps feeding the paper until the mark on the paper is recognized by the mark sensor of printer.
PTR_MF_TO_CUTTER	The printer feeds the paper until the printed contents on the paper are not cut.
PTR_MF_TO_CURRENT_TOP	Not supported
PTR_MF_TO_NEXT_TOF	The printer keeps feeding the paper until the next mark of the paper is recognized by the printer’s mark sensor.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList  = [_uposPrinterController  getRegisteredDevice];

///  After printer initialization (open-claim-deviceEnable)
 [_uposPrinterController markeFeed:PTR_MF_TO_TAKEUP];
//  Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availability]

SDK 1.0.0 and later

12-3-7 printBarcode

This method prints barcodes.

[See Also]

- Constants (Defines) :: Result Code
- Constants (Defines) :: Barcode Type
- Constants (Defines) :: Alignment
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
-(NSInteger) printBarcode: (NSInteger) station
                                   data : (NSString*) data
                         symbology : (NSInteger) symbology
                               height : (NSInteger) height
                                width: (NSInteger) width
                          alignment : (NSInteger) alignment
                         textPostion: (NSInteger) textPosition;
```

[Parameters]

(NSInteger) station
- Fixed to PTR_S_RECEIPT

(NSString) data
- Data to be included in the barcode, which may vary, depending on the barcode type.

(NSInteger) symbology
- Type of barcode. (Refer to Constants (Defines) :: Barcode Type)

(NSInteger) height
- Height of the barcode.

(NSInteger) width
- Width of the barcode.

(NSInteger) alignment
- Barcode alignment. (Refer to Constants (Defines) :: Alignment)

(NSInteger) textProsition
- Position of the text to be printed with barcode.
  (Refer to Constants (Defines) :: Barcode Text Position)

[Return Value]

NSInteger
- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList    = [_uposPrinterController    getRegisteredDevice];

///    After printer initialization (open-claim-deviceEnable)
[_uposPrinterController printBarcode          :PTR_S_RECEIPT
                                       data     :@"1234567890123"
                                  symbology     : PTR_BCS_EAN13
                                       height  :100
                                       width   :200
                                  alignment    : PTR_BC_CENTER
                                   textPostion:PTR_BC_TEXT_BELOW];

//    Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availability]

SDK 1.0.0 and later

12-3-8 printBitmap (File Printing)

This method prints images.

[See Also]

- Constants (Defines) :: Result Code
- Constants (Defines) :: Alignment
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
-(NSInteger)    printBitmap   : (NSInteger) station
                   Filename   : (NSString*) fileName
                      width   : (NSInteger) width
                  alignment : (NSInteger) alignment;
```

[Parameters]

(NSInteger) station
- Fixed to PTR_S_RECEIPT

(NSString) fileName
- Path of the image file.

(NSInteger) width
- Width of the image .
  (The image will be printed at the specified width within the range supported by the printer, irrespective of the size of the image.)

(NSInteger) alignment
- Alignment of the image. (Refer to Constants (Defines) :: Alignment)

[Return Value]

NSInteger
- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList    = [_uposPrinterController    getRegisteredDevice];

///    After printer initialization (open-claim-deviceEnable)
NSString    *path    =    [[NSBundle    mainBundle]    pathForResource:@"Sample"
ofType:@"png"];
[_uposPrinterController printBitmap:PTR_S_RECEIPT
                           fileName    :path
                              width    :200
                           alignment   : PTR_BM_CENTER];

//    Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availability]

SDK 1.0.0 and later

12-3-9 printBitmap (UIImage Printing)

This method prints images.

[See Also]

- Constants (Defines) :: Result Code
- Constants (Defines) :: Alignment
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
-(NSInteger) printBitmap      : (NSInteger) station
                       image  : (NSString*) image
                       width  : (NSInteger) width
                   alignment  : (NSInteger) alignment;
```

[Parameters]

(NSInteger) station
- Fixed to PTR_S_RECEIPT

(UIImage) image
- Image to print

(NSInteger) width
- Width of the printed image
  (The image will be printed at the specified width within the range supported by the printer, irrespective of the size of the image.)

(NSInteger) alignment
- Alignment of the image (Refer to Constants (Defines) :: Alignment)

[Return Value]

NSInteger
- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList    = [_uposPrinterController    getRegisteredDevice];

///    After printer initialization (open-claim-deviceEnable)
IBOulet UIImageView * _imageView; // Views that are connected to resources
[_uposPrinterController printBitmap:PTR_S_RECEIPT
                                    image  :_imageView.image
                                    width   :200
                            alignment      : PTR_BM_CENTER];

//    Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availability]

SDK 1.0.0 and later

12-3-10 printNormal

This method prints text.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
-(NSInteger) printNormal        : (NSInteger) station
                         data    : (NSString*) data;
```

