

# Epson ePOS SDK for iOS

## User's Manual

**Functionality**

**How to Use**

**API Reference**

**Device Specifications**

**Sample Programs**

**Application Guide**

**Appendix**

## **Precautions**

- Unauthorized duplication, copying, reproduction, or modification of any part or all of this document is strictly prohibited.
- Contents of this manual are subject to change without prior notice. Contact us directly for the most recent information.
- Every effort is made to ensure that the contents of this manual are without error. Please contact us if any errors or other issues are found.
- The previous statement notwithstanding, we will not be liable for any negative impact as a result of use.
- Epson shall not be liable for any damages caused as a result of using this product incorrectly, failing to comply with the content of this document, or having repair or modifications performed by third parties other than Epson or those specified by Epson.
- Epson shall not be liable for any issues as a result of installing optional parts or consumables that are not genuine Epson parts or parts certified by Epson.

## **Trademarks**

EPSON, EXCEED YOUR VISION, and ESC/POS are registered trademarks of Seiko Epson Corporation.

iPhone®, iPod touch®, iPad®, iTunes®, and Xcode® are trademarks of Apple Inc. registered in the US and other countries.

iOS® is a trademark or registered trademark of Cisco in the US and other countries.

Wi-Fi® is a registered trademark of Wi-Fi Alliance®.

The Bluetooth® word mark and logo is a registered trademark of Bluetooth SIG, Inc. Seiko Epson uses these trademarks under the terms of license. Other trademarks and trade names are the property of their respective owners.

QR Code is a registered trademark of Denso Wave Incorporated.

Other company names or product names are trademarks or registered trademarks of their respective companies.

## **ESC/POS® Command System**

Epson has embarked on a global initiative by developing ESC/POS, a unique POS printer command system. ESC/POS contains a wealth of unique commands, many of which are patent-protected. Our system enables the configuration of versatile POS systems with a high level of scalability. In addition to being compatible with most Epson POS printers and displays, the flexibility provided by this unique control system facilitates ease of future upgrades. This functionality and convenience of use are appreciated around the world.

© Seiko Epson Corporation 2015-2019. All rights reserved.

# Safety Precautions

## Meaning of Symbols

The following symbols are used in this manual. Make sure to understand the meaning of these symbols before using the product.



Describes usage precautions that must be observed. Incorrect handling due to the disregard of this information may result in product failure or incorrect operation.



Describes additional explanation or other useful information.

## Usage Limitations

Please use our products in environments and systems designed with consideration to safety and disaster recovery such as fail-safe configurations and redundant designs, for example, if this product is used in applications in which a high level of reliability and safety in functionality and precision is required such as in aircraft, trains, ships, automobiles and other transportation-related applications or in crime prevention equipment and safety equipment.

This product is not intended for use in applications that require extremely high levels of reliability and safety such as in aerospace equipment, trunk-line communications equipment, nuclear power control equipment, and medical equipment. Consider your usage environment and requirements carefully before using this product in such applications.

## About this Manual

### Purpose of this Manual

This manual provides the information necessary to develop applications using Epson ePOS SDK for iOS.

### Organization of this Manual

This manual is organized into the following chapters.

Chapter 1	<a href="#">Functionality</a>
Chapter 2	<a href="#">How to Use</a>
Chapter 3	<a href="#">API Reference</a>
Chapter 4	<a href="#">Device Specifications</a>
Chapter 5	<a href="#">Sample Programs</a>
Chapter 6	<a href="#">Application Guide</a>
Appendix	<a href="#">Open Source Software Licensing</a>

# Contents

■ Safety Precautions .....	3
Meaning of Symbols.....	3
■ Usage Limitations .....	3
■ About this Manual.....	3
Purpose of this Manual.....	3
Organization of this Manual .....	3
■ Contents .....	4

## Functionality ..... 11

■ Application Development in Epson ePOS SDK for iOS .....	11
TM Printer Models .....	12
Customer Display Models.....	12
TM-m30 or TM-T88VI + DM-D30 + barcode scanner model.....	13
POS Terminal Model .....	14
■ Epson ePOS SDK for iOS Development Environment .....	15
■ Application Operating Environment.....	15
Supported printers.....	15
Functions provided in each printer.....	17
Controllable Peripheral Devices.....	19
■ Downloadable Content .....	21
■ Web Content.....	21
■ Limitations .....	22

## How to Use ..... 23

■ Printer Connections .....	23
■ Creating an Epson ePOS SDK for iOS Project .....	23
■ Programming Guide.....	25
Programming Flow .....	25
Effective range of command buffers for setting .....	31
Status .....	32

## API Reference ..... 33

■ List of ePOS SDK API .....	33
Epos2Printer class.....	33
Epos2HybridPrinter class.....	36
Epos2LineDisplay class.....	39
Epos2Keyboard class.....	39
Epos2POSKeyboard class.....	40
Epos2BarcodeScanner class .....	40

Epos2MSR class .....	40
Epos2SimpleSerial class .....	41
Epos2OtherPeripheral class .....	41
Epos2CommBox class .....	41
Common to all classes .....	42
Epos2Discovery class .....	42
Epos2Log class.....	42
Epos2BluetoothConnection class.....	42
EasySelect class .....	42
EasySelectInfo class .....	43

## ■ **Epos2Printer Class .....** **44**

initWithPrinterSeries .....	44
connect .....	46
disconnect.....	49
startMonitor .....	50
stopMonitor.....	51
getStatus.....	52
sendData.....	54
beginTransaction .....	55
endTransaction.....	56
requestPrintJobStatus .....	57
clearCommandBuffer.....	58
addTextAlign .....	59
addLineSpace .....	60
addTextRotate .....	61
addText.....	62
addTextLang.....	63
addTextFont.....	64
addTextSmooth.....	65
addTextSize.....	66
addTextStyle.....	67
addHPosition.....	69
addFeedUnit.....	70
addFeedLine.....	71
addImage .....	72
addLogo.....	76
addBarcode.....	77
addSymbol.....	81
addHLine .....	86
addVLineBegin .....	88
addVLineEnd .....	90
addPageBegin.....	91
addPageEnd .....	92
addPageArea.....	93
addPageDirection.....	95
addPagePosition.....	96
addPageLine.....	98
addPageRectangle .....	100
addCut.....	102
addPulse .....	103
addSound.....	105
addFeedPosition.....	108
addLayout .....	109
addCommand.....	113
getMaintenanceCounter.....	114
resetMaintenanceCounter .....	116
getPrinterSetting .....	118

setPrinterSetting.....	121
forceRecover.....	124
forcePulse.....	125
forceStopSound .....	127
forceCommand.....	128
forceReset.....	129
setStatusChangeEventDelegate .....	130
setReceiveEventDelegate.....	132
interval.....	134

## ■ **Epos2HybridPrinter class..... 135**

initWithLang.....	135
connect .....	136
disconnect.....	139
startMonitor.....	140
stopMonitor.....	141
getStatus.....	142
sendData.....	144
beginTransaction .....	145
endTransaction.....	146
clearCommandBuffer.....	147
selectPaperType .....	148
waitInsertion .....	149
cancelInsertion.....	150
ejectPaper .....	151
readMicrData.....	152
cleanMicrReader .....	153
forceRecover.....	154
forcePulse.....	155
forceCommand.....	157
forceReset.....	158
paperType .....	159
interval.....	160
waitTime .....	161
mode40Cpl .....	162
setStatusChangeEventDelegate .....	163
setReceiveEventDelegate.....	165

## ■ **Epos2LineDisplay Class..... 168**

initWithDisplayModel .....	168
connect .....	169
disconnect.....	172
getStatus.....	173
sendData.....	174
clearCommandBuffer.....	175
addInitialize .....	176
addCreateWindow .....	177
addDestroyWindow.....	179
addSetCurrentWindow.....	180
addClearCurrentWindow.....	181
addSetCursorPosition .....	182
addMoveCursorPosition .....	183
addSetCursorType.....	184
addText.....	185
addReverseText .....	187
addMarqueeText .....	189
addSetBlink.....	191
addSetBrightness .....	192

addShowClock.....	193
addCommand.....	194
setReceiveEventDelegate.....	195
<b>■ Epos2Keyboard class .....</b>	<b>197</b>
init .....	197
connect .....	198
disconnect.....	200
getStatus.....	201
setPrefix.....	202
getPrefix.....	203
setKeyPressEventDelegate.....	204
setReadStringEventDelegate .....	205
<b>■ Epos2POSKeyboard class.....</b>	<b>206</b>
init .....	206
connect .....	207
disconnect.....	209
getStatus.....	210
setKeyPressEventDelegate.....	211
<b>■ Epos2BarcodeScanner Class .....</b>	<b>212</b>
init .....	212
connect .....	213
disconnect.....	215
getStatus.....	216
setScanEventDelegate.....	217
<b>■ Epos2MSR class .....</b>	<b>218</b>
init .....	218
connect .....	219
disconnect.....	221
getStatus.....	222
setDataEventDelegate.....	223
<b>■ Epos2SimpleSerial Class .....</b>	<b>225</b>
init .....	225
connect .....	226
disconnect.....	228
getStatus.....	229
sendCommand.....	230
setReceiveEventDelegate.....	231
<b>■ Epos2OtherPeripheral class .....</b>	<b>232</b>
init .....	232
connect .....	233
disconnect.....	235
getStatus.....	236
sendData.....	237
setReceiveEventDelegate.....	238
<b>■ Epos2CommBox Class .....</b>	<b>239</b>
init .....	239
connect .....	240
disconnect.....	242
getStatus.....	243
getCommHistory .....	244
sendMessage .....	246
setReceiveEventDelegate.....	248

<b>■ Common to all classes .....</b>	<b>249</b>
getAdmin.....	.249
getLocation.....	.250
setConnectionEventDelegate.....	.251
<b>■ Epos2Discovery Class.....</b>	<b>252</b>
start.....	.252
stop.....	.256
<b>■ Epos2Log Class.....</b>	<b>257</b>
setLogSettings.....	.257
SdkVersion .....	.259
<b>■ Epos2BluetoothConnection Class .....</b>	<b>260</b>
connectDevice.....	.260
disconnectDevice.....	.261
<b>■ EasySelect Class .....</b>	<b>262</b>
parseNFC .....	.262
parseQR.....	.264
createQR .....	.265
parseBeacon.....	.266
<b>■ EasySelectInfo Class.....</b>	<b>267</b>
deviceType .....	.267
printerName .....	.267
macAddress .....	.267
target.....	.267
<b>■ Status list .....</b>	<b>268</b>
Error Status and countermeasures.....	.268
Callback Codes and countermeasures.....	.270
Printer Status and countermeasures .....	.273
<b>■ Key code list .....</b>	<b>277</b>

---

<b>Device Specifications .....</b>	<b>279</b>
<b>■ List of Supported Classes .....</b>	<b>279</b>
<b>■ List of Supported APIs.....</b>	<b>282</b>
Epos2Printer Class .....	.282
Epos2LineDisplay Class .....	.290
Common to all classes .....	.294
EasySelect Class.....	.296
<b>■ Printer-specific Support Information .....</b>	<b>298</b>
TM-m10.....	.298
TM-m30.....	.300
TM-T20.....	.303
TM-T20II.....	.305
TM-T20III .....	.308
TM-T20IIIIL.....	.310
TM-T20X.....	.312
TM-T60.....	.314
TM-T70.....	.316
TM-T70II.....	.318

TM-T81II.....	320
TM-T81III .....	322
TM-T82.....	324
TM-T82II.....	326
TM-T82III .....	328
TM-T82IIIL.....	330
TM-T82X .....	332
TM-T83III .....	334
TM-T88V.....	336
TM-T88VI .....	338
TM-T100 .....	341
TM-U220 .....	343
TM-U330 .....	344
TM-P20 .....	346
TM-P60 (Receipt).....	350
TM-P60 (Peeler) .....	352
TM-P60II (Receipt) .....	355
TM-P60II (Peeler) .....	358
TM-P80 .....	361
TM-H6000V .....	364
TM-T20II-i.....	366
TM-T70-i .....	368
TM-T82II-i.....	370
TM-T83II-i.....	372
TM-T88V-i.....	374
TM-T88VI-iHUB.....	376
TM-U220-i.....	379
TM-T70II-DT.....	380
TM-T70II-DT2 .....	382
TM-T88V-DT .....	384
TM-T88VI-DT2.....	386
TM-H6000IV-DT .....	388
TM-T88IV .....	390
TM-T90.....	392
TM-L90.....	394
TM-H6000IV .....	396
<b>■ Usage restriction by firmware version .....</b>	<b>398</b>
TM-i Series/TM-DT Series .....	398
TM-m30.....	399
TM-T88VI .....	399

---

## **Sample Programs .....** **400**

<b>■ Functionality .....</b>	<b>400</b>
ePOS2Printer .....	400
ePOS2 Hybrid Printer .....	401
ePOS2Discovery .....	401
ePOS2LineDisplay .....	401
ePOS2Keyboard .....	402
ePOS2POSKeyboard .....	402
ePOS2BarcodeScanner.....	402
ePOS2MSR.....	402
ePOS2SimpleSerial.....	403
ePOS2OtherPeripheral .....	403

ePOS2CommBox.....	403
ePOS2EasySelection.....	403
ePOS2_POSAppForTerminalModel.....	404
<b>■ Use Environment.....</b>	<b>405</b>
<b>■ Installation Procedure .....</b>	<b>405</b>

---

## **Application Guide.....406**

<b>■ To search printers.....</b>	<b>406</b>
<b>■ To monitor continuously .....</b>	<b>407</b>
<b>■ To use the same printer from multiple mobile devices .....</b>	<b>409</b>
<b>■ To specify a transaction.....</b>	<b>410</b>
<b>■ To reconnect to the network automatically .....</b>	<b>411</b>
<b>■ To transmit and receive the data between applications .....</b>	<b>412</b>
<b>■ To perform forward printing .....</b>	<b>414</b>
<b>■ To select a printer using its QR code.....</b>	<b>416</b>
<b>■ To select a printer using its NFC tag .....</b>	<b>418</b>
<b>■ To perform check process.....</b>	<b>420</b>
<b>■ To control multiple peripheral devices .....</b>	<b>422</b>

---

## **Appendix .....423**

<b>■ Open Source Software Licensing .....</b>	<b>423</b>
Sample Programs.....	423
Libraries.....	423

# Functionality

Epson ePOS SDK for iOS is an SDK for developing iOS applications. Using Epson ePOS SDK for iOS enables the use of simple code to control TM printers. Also, in some TM printers, peripheral devices such as the customer display and barcode scanner that are connected to the printer, and slave printers that are connected over a network can be controlled. In addition, application software using unique functions such as the spooler function and Communication Box, etc. can also be developed.