[Parameters]

(NSInteger) station

- Fixed to PTR_S_RECEIPT

(NSString) data

- This parameter is the data to print.
- It includes printable text, escape sequences, carriage returns, and line feeds data.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList   = [_uposPrinterController   getRegisteredDevice];

///   After printer initialization (open-claim-deviceEnable)
IBOulet UIImageView * _imageView; // Views that are connected to resources
[_uposPrinterController printNormal          :PTR_S_RECEIPT
                                       data   :@"|N|cAPrint
CenterAlienedText\r\n"];

//   Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availability]

SDK 1.0.0 and later

12-3-11 transactionPrint

This method prints text.

[See Also]

- Constants (Defines) :: Result Code
- Constants (Defines) :: Transaction Print
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
-(NSInteger) transactionPrint : (NSInteger)station
                          control : (NSInteger)control
```

[Parameters]

(NSInteger) station
- Fixed to PTR_S_RECEIPT

(NSString) control
- Transaction Mode (Refer to Constants (Defines) :: Transaction Print)

[Return Value]

NSInteger
- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList    = [_uposPrinterController    getRegisteredDevice];

///    After printer initialization (open-claim-deviceEnable)
IBOulet UIImageView * _imageView; // Views that are connected to resources
[_uposPrinterController transactionPrint    :PTR_S_RECEIPT
                                 Control    : PTR_TR_TRANSACTION];


[_uposPrinterController printNormal   :PTR_S_RECEIPT
                               data   :@"|N|cAPrint CenterAlienedText 1 \r\n"];
[_uposPrinterController printNormal   :PTR_S_RECEIPT
                               data   :@"|N|cAPrint CenterAlienedText 2 \r\n"];
[_uposPrinterController printNormal   :PTR_S_RECEIPT
                               data   :@"|N|cAPrint CenterAlienedText 3 \r\n"];


// Contents in the buffer are printed, and the transaction mode is terminated.
[_uposPrinterController transactionPrint        :PTR_S_RECEIPT
                                    control     : PTR_TR_NORMAL];
//    Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availability]

SDK 1.0.0 and later

12-3-13 setPageArea

Configures the printing area of pagemode.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
- (NSInteger)setPageArea:(NSInteger)startingX
                startingY:(NSInteger)startingY
                      width:(NSInteger)width
                    height:(NSInteger)height;
```

[Parameters]

(NSInteger) startingX
- The starting x value of the pagemode printing area

(NSInteger) startingY
- The starting y value of the pagemode printing area

(NSInteger) width
- Width value of pagemode printing area

(NSInteger) height
- Height value of pagemode printing area

[Return Value]

long
- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

- Refer to 12-3-25 printDataInPageMode Example

[Availablility]

SDK 1.0.14 and later

12-3-14 setLeftPosition

Configures the x coordinates of the printing target in pagemode.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
- (NSInteger)setLeftPosition:(NSInteger)positionX;
```

[Parameters]

(NSInteger) positionX

- x axis coordinate value of object to be printed

[Return Value]

long

- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

- Refer to 12-3-25 printDataInPageMode Example

[Availablility]

SDK 1.0.14 and later

12-3-15 setVerticalPosition

Configures the y coordinates of the printing target in pagemode.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
- (NSInteger)setVerticalPosition:(NSInteger)positionY;;
```

[Parameters]

(NSInteger) positionY

- y axis coordinate value of object to be printed

[Return Value]

long

- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

- Refer to 12-3-25 printDataInPageMode Example

[Availablility]

SDK 1.0.14 and later

12-3-16 printDataInPageMode

Pagemode prints the printed set.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [Printer] Printer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Printer] Printer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
- (NSInteger)printDataInPageMode;
```

[Return Value]

long

- UPOS_SUCCESS if the operation is successful.
  (Refer to Constants (Defines) :: Result Code)

[Example]