In this manual, printers are classified as follows.

Type	Description
TM Printers	Collective name for the following receipt printer models: <ul style="list-style-type: none"><li>• Single-function models</li><li>• Mobile models</li><li>• Hybrid models</li><li>• TM-i Series</li><li>• TM-DT Series</li></ul>
Slave Printers	A collective name for TM printers connected over a network that are controlled from a smart device via the master TM printer.

## Application Development in Epson ePOS SDK for iOS

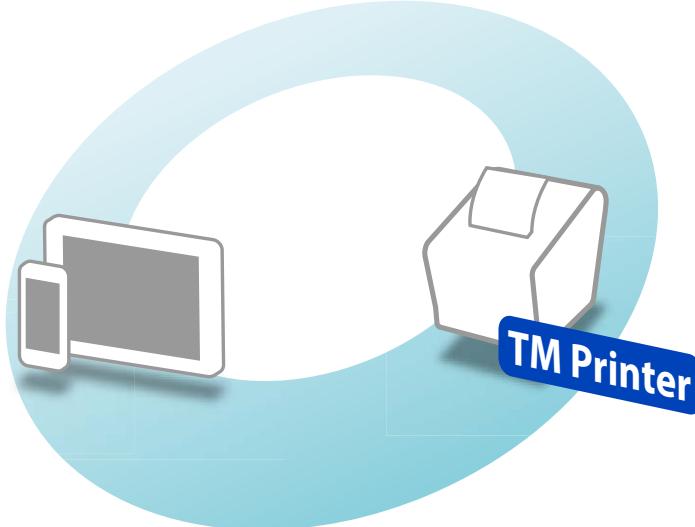
The following section describes the system configurations of applications developed in Epson ePOS SDK for iOS. Refer to the Technical Reference Guide of each printer for information on system configuration methods.

## TM Printer Models

This is a system in which a smart device and TM printer are connected through communication.

A connection method (*Bluetooth/Wi-Fi/Ethernet*) conforming to the specifications of your smart device and TM printer can be selected.

Multiple TM printers can be controlled via a Wi-Fi/Ethernet connection.



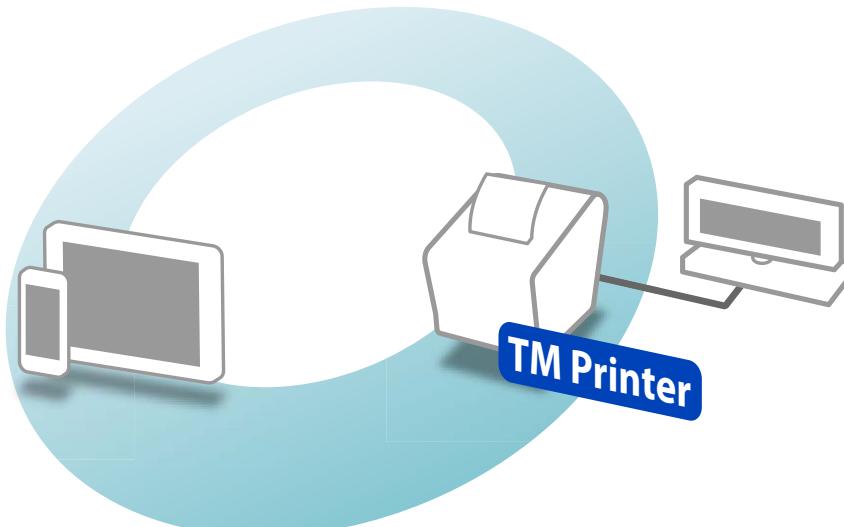
Epson must apply with Apple in advance to register applications using *Bluetooth* communication in the App Store. Use the following URL to apply for registration of each application into the App Store.  
<https://c4b.epson-biz.com/ais/E/>

## Customer Display Models

This is a system in which the TM printer and customer display are controlled from a smart device.

The customer display is connected to the TM printer, and the smart device and TM printer are connected through communication.

A connection method (*Bluetooth/Wi-Fi/Ethernet*) conforming to the specifications of your smart device and TM printer can be selected.

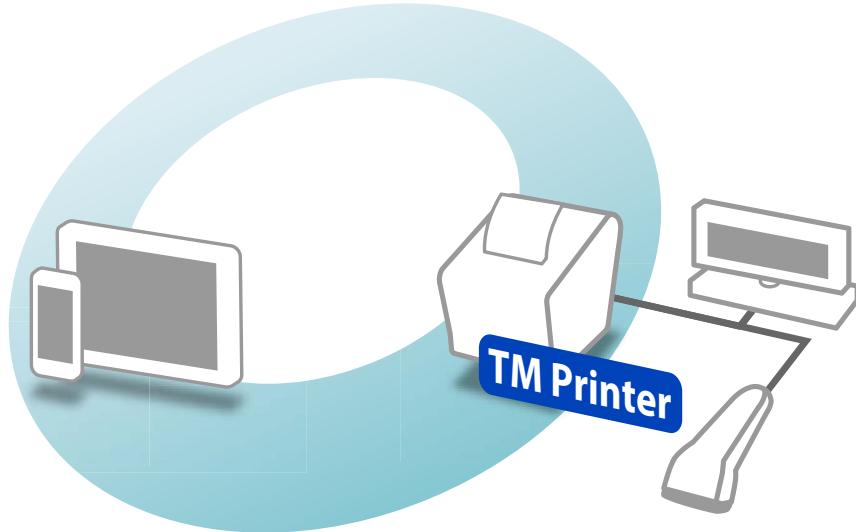


## TM-m30 or TM-T88VI + DM-D30 + barcode scanner model

This is a system in which the TM-m30 or TM-T88VI and DM-D30, as well as the barcode scanner are controlled from a smart device.

The DM-D30 and the barcode scanner are connected to the TM-m30 or TM-T88VI, and the smart device and TM-m30 or TM-T88VI are connected through communication.