```
UPOSPrinterController* _uposPrinterController = [ UPOSPrinterController new];
UPOSPrinters* printerList    = [_uposPrinterController    getRegisteredDevice];

///     After printer initialization (open-claim-deviceEnable)
[_uposPrinterController setPageArea : 0
                                          startingY : 0
                                               width : 512
                                              height : 500];

     [_uposPrinterController setVerticalPosition:100];
     [_uposPrinterController setLeftPosition:100];
     [_uposPrinterController printNormal:PTR_S_RECEIPT data:@"0.0\r\n"];

     [_uposPrinterController setVerticalPosition:100];
     [_uposPrinterController setLeftPosition:100];
     [_uposPrinterController    printBitmap:PTR_S_RECEIPT    image:img    width:250
alignment:PTR_BM_CENTER brightness:50];

     [_uposPrinterController setVerticalPosition:200];
     [_uposPrinterController setLeftPosition:200];
     [_uposPrinterController printNormal:PTR_S_RECEIPT data:@"200.0\r\n"];

     [_uposPrinterController setVerticalPosition:200];
     [_uposPrinterController setLeftPosition:50];
     [_uposPrinterController    printBitmap:PTR_S_RECEIPT    image:img    width:350
alignment:PTR_BM_CENTER brightness:50];

     [_uposPrinterController setVerticalPosition:400];
     [_uposPrinterController setLeftPosition:0];
     [_uposPrinterController printNormal:PTR_S_RECEIPT data:@"500.0\r\n"];

     [_uposPrinterController printDataInPageMode];

//    Printer Closing procedure
_uposDeviceController.deviceEnabled = NO;
[_uposPrinterController releaseDevice];
[_uposPrinterController close];
```

[Availablility]

SDK 1.0.14 and later

12-4 Available Delegate

12-4-1 StatusUpdateEvent

This is an event that is generated when the status of the printer is changed.

[See Also]

- [Common] Delegater Class Reference :: Available Delegate :: StatusUpdateEvent
- Constants (Defines) :: StatusUpdateEvent

[Declare]

- Refer to [Common] Delegater Class Reference :: Available Delegate :: StatusUpdateEvent

[Parameters]

(NSNumber*) Status

- It includes the changed status value.
  (Refer to Constants (Defines) :: StatusUpdateEvent)

[Return Value]

- void

[Example]

```
-(void) StatusUpdateEvent: (NSNumber*) Status
{
    NSLog(@"!!!!!!!!!!!!   StatusUpdateEvent : %ld !!!!!!!!!!!", (long)Status.integerValue);
    NSString *message;
    switch([ Status integerValue])
         {
         case PTR_SUE_COVER_OPEN:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Cover
Open"];
             break;
         case PTR_SUE_COVER_OK:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Cover
OK"];
              break;
         case PTR_SUE_REC_EMPTY:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Paper
Empty"];
               break;
         case PTR_SUE_REC_PAPEROK:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Paper
OK"];
              break;
         case PTR_SUE_REC_NEAREMPTY:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Paper
Near End"];
              break;
         case UPOS_SUE_POWER_OFF:
         case UPOS_SUE_POWER_OFF_OFFLINE:
         case UPOS_SUE_POWER_OFFLINE:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Device off
or offLine"];
             break;
         case UPOS_SUE_POWER_ONLINE:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Device
OnLine"];
             break;
         default:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent]
UNKNOWN"];
         }

         NSLog(@"%@", message)
}
```

[Availability]

SDK 1.0.0 and later

12-4-2 OutputCompleteEvent

This event is generated when each device completes the received output request.

[See Also]

- [Printer] Printer Controller Class Reference :: Available Method
- [Printer] Printer Controller Class Reference :: Available Method :: cutPaper
- [Printer] Printer Controller Class Reference :: Available Method :: markFeed
- [Printer] Printer Controller Class Reference :: Available Method :: printBarcode
- [Printer] Printer Controller Class Reference :: Available Method :: printBitmap (File Printing)
- [Printer] Printer Controller Class Reference :: Available Method :: printBitmap (UIImage Printing)
- [Printer] Printer Controller Class Reference :: Available Method :: printNormal
- [Printer] Printer Controller Class Reference :: Available Method :: transactionPrint

[Declare]

- Refer to [Common] Delegater Class Reference :: Available Delegate :: DataEvent

[Parameters]

(NSNumber*) Status

- It includes the changed status value.
  (Refer to Constants (Defines) :: StatusUpdateEvent)

[Return Value]

- void

[Declare]

```
- (void)OutputCompleteEvent:(NSNumber*)OutputID;
```

[Availability]

SDK 1.0.0 and later

13. [CashDrawer] Cash Drawer Class Reference

13-1 Overview

The UPOSCashDrawer Class is the object that contains the information about target devices controlled by the UPOSCDController.

[See Also]

- [Common] Device Class Reference

13-2 Available Properties

[See Also]

- Refer to [Common] Device Class Reference :: Available Properties

13-2-1 selectedPrinterName

Name of the printer to connect the cash drawer

[Declare]

```
@property (retain)   NSString            *selectedPrinterName;
```

[Availability]

SDK 1.0.0 and later

13-2-2 pinNumber

This is the PIN number that is required to open the cash drawer.

[Declare]

```
@property (retain)   NSNumber            *pinNumber;
```

[Availability]

SDK 1.0.0 and later

13-2-3 pinLevel

This is the level of sensing for monitoring the cash drawer open status.
Change this option if the status of the cash drawer is reversed in the display.

[Declare]

```
@property (retain)   NSNumber            *pinLevel;
```

[Availability]

SDK 1.0.0 and later

13-2-4 pulseOnTime

This determines the time duration to turn on the signal when opening the cash drawer,

[Declare]

```
@property (retain)   NSNumber           *pinLevel;
```

[Availability]

SDK 1.0.0 and later

13-2-5 pulseOffTime

This determines the time when the signal will be turned off after supplying the signal while opening the cash drawer.

[Declare]

```
@property (retain)   NSNumber           *pinLevel;
```

[Availability]

SDK 1.0.0 and later

13-3 Available Method

- Refer to [Common] Device Class Reference :: Available Method

14. [CashDrawer] Cash Drawer List Class Reference

Inherits from	UPOSDevices
Framework	libUPOS.a
[Availability]	iOS 8.0 and later
Class name	UPOSCashDrawers
Declared	UPOSDevices.h

14-1 Overview

The UPOSCashDrawers Class is the object that contains the list of cash drawers stored in iDevice. (It is a set of UPOSCashDrawer objects.)

[See Also]

- Cash Drawer Class Reference

14-2 Available Properties

- Not applicable

14-3 Available Method

14-3-1 getList

This method reads the stored device list.

[See Also]

- Device Class Reference (Common Device)
- Device Controller Class Reference (Common Controller)
- Cash Drawer Class Reference

[Declare]

- Refer to Cash Drawer List Class Reference (stored list of cash drawers) :: getList

[Parameters]

None

[Return Value]

- NSMutableArray*:
  The list of devices is stored as an array.
  Each object is stored as a Device Class.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList    = [_ uposCDController getRegisteredDevice];


NSMutableArray* cdArray = [cdrList getList];

if(cdArray == nil)
{
        NSLog(@"Failed to read the list of CashDrawers.");
}
else
{
        NSLog(@"List of CashDrawers is read.");
}
```

[Availability]

SDK 1.0.0 and later

14-3-2 getDeviceIdentity

This method reads the Identity string of the current device.

[Declare]

- Refer to Device List Class Reference (stored device list) :: getDeviceIdentity

[Parameters]

None

[Return Value]

- NSString*:
  The Identity of the current device is returned as a string.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList   = [_ uposCDController getRegisteredDevice];

NSString* strIdentity = [cdList getDeviceIdentity];