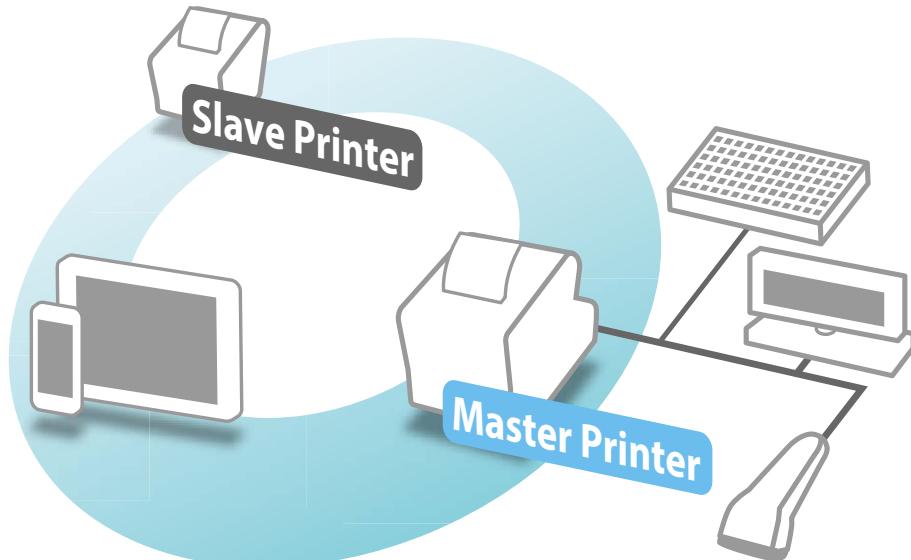
A connection method (*Bluetooth/Wi-Fi/Ethernet*) conforming to the specifications of your smart device and the TM-m30 or TM-T88VI can be selected.



- The ePOS-Device settings of the TM printer must be set to "Enable."
  - \* The ePOS-Device settings are made from EpsonNet Config (Web version) of the TM-m30.
  - \* The TM-T88VI ePOS-Device settings are carried out in TM-T88VI Utility.
- A combination of TM-m30 or TM-T88VI + barcode scanner can also be used.

## POS Terminal Model

This is a system in which a smart device and the TM printer (master) that acts as the POS terminal are connected through Wi-Fi/Ethernet network communication, and operation is performed by connecting multiple peripheral devices such as slave printers and customer display, etc. to the master printer.



In addition to Epson's peripheral devices, the POS terminal model can control various peripheral devices from the device control program and device control script originally developed by Epson.

Since the software to be loaded and the version of the software differ depending on the TM printer that acts as the POS terminal, the peripheral devices that can be controlled are also different.

For details on controllable peripheral devices, refer to the Technical Reference Guide of the printer.

The device control programs are implemented in TM-DT series (TM-DT software version 4.0 or later).

Refer to TM-DT Series Peripheral Device Control Guide for information on the device control programs and device control scripts.

# Epson ePOS SDK for iOS Development Environment

Use the latest version of Xcode for the development of applications using the Epson ePOS SDK for iOS.



Epson ePOS SDK for iOS is compatible with Bitcode.

## Application Operating Environment

This section describes the operating environment for applications developed using the Epson ePOS SDK for iOS. For the most recent information on applicable smart devices, refer to the README.en.txt file contained in the "Epson ePOS SDK for iOS" package.



The NFC function can be used with devices that can read the NFC NDEF tags by CoreNFC of iOS11 or later.

### Supported printers

The following list of printers can be controlled from the applications.



Usable interfaces vary depending on the specific TM printer. Refer to the Technical Reference Guide of each printer for more information.

#### ***Single-function models***

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> TM-m10     | <input type="checkbox"/> TM-T82     |
| <input type="checkbox"/> TM-m30     | <input type="checkbox"/> TM-T82II   |
| <input type="checkbox"/> TM-T20     | <input type="checkbox"/> TM-T82III  |
| <input type="checkbox"/> TM-T20II   | <input type="checkbox"/> TM-T82IIIL |
| <input type="checkbox"/> TM-T20III  | <input type="checkbox"/> TM-T82X    |
| <input type="checkbox"/> TM-T20IIIL | <input type="checkbox"/> TM-T83III  |
| <input type="checkbox"/> TM-T20X    | <input type="checkbox"/> TM-T88V    |
| <input type="checkbox"/> TM-T60     | <input type="checkbox"/> TM-T88VI   |
| <input type="checkbox"/> TM-T70     | <input type="checkbox"/> TM-T100    |
| <input type="checkbox"/> TM-T70II   | <input type="checkbox"/> TM-U220    |
| <input type="checkbox"/> TM-T81II   | <input type="checkbox"/> TM-U330    |
| <input type="checkbox"/> TM-T81III  |                                     |

---

#### ***Mobile models***

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| <input type="checkbox"/> TM-P20 | <input type="checkbox"/> TM-P60II |
| <input type="checkbox"/> TM-P60 | <input type="checkbox"/> TM-P80   |

---

**Hybrid models**

- TM-H6000V
- 

**TM-i Series**

- TM-T20II-i
  - TM-T70-i (TM-i firmware Ver. 4.0 or later)
  - TM-T82II-i
  - TM-T83II-i
  - TM-T88V-i (TM-i firmware Ver. 4.0 or later)
  - TM-T88VI-iHUB
  - TM-U220-i
- 

**TM-DT Series**

- TM-T70II-DT
- TM-T70II-DT2
- TM-T88V-DT
- TM-T88VI-DT2
- TM-H6000IV-DT

## Functions provided in each printer

Among the functions provided by Epson ePOS SDK for iOS, those that can be used differ according to the printer. Refer to the list below.

	SSL/TLS communication <sup>*1</sup>	Ringing control of built-in buzzer	Ringing control of optional external buzzer	Printing by multiple interfaces	Control of slave printers	Spooler/Offset printing	Communication Box	Control of peripheral devices <sup>*2</sup>	Simple selection using NFC tag	Simple selection using QR code	Simple selection using iBeacon	Bluetooth pairing
TM-m10	-	-	✓	✓	-	-	-	-	✓	✓	-	✓ <sup>*6</sup>
TM-m30	-	-	✓	✓ <sup>*5</sup>	-	-	-	✓	✓	✓	-	✓ <sup>*6</sup>
TM-T20	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-T20II	-	-	✓	-	-	-	-	-	✓	✓	-	✓ <sup>*6</sup>
TM-T20III	-	-	✓	-	-	-	-	-	✓	✓	-	✓ <sup>*6</sup>
TM-T20IIIL	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-T20X	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-T60	-	-	-	-	-	-	-	-	✓	✓	-	-
TM-T70	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-T70II	-	✓ <sup>*4</sup>	✓	-	-	-	-	-	✓	✓	-	✓ <sup>*6</sup>
TM-T81II	-	-	-	-	-	-	-	-	✓	✓	-	-
TM-T81III	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-T82	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-T82II	-	✓ <sup>*4</sup>	✓	-	-	-	-	-	✓	✓	-	-
TM-T82III	-	✓ <sup>*4</sup>	✓	-	-	-	-	-	✓	✓	-	✓
TM-T82IIIL	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-T82X	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-T83III	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-T88V	-	✓ <sup>*4</sup>	✓	-	-	-	-	-	✓	✓	-	✓ <sup>*6</sup>
TM-T88VI	✓ <sup>*3</sup>	✓ <sup>*4</sup>	✓	✓ <sup>*5</sup>	-	-	-	✓	✓	✓	✓	✓ <sup>*6</sup>
TM-T100	-	-	✓	-	-	-	-	-	✓	✓	-	-
TM-U220	-	-	-	-	-	-	-	-	✓	✓	-	-