if(cdArray == nil)
{
          NSLog(@"Failed to read the identity value.");
}
else
{
          NSLog(@" Identity of UPOSCDController :%@.", strIdentity);
}
```

[Availability]

SDK 1.0.0 and later

14-3-3 save

This method saves the current device list.

[See Also]

- Cash Drawer List Class Reference (stored list of cash drawers) :: removeDevice
- Cash Drawer List Class Reference (stored list of cash drawers) :: addDevice

[Declare]

- Refer to Device List Class Reference (stored device list) :: save

[Parameters]

None

[Return Value]

- BOOL:
  YES if the operation is successful.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList    = [_ uposCDController getRegisteredDevice];

UPOSCashDrawer* newDevice = [UPOSCashDrawer new];
newDevice.modelName       = @"AP3-CDW";
newDevice.ldn             = @"type1";
newDevice.selectedPrinterName = @"AP3";
newDevice.pinNumber = 2;
newDevice.pinLevel = 0;
newDevice.pulseOnTime = 100;
newDevice.pulseOffTime = 400;
[cdList addDevice:newDevice];    // Add Device
[newDevice release];
if([printerList save])
{
        NSLog(@"List is saved.");
}
else
{
        NSLog(@"List cannot be saved.");
}
```

[Availability]

SDK 1.0.0 and later

14-3-4 addDevice

This method adds a device to the current device list.
The device’s addition may not be reflected to the device list when the list is refreshed if the data is not saved by using the save method after using this method.

[See Also]

- Cash Drawer List Class Reference (stored list of cash drawers) :: save
- Cash Drawer List Class Reference (stored list of cash drawers) :: removeDevice

[Declare]

- Refer to Device List Class Reference (stored device list) :: addDevice

[Parameters]

- (UPOSDevice*) device
  Object that contains the information about the device to add.

[Return Value]

- BOOL:
  YES if the operation is successful.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList    = [_ uposCDController getRegisteredDevice];

UPOSCashDrawer* newDevice = [UPOSCashDrawer new];
newDevice.modelName          = @”AP3-CDW”;
newDevice.ldn                          =@”type1”;
newDevice.selectedPrinterName = @”AP3”;
newDevice.pinNumber = 2;
newDevice.pinLevel = 0;
newDevice.pulseOnTime = 100;
newDevice.pulseOffTime = 400;
if([cdList addDevice:newDevice])     //    Add device
{
            NSLog(@”Device is added successfully.”);
}
else
{
            NSLog(@”“Failed to add device.”);
}

[newDevice release];
[cdList save];
```

[Availability]

SDK 1.0.0 and later

14-3-5 removeDevice

This method deletes a device from the device list.
The device’s deletion may not be reflected to the device list when the list is refreshed if the data is not saved by using the save method after using this method.

[See Also]

- Cash Drawer List Class Reference (stored list of cash drawers) :: save
- Cash Drawer List Class Reference (stored list of cash drawers) :: addDevice

[Declare]

- Refer to Device List Class Reference (stored device list) :: removeDevice

[Parameters]

- (UPOSDevice*) device
  Object that contains the information about the device to add

[Return Value]

- BOOL:
  YES if the operation is successful.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList    = [_ uposCDController getRegisteredDevice];

UPOSCashDrawer* * willRemoveDevice = [[printerList getList] objectAtIndex:0];
if([cdList removeDevice:willRemoveDevice])      //    Remove device
{
            NSLog(@”0th device is removed from the list.”);
}
else
{
            NSLog(@”Failed to remove 0th device from the list.”);
}

[newDevice release];
[cdList save];
```

[Availability]

SDK 1.0.0 and later

15. [CashDrawer] Cash Drawer Controller Class Reference

Inherits from	UPOSDeviceController
Framework	libUPOS.a
[Availability]	iOS 8.0 and later
Class name	UPOSCDController
Declared	UPOSCDController.h

15-1 Overview

The UPOSCDController Class is the main object that controls common functions of the devices supported by this SDK.

15-2 Available Properties

15-2-1 DrawerOpened

This indicates the status of CashDrawer.
YES means that the Drawer is open.

[Declare]

```
@property (readonly)              BOOL              DrawerOpened;
```

[Availability]
SDK 1.0.0 and later

15-3 Available Method

15-3-1 open

This method initiates the use of the cashdrawer class, and it includes the initialization process such as memory allocation. This method should be called first before calling the claim and other subsequent methods.