	SSL/TLS communication <sup>*1</sup>	Ringing control of built-in buzzer	Ringing control of optional external buzzer	Printing by multiple interfaces	Control of slave printers	Spooler/Offset printing	Communication Box	Control of peripheral devices <sup>*2</sup>	Simple selection using NFC tag	Simple selection using QR code	Simple selection using iBeacon	Bluetooth pairing
TM-U330	-	-	-	-	-	-	-	-	-	-	-	-
TM-P20	-	✓	-	-	-	-	-	-	✓	✓	-	✓ <sup>*6</sup>
TM-P60	-	-	-	-	-	-	-	-	-	✓	-	-
TM-P60II	-	✓	-	-	-	-	-	-	✓	✓	-	✓ <sup>*6</sup>
TM-P80	-	✓	-	-	-	-	-	-	✓	✓	-	✓ <sup>*6</sup>
TM-H6000V	✓	-	-	✓	-	-	-	✓	✓	✓	-	✓ <sup>*6</sup>
TM-T20II-i	✓	-	✓	-	✓	✓	✓	✓	-	-	-	-
TM-T70-i	✓	-	-	-	✓	✓	✓	✓	-	-	-	-
TM-T82II-i	✓	✓ <sup>*4</sup>	✓	-	✓	✓	✓	✓	-	-	-	-
TM-T83II-i	✓	✓ <sup>*4</sup>	✓	-	✓	✓	✓	✓	-	-	-	-
TM-T88V-i	✓	-	✓	-	✓	✓	✓	✓	-	-	-	-
TM-T88VI-iHUB	✓	✓ <sup>*4</sup>	✓	-	✓	✓	✓	✓	✓	-	✓	-
TM-U220-i	✓	-	✓	-	✓	✓	✓	✓	-	-	-	-
TM-T70II-DT	✓	-	✓	-	✓	✓	✓	✓	-	-	-	-
TM-T70II-DT2	✓	-	✓	-	✓	✓	✓	✓	-	-	-	-
TM-T88V-DT	✓	-	✓	-	✓	✓	✓	✓	-	-	-	-
TM-T88VI-DT2	✓	-	✓	-	✓	✓	✓	✓	-	-	-	-
TM-H6000IV-DT	✓	-	-	-	✓	✓	✓	✓	-	-	-	-

\*1: To communicate with the printer using SSL/TLS, select "TCP/S" as the connection type in the connect API.

\*2: The peripheral devices that can be used differ according to the printer. Refer to the Technical Reference Guide of each printer.

\*3: Cannot be used in the system configuration of the customer display + barcode scanner model.

\*4: Supports ringing control by the drawer kick command.

\*5: Cannot be used in a system configuration with TM printer + barcode scanner.

\*6: Supported by **Bluetooth** models.

## Controllable Peripheral Devices

Control of the following peripheral devices is supported in Epson ePOS SDK for iOS.



- Controllable devices vary by model of printer.  
Refer to [Functions provided in each printer](#) or the Technical Reference Guide of each printer.
- By developing a device control program, a TM-DT series printer can control peripheral devices other than those introduced here.  
Refer to TM-DT Series Peripheral Device Control Guide for information on the development.

### ***Slave printer***

Wi-Fi enabled models of the following TM printers

- |                                            |                                 |
|--------------------------------------------|---------------------------------|
| <input type="checkbox"/> TM-P20            | <input type="checkbox"/> TM-P80 |
| <input type="checkbox"/> TM-P60II (Peeler) |                                 |

The following TM printers that are equipped with a Wi-Fi/Ethernet interface

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| <input type="checkbox"/> TM-T20   | <input type="checkbox"/> TM-T88V    |
| <input type="checkbox"/> TM-T20II | <input type="checkbox"/> TM-T88VI   |
| <input type="checkbox"/> TM-T70   | <input type="checkbox"/> TM-T90     |
| <input type="checkbox"/> TM-T70II | <input type="checkbox"/> TM-L90     |
| <input type="checkbox"/> TM-T82II | <input type="checkbox"/> TM-U220    |
| <input type="checkbox"/> TM-T83II | <input type="checkbox"/> TM-H6000IV |
| <input type="checkbox"/> TM-T88IV |                                     |

The following TM-i Series/TM-DT Series

- |                                                                        |                                                                          |
|------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <input type="checkbox"/> TM-T20II-i                                    | <input type="checkbox"/> TM-T88V-i (TM-i firmware Ver. 4.0 or later)     |
| <input type="checkbox"/> TM-T70-i (TM-i firmware Ver. 4.0 or later)    | <input type="checkbox"/> TM-T88V-DT (TM-DT software Ver.4.0 or later)    |
| <input type="checkbox"/> TM-T70II-DT (TM-DT software Ver.4.0 or later) | <input type="checkbox"/> TM-U220-i                                       |
| <input type="checkbox"/> TM-T82II-i                                    | <input type="checkbox"/> TM-H6000IV-DT (TM-DT software Ver.4.0 or later) |
| <input type="checkbox"/> TM-T83II-i                                    |                                                                          |

### ***Customer display***

- |                                  |                                  |
|----------------------------------|----------------------------------|
| <input type="checkbox"/> DM-D30  | <input type="checkbox"/> DM-D210 |
| <input type="checkbox"/> DM-D110 |                                  |

---

**Peripheral Devices that can be Controlled by Device Control Programs**

Peripheral devices conforming to the OPOS specifications can be controlled using the device control programs that are supported by TM-DT series (TM-DT software version 4.0 or later).

In the categories described below, peripheral devices having a driver that runs in combination with OPOS Common Control Object (OPOS CCO) 1.14.001 can be controlled.

- MSR
  - POS keyboard
  - Barcode scanner
- 

**Peripheral Devices that can be Controlled by Device Control Scripts**

The peripheral devices listed below can be controlled from the device control scripts of the TM-i series/TM-DT series.

- Key input device
  - MSR (Hitachi-Omron Terminal Solutions, Corp.)
  - Keyboard (Standard HID device)
  - Barcode scanner (Standard HID device)
- Serial communication device

# Downloadable Content

Epson ePOS SDK for iOS packages include the following files.

Filename	Description
ePOS2.h	This is a header file that includes the class definition and error value/device type constant definition.
libepos2.a	This is a library for function execution. (Compatible with armv6, armv7, armv7s, arm64, i386, x86_64)
ePOSEasySelect.h	This is a header file for simple printer selection.
libeposeeasyselect.a	This is a library for the simple printer selection function.
OPOS_CCOs_1.14.001.msi	This is the OPOS CCO installer package.
ePOS2_Sample_iOS.zip	These files are sample programs.
DeviceControlProgram_Sample.zip	This file contains sample device control programs.
README.jp.txt	This is the Japanese README file.
README.en.txt	This is the English README file.
EULA.jp.txt	This is the Japanese software license agreement.
EULA.en.txt	This is the English software license agreement.
ePOS_SDK_iOS_um_ja_revx.pdf	This is the Japanese user manual.
ePOS_SDK_iOS_um_en_revx.pdf	This is the English user manual.
TM-DT_Peripherals_ja_revx.pdf	This is the Japanese TM-DT Series Peripheral Device Control Guide. This guide describes how to control peripheral devices with TM-DT series.
TM-DT_Peripherals_en_revx.pdf	This is the English TM-DT Series Peripheral Device Control Guide.
ePOS_SDK_iOS_Migration_Guide_ja_revx.pdf	This is the Japanese migration guide. This guide describes the procedure to migrate from the ePOS-Print SDK or ePOS-Device SDK.
ePOS_SDK_iOS_Migration_Guide_en_revx.pdf	This is the English migration guide.

# Web Content

Online reference is publicly available from the following website.

<https://reference.epson-biz.com/pos/reference/>

## Limitations

- Set the barcode reader suffix (delimiter) to CR (carriage return code). Data cannot be obtained using any other settings.
- When using 2D barcode readers, Japanese and other multi-byte characters cannot be read correctly. However, when combining a TM-m30/TM-T88VI and 2D barcode reader to read a QR code, multi-byte characters encoded with UTF-8 can be obtained correctly.
- Control codes cannot be read from 2D barcode data if it contains ASCII control codes (0x00 through 0x1F).
- The number of device ports that can be simultaneously opened in the same application is 16 ports.
- Communication will be disrupted if a terminal enters sleep mode while communicating with a printer via a *Bluetooth* connection.
- When connecting via *Bluetooth* and sending print data to devices that cannot print, the print data may be deleted depending on the specifications of the particular iOS version. Devices cannot print under the following circumstances.
  - The roll-paper cover is open.
  - The printer is out of paper.
  - Waiting for printed labels to be separated.

# How to Use

This section describes how to create Epson ePOS SDK for iOS projects and some basic programming methods used in the Epson ePOS SDK for iOS.

## Printer Connections

Connect smart devices and printers using a connection method that matches the system you want to create. Refer to the Technical Reference Guide of each printer for more information.

## Creating an Epson ePOS SDK for iOS Project



You can get Xcode from the following URL.

<https://developer.apple.com/>

- 1 Create a new project in Xcode.
- 2 Allocate the following provided Objective-C headers to the desired layer of the project in the Xcode **Project Navigator**.
  - ePOS2.h
  - ePOSEasySelect.h
- 3 Drag the following provided static libraries to the desired layer of the project in the Xcode **Project Navigator**.
  - libepos2.a
  - libposeeasyselect.a
- 4 Select the project files in the root location from the **Project Navigator**.
- 5 Select **Build Phase** from **Targets**.
- 6 Expand **Link Binary With Libraries** and the click "+".
- 7 Select **libxml2.2.\*** and **ExternalAccessory.framework** and then click **Add**.



Import the following .frameworks according to the application functions to be developed.

- iBeacon function: CoreLocation.framework
- NFCfunction: CoreNFC.framework

- 8 Describe the import definitions for the Objective-C headers in the \*.m source files for the application you want to use. Refer to the following documents.

```
#import "ePOS2.h"
#import "ePOSEasySelect.h"
```

## 9 When the *Bluetooth* is used, set the protocol name.

Set the protocol name according to the following procedure:

1. In Project Navigator, select \*.plist. (The file name will be Project name-info.)
2. In the pop-up menu, select Add Row.
3. Select "Supported external accessory protocols".
4. Expand the items added in Step 3.
5. Enter com.epson.escpos as the Value for Item 0.

Key	Type	Value
Localization native development region	String	en
Bundle display name	String	\$(PRODUCT_NAME)
Executable file	String	\$(EXECUTABLE_NAME)
Bundle identifier	String	test.\$(PRODUCT_NAME).rfc1034identifier
InfoDictionary version	String	6.0
Bundle name	String	\$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle versions string, short	String	1.0
Bundle creator OS Type code	String	????
Bundle version	String	1.0
Application requires iPhone environment	Boolean	YES
► Required device capabilities	Array	(1 item)
► Supported interface orientations	Array	(3 items)
▼ Supported external accessory protocols	Array	(1 item)
Item 0	String	com.epson.escpos

# Programming Guide

This section describes some of the basic programming methods used in the Epson ePOS SDK for iOS.

## Programming Flow

This section describes a flow to create a program for controlling printers or peripheral devices respectively.

- [Controlling Printers](#)
- [Controlling Customer Displays](#)
- [Controlling Keyboards and Barcode Scanners](#)

### **Controlling Printers**

The method of controlling the TM printer and slave printer, and programming receipt printing is described below.

#### 1. Printer selection (class initialization)



#### 2. Creating print data (data buffering)



#### 3. Sending print data (connection with the devices/communication/printing/disconnection)

### **Printer selection (class initialization)**

Initialize the Epos2Printer class and select the printer to control.

```
Epos2Printer *printer = nil;
printer = [[Epos2Printer alloc] initWithPrinterSeries:EPOS2_TM_T88
lang:EPOS2_MODEL_ANK];
if (printer == nil) {
    //Displays error messages
}
```

Register the callback method for response document receive events.

```
[printer setReceiveEventDelegate:self];
```

### **Creating print data (data buffering)**

Use add\* API commands in the Epos2Printer class to create print data.

```
int result = EPOS2_SUCCESS;
result = [printer addTextAlign:EPOS2_ALIGN_CENTER];
result = [printer addText:@"Hello World"];
if (result != EPOS2_SUCCESS) {
    //Displays error messages
}
```

## **Sending print data (connection with the devices/communication/printing/disconnection)**

Connect to the printer to which the created print data will be sent.

```
int result = EPOS2_SUCCESS;
result = [printer connect:@"TCP:192:168.192.168", timeout:EPOS2_PARAM_DEFAULT];
result = [printer beginTransaction];
if (result != EPOS2_SUCCESS) {
    //Displays error messages
}
```

Run the print process and retrieve the print result in the callback. Do not add an API command in the callback.

```
Epos2PrinterStatusInfo *status = nil;
status = [printer getStatus];
if (status.getConnection && status.getOnline) {
    result = [printer sendData:EPOS2_PARAM_DEFAULT];
} else{
    //Displays error messages
    //Abort process
}

- (void)onPtrReceive:(Epos2Printer *)printerObj code:(int)code
status:(Epos2PrinterStatusInfo *)status printJobId:(NSString *)printJobId
{
if (code == EPOS2_CODE_SUCCESS) {
    //Displays successful print messages
}
else {
    //Displays error messages
}
    //Abort process
}
```



When an error occurs, the print data that has been created is not erased until the command buffer is cleared. The print data can be used for re-printing in cases such as when the error processing ends.