[See Also]

- Constants (Defines) :: OpenResult Code
- [Common] Device Controller Class Reference :: Available Properties :: OpenResult
- [Common] Device Controller Class Reference :: Available Properties :: ldn (Logical Device Name)
- [CashDrawer] Cash Drawer List Class Reference ::Available Method :: addDevice

[Declare]

- [Common] Device Controller Class Reference :: Available Method :: open

[Parameters]

(NSString*) logicalDeviceName

- Model name of the device to open or stored device name
  Refer to ldn (Logical Device Name)
- [CashDrawer] Cash Drawer List Class Reference :: Available Method :: addDevice
  The device should be added by using the [CashDrawer] Cash Drawer List Class Reference :: addDevice method first in order to use it.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList    = [_ uposCDController getRegisteredDevice];


if(UPOS_SUCCESS == [_ uposCDController open:@"type1"])
{
          if(UPOS_SUCCESS == [_uposCDController claim:3000])
          {
                    _uposCDController.deviceEnabled = YES;
                              //    Cash drawer can be used now.

          }
}
```

[Availability]

SDK 1.0.0 and later

15-3-2 claim

This method tries to open the port specified in the device information, and it includes some initialization processes such as memory allocation and initialization.

This method should be called before using the device.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [CashDrawer] Cash Drawer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

- [Common] Device Controller Class Reference :: Available Method :: claim

[Parameters]

(NSInteger) timeout

- The system will try to execute the corresponding operation for the duration specified by this parameter.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList    = [_ uposCDController getRegisteredDevice];

if(UPOS_SUCCESS == [_ uposCDController open:@”type1”])
{
        if(UPOS_SUCCESS == [_ uposCDController claim:3000])
        {
                _ uposCDController.deviceEnabled = YES;
                        //    Cash drawer can be used
        }
}
```

[Availability]

SDK 1.0.0 and later

15-3-3 releaseDevice

This method terminates the use of the port of the claimed device and releases the physical resources. Some of the memory resources may also be released as a result.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [CashDrawer] Cash Drawer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [CashDrawer] Cash Drawer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed
- [CashDrawer]CashDrawerControllerClassReference :: AvailableMethod :: releaseDevice

[Declare]

- [Common] Device Controller Class Reference :: Available Method :: releaseDevice

[Parameters]

(NSString*) logicalDeviceName

- Model name of the device to open or stored device name
  Refer to ldn (Logical Device Name)

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList    = [_ uposCDController getRegisteredDevice];

///    After using the cash drawer


//     CashDrawer Closing procedure
_ uposCDController deviceEnabled = NO;
[_ uposCDController releaseDevice];
[_ uposCDController close];
```

[Availability]

SDK 1.0.0 and later

15-3-4 close

This method terminates the use of the open device.
Some of the memory resources may also be released as a result.

[See Also]

- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [CashDrawer] Cash Drawer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [CashDrawer] Cash Drawer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed
- [Common] Device Controller Class Reference :: Available Method :: close

[Declare]

- [Common] Device Controller Class Reference :: Available Method :: close

[Parameters]

(NSInteger) timeout

- The system will try to execute the corresponding operation for the duration specified by this parameter.

[Return Value]

NSInteger

- UPOS_SUCCESS if the operation is successful.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList    = [_ uposCDController getRegisteredDevice];

///    After using the cash drawer

//      CashDrawer Closing procedure
_ uposCDController.deviceEnabled = NO;
[_uposCDController releaseDevice];
[_uposCDController close];
```

[Availability]

SDK 1.0.0 and later

15-3-5 OpenDrawer

This method opens the cash drawer.

[See Also]
- Constants (Defines) :: Result Code
- [Common] Device Controller Class Reference :: Available Method :: open
- [CashDrawer] Cash Drawer Controller Class Reference :: Available Method :: open
- [Common] Device Controller Class Reference :: Available Method :: claim
- [CashDrawer] Cash Drawer Controller Class Reference :: Available Method :: claim
- [Common] Device Controller Class Reference::Available Properties::DeviceEnabled
- [Common] Device Controller Class Reference :: Available Properties :: Claimed

[Declare]

```
-(NSInteger) OpenDrawer;
```

[Parameters]

None

[Return Value]

NSInteger
- UPOS_SUCCESS if the operation is successful.

[Example]

```
UPOSCDController* _uposCDController = [UPOSCDController new];
UPOSCashDrawers* cdList    = [_ uposCDController getRegisteredDevice];

///    After initialization of CashDrawer (open-claim-deviceEnable)
  [_uposCDController openDrawer];

//    Cash drawer Closing procedure
_ uposCDController.deviceEnabled = NO;
[_ uposCDController releaseDevice];
[_ uposCDController close];
```

[Availability]

SDK 1.0.0 and later

15-4 Available Delegate

15-4-1 StatusUpdateEvent

This is an event that is generated when the status of CashDrawer is changed.