Disconnect from the printer.

```
int result = EPOS2_SUCCESS;
result = [printer endTransaction];
result = [printer disconnect];
```

Clear the command buffer and terminate the printer control.

```
[printer clearCommandBuffer];
[printer setReceiveEventDelegate:nil];
printer = nil;
```

## **Controlling Customer Displays**

This section describes the programming methods for controlling customer displays and displaying text on displays.

### **1. Device selection (class initialization)**



### **2. Creating display data (data buffering)**



### **3. Sending display data (connection with the devices/communication/printing/disconnection)**

#### **Device selection (class initialization)**

Initialize the Epos2LineDisplay class and connect to the customer display.

```
Epos2Display *display = nil;
display = [[Epos2Display alloc] initWithDisplayModel:EPOS2_DM_D30]
if (display == nil) {
    //Displays error messages
}
```

Register the callback method for response document receive events.

```
[display setReceiveEventDelegate:self];
```

#### **Creating display data (data buffering)**

Use add\* API commands in the Epos2LineDisplay class to create display data.

In the following example, data is created to display "Hello World".

```
int result = EPOS2_SUCCESS;
result = [display addText:@"Hello World"];
if (result != EPOS2_SUCCESS) {
    //Displays error messages
}
```

#### **Sending display data (connection with the devices/communication/printing/disconnection)**

Connect the customer display to which created display data will be sent.

```
int result = EPOS2_SUCCESS;
result = [display connect:@"TCP:192.168.192.168", timeout:EPOS2_PARAM_DEFAULT];
if (result != EPOS2_SUCCESS) {
    //Displays error messages
}
```

Run the display process and retrieve the display result.

```
Epos2DisplayStatusInfo *status = nil;
status = [display getStatus];
if (status.connection && status.online) {
    result = [display sendData];
} else{
    //Displays error messages
    //Abort process
}

- (void) onDispReceive:(Epos2LineDisplay *)displayObj code:(int)code
{
if (code == EPOS2_CODE_SUCCESS) {
    //Displays successful print messages
}
else {
    //Displays error messages
}
    //Abort process
}
```

Disconnect from the customer display.

```
int result = EPOS2_SUCCESS;
result = [display disconnect];
if (result != EPOS2_CODE_SUCCESS) {
    //Displays error messages
}
```

Clear the command buffer and terminate the customer display control.

```
[display clearCommandBuffer];
[display setReceiveEventDelegate:nil];
display = nil;
```

## Controlling Keyboards and Barcode Scanners

This section describes how to create a program that enables receiving data input from keyboards and barcode scanners.

The following section describes the programming flow for controlling keyboards.

### 1. Connecting to the device



### 2. Receiving data



### 3. Disconnecting from the device

#### Connecting to the device

Initialize the Epos2Keyboard class, connect the keyboard, and then register the callback method that will receive input data.

```
//Initialization process
EPOS2Keyboard keyboard_ = [[EPOS2Keyboard alloc] init];

if (keyboard_ == nil) {
    //Displays error messages
}

[keyboard_ setReadStringEventDelegate:self];

//Connection process
int result = EPOS2_SUCCESS;

result = [keyboard_ connect:@"TCP:192.168.192.168[local_keyboard]"
timeout:EPOS2_PARAM_DEFAULT];
if (result != EPOS2_SUCCESS) {

    //Displays error messages
    //Abort process
}
```

#### Receiving data

Register the callback method for key press events.

```
//Receive process
- (void)onKbdKeyPress:(EPOS2Keyboard *)keyboardObj keyCode:(int)keyCode ascii:(NSString *)
*
{
    switch (keyCode) {
        case EPOS2_VK_RETURN:
            //Process executed when the Return key is pressed
            break;

        default:
            //Process executed when the any key is pressed
            break;
    }
}
```

### ***Disconnecting from the device***

Disrupt communication to terminate the reception of input data from the keyboard.

```
//Abort process
int result = [keyboard_ disconnect];

if (result != EPOS2_SUCCESS) {
    //Error message
}

//Termination process
[keyboard_ setReadStringEventDelegate:nil];

keyboard_ = nil;
```

## Effective range of command buffers for setting

The valid range of add\* of the Epos2Printer class used for setting depends on the print method.

### Receipt

Effective after setting add\* until [sendData](#) is executed.

The configured values are initialized every time [sendData](#) is executed. See below.

```
[printer addText:@"Hello World!\n"];
[printer addTextFont:EPOS2_FONT_B];
[printer addText:@"Hello World!\n"];
[printer addText:@"Hello World!\n"];
[printer sendData:EPOS2_PARAM_DEFAULT];
[printer clearCommandBuffer];
[printer addText:@"Hello World!\n"];
[printer sendData:EPOS2_PARAM_DEFAULT];
[printer clearCommandBuffer];
```

Red letters: Font A

Green letters: Font B

### Slip, Endorsement, Validation

Effective after setting add\* until the paper is ejected.

The configured values are initialized each time the following APIs are executed:

- [waitInsertion](#)
- [readMicrData](#)
- [sendData](#) (receipt printing)

See below.

```
[HybridPrinter selectPaperType:EPOS2_PAPER_TYPE_SLIP];
[HybridPrinter waitInsertion:EPOS2_PARAM_DEFAULT];
[HybridPrinter addText:@"Hello World!\n"];
[HybridPrinter addTextFont:EPOS2_FONT_B];
[HybridPrinter addText:@"Hello World!\n"];
[HybridPrinter addText:@"Hello World!\n"];
[HybridPrinter sendData:EPOS2_PARAM_DEFAULT];
[HybridPrinter clearCommandBuffer];
[HybridPrinter addText:@"Hello World!\n"];
[HybridPrinter sendData:EPOS2_PARAM_DEFAULT];
[HybridPrinter clearCommandBuffer];
[HybridPrinter ejectPaper];
[HybridPrinter selectPaperType:EPOS2_PAPER_TYPE_RECEIPT];
[HybridPrinter addText:@"Hello World!\n"];
[HybridPrinter sendData:EPOS2_PARAM_DEFAULT];
```

Red letters: Font A

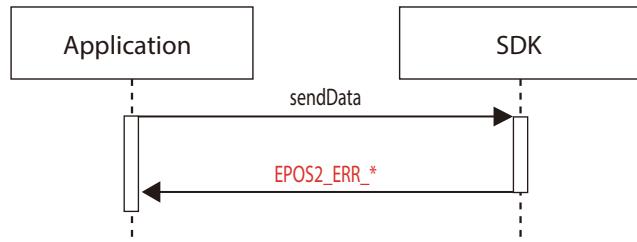
Green letters: Font B

## Status

The following statuses are defined in the Epson ePOS SDK for iOS.

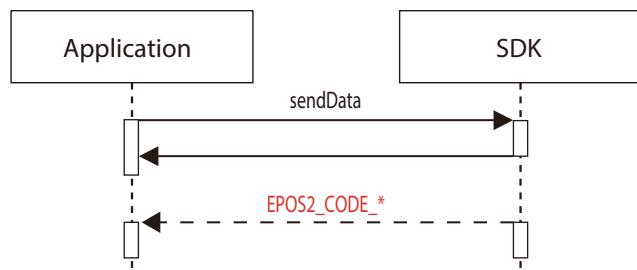
Error status

Indicates a result of sending data to devices in each class. The result is sent immediately as an exception of API. Refer to [Error Status and countermeasures](#) for more information.