[See Also]

- [Common] Delegater Class Reference :: Available Delegate :: StatusUpdateEvent
- Constants (Defines) :: StatusUpdateEvent

[Declare]

- Refer to [Common] Delegater Class Reference :: Available Delegate :: StatusUpdateEvent

[Parameters]

(NSNumber*) Status

- It includes the changed status value.
  (Refer to Constants (Defines) :: StatusUpdateEvent)

[Return Value]

- void

[Example]

```
-(void) StatusUpdateEvent: (NSNumber*) Status
{
    NSLog(@"!!!!!!!!!!!!   StatusUpdateEvent : %ld !!!!!!!!!!!", (long)Status.integerValue);
    NSString *message;
    switch([ Status integerValue])
         {

         case CASH_SUE_DRAWEROPEN:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Cash
Drawer Opened"];
             break;
         case CASH_SUE_DRAWERCLOSED:
              message = [NSString stringWithFormat:@"[StatusUpdateEvent] Cash
Drawer Closed"];
              break;
         case UPOS_SUE_POWER_OFF:
         case UPOS_SUE_POWER_OFF_OFFLINE:
         case UPOS_SUE_POWER_OFFLINE:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Device off
or offLine"];
             break;
         case UPOS_SUE_POWER_ONLINE:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent] Device
OnLine"];
             break;
         default:
             message = [NSString stringWithFormat:@"[StatusUpdateEvent]
UNKNOWN"];
         }

    NSLog(@"%@", message)
}
```

[Availability]

SDK 1.0.0 and later

16. [Common] Delegater Class Reference

Inherits from	NSObject
Framework	libUPOS.a
[Availability]	iOS 8.0 and later
Class name	UPOSDeviceControlDelegate
Declared	UPOSDeviceControlDelegate.h

16-1 Overview

The UPOSDeviceControlDelegate Class is the main object to pass events in this SDK.

16-2 Available Properties

- Not applicable

16-3 Available Delegate

16-3-1 DataEvent

This is the delegate that is passed when data is generated from each device.

[Declare]

```
-(void)DataEvent:(NSNumber*) Status;
```

[Availability]

SDK 1.0.0 and later

16-3-2 StatusUpdateEvent

It is an event that is generated when the status of device is changed.

[Declare]

```
-(void)StatusUpdateEvent:(NSNumber*) Status;
```

[Availability]

SDK 1.0.0 and later

16-3-3 OutputCompleteEvent

This event is generated from the printer when printing completes the received output request.

[Declare]

```
-(void)OutputCompleteEvent:(NSNumber*)OutputID;
```

[Availability]

SDK 1.0.0 and later

17. Sample Program

It is an example of an iOS application program using the SDK for iOS_UPOS Compliant.

18. Error Information

This section is to explain returned error information when use Printer methods.
For more details, please refer to the UPOS specifications.

18-1 Error list

- claim

Method	Errors
claim	UPOS_E_ILLEGAL
	UPOS_E_TIMEOUT

- checkHealth

Method	Errors
checkHealth	UPOS_E_ILLEGAL

- printNormal

Method	Errors
printNormal	UPOS_E_ILLEGAL
	UPOS_E_BUSY

- printImmediate

Method	Errors
printImmediate	UPOS_E_ILLEGAL

- cutPaper

Method	Errors
cutPaper	UPOS_E_BUSY
	UPOS_E_ILLEGAL

- printBitmap

Method	Errors
printBitmap	UPOS_E_BUSY
	UPOS_E_ILLEGAL
	UPOS_E_NOEXIST

- transactionPrint

Method	Errors
transactionPrint	UPOS_E_BUSY
	UPOS_E_ILLEGAL

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Caution

Some semiconductor devices are easily damaged by static electricity. You should turn the printer “OFF”, before you connect or remove the cables on the rear side, in order to guard the printer against the static electricity. If the printer is damaged by the static electricity, you should turn the printer “OFF”.

Revision history

Rev.	Date	Page	Description
1.00	19.07.18	-	New
1.01	25.04.19	1, 6, 16, 18, 22, 40, 62	supported printer added : AP3-3 Removal of the features which not are supported.