Callback code

Indicates a device's processing result for a `sendData`. Notified in a print completion event (`onPtrReceive` / `onDispReceive`). Refer to [Callback Codes and countermeasures](#) for more information.



Printer status

Indicates the status of printers when sending print data. The printer status is retrieved when executing `sendData`. Refer to [Printer Status and countermeasures](#) for more information.

# API Reference

This chapter describes the APIs provided by Epson ePOS SDK for iOS.

## List of ePOS SDK API

Epson ePOS SDK for iOS provides the following classes:



- Available APIs and parameters vary by printer model and peripheral device.  
Refer to [List of Supported Classes](#).
- For the list of APIs of each class, and the APIs supported by each printer, refer to [List of Supported APIs](#).

- [Epos2Printer class](#)
- [Epos2HybridPrinter class](#)
- [Epos2LineDisplay class](#)
- [Epos2Keyboard class](#)
- [Epos2POSKeyboard class](#)
- [Epos2BarcodeScanner class](#)
- [Epos2MSR class](#)
- [Epos2SimpleSerial class](#)
- [Epos2OtherPeripheral class](#)
- [Epos2CommBox class](#)
- [Common to all classes](#)
- [Epos2Discovery class](#)
- [Epos2Log class](#)
- [Epos2BluetoothConnection class](#)
- [EasySelect class](#)
- [EasySelectInfo class](#)

### Epos2Printer class

Controls printing by the printer.

Two print modes are available; standard and page modes.

- Standard mode

Prints line by line. Line spacing is automatically adjusted according to character size, image size, and barcode height. Suitable for printing receipts whose print length varies by print content.

- Page mode

Prints page by page. Prints characters, images, and/or barcodes on a single page that is defined as a print area.

To print in the page mode, use [addPageBegin](#) and [addPageEnd](#) to start and end the page mode process, respectively.

API		Description	Standard mode	Page mode
Initialization	<a href="#">initWithPrinterSeries</a>	Initializes the Epos2Printer class.	-	-
Communication path	<a href="#">connect</a>	Connects to the printer.	-	-
	<a href="#">disconnect</a>	Disconnects from the printer.	-	-
Status monitor	<a href="#">startMonitor</a>	Enables status event notification.	✓	✓
	<a href="#">stopMonitor</a>	Disables status event notification.	✓	✓
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected printer.	✓	✓
Transmission	<a href="#">sendData</a>	Sends a command to the printer.	✓	✓
Transaction	<a href="#">beginTransaction</a>	Starts a transaction.	✓	✓
	<a href="#">endTransaction</a>	Ends a transaction.	✓	✓
Print job	<a href="#">requestPrintJobStatus</a>	Acquires the print result.	✓	✓
Buffer clear	<a href="#">clearCommandBuffer</a>	Clears the command buffer.	✓	✓
Text	<a href="#">addTextAlign</a>	Adds text alignment setting to the command buffer.	✓	-
	<a href="#">addLineSpace</a>	Adds line spacing setting to the command buffer.	✓	✓
	<a href="#">addTextRotate</a>	Adds text rotation setting to the command buffer.	✓	-
	<a href="#">addText</a>	Adds text to print to the command buffer.	✓	✓
	<a href="#">addTextLang</a>	Adds language setting to the command buffer.	✓	✓
	<a href="#">addTextFont</a>	Adds character font setting to the command buffer.	✓	✓
	<a href="#">addTextSmooth</a>	Adds character smoothing setting to the command buffer.	✓	✓
	<a href="#">addTextSize</a>	Adds character scaling factor setting to the command buffer.	✓	✓
	<a href="#">addTextStyle</a>	Adds character style setting to the command buffer.	✓	✓
Paper feed	<a href="#">addHPosition</a>	Adds character print position setting to the command buffer.	✓	✓
	<a href="#">addFeedUnit</a>	Adds paper-feed setting in dots to the command buffer.	✓	✓
	<a href="#">addFeedLine</a>	Adds paper-feed setting in lines to the command buffer.	✓	✓

API		Description	Standard mode	Page mode
Graphics	<a href="#">addImage</a>	Adds a raster image print command to the command buffer.	✓	✓
	<a href="#">addLogo</a>	Adds a NV logo print command to the command buffer.	✓	✓
Barcode	<a href="#">addBarcode</a>	Adds a barcode print command to the command buffer.	✓	✓
	<a href="#">addSymbol</a>	Adds a 2D symbol print command to the command buffer.	✓	✓
Ruled line	<a href="#">addHLine</a>	Adds a horizontal ruled line print command to the command buffer.	✓	-
	<a href="#">addVLineBegin</a>	Adds a vertical ruled line start command to the command buffer.	✓	-
	<a href="#">addVLineEnd</a>	Adds a vertical ruled line end command to the command buffer.	✓	-
Page mode	<a href="#">addPageBegin</a>	Adds a page mode start command to the command buffer.	✓	-
	<a href="#">addPageEnd</a>	Adds a page mode end command to the command buffer.	-	✓
	<a href="#">addPageArea</a>	Adds page mode print area setting to the command buffer.	-	✓
	<a href="#">addPageDirection</a>	Adds page mode print direction setting to the command buffer.	-	✓
	<a href="#">addPagePosition</a>	Adds page mode print position setting to the command buffer.	-	✓
	<a href="#">addPageLine</a>	Adds a page mode line draw command to the command buffer.	-	✓
	<a href="#">addPageRectangle</a>	Adds a page mode rectangle draw command to the command buffer.	-	✓
Cut	<a href="#">addCut</a>	Adds a sheet cut command to the command buffer.	✓	-
Drawer	<a href="#">addPulse</a>	Adds a drawer kick command to the command buffer.	✓	-
Buzzer	<a href="#">addSound</a>	Adds a buzzer sound command to the command buffer.	✓	-
Label sheet/ black mark sheet	<a href="#">addFeedPosition</a>	Adds a paper feed command to the command buffer.	✓	-
	<a href="#">addLayout</a>	Adds sheet layout setting to the command buffer.	✓	-
Command	<a href="#">addCommand</a>	Adds a command to the command buffer.	✓	✓

API		Description
Maintenance counter	<a href="#">getMaintenanceCounter</a>	Acquires the counter value.
	<a href="#">resetMaintenanceCounter</a>	Resets the counter value.
Printer setting	<a href="#">getPrinterSetting</a>	Acquires the set value of the printer setting.
	<a href="#">setPrinterSetting</a>	Changes the printer setting.
Forced transmission	<a href="#">forceRecover</a>	Forced transmission function
	<a href="#">forcePulse</a>	
	<a href="#">forceStopSound</a>	
	<a href="#">forceCommand</a>	
	<a href="#">forceReset</a>	
Reception of result	<a href="#">setStatusChangeEventDelegate</a>	Registers the callback method for an event.
	<a href="#">setReceiveEventDelegate</a>	
Monitor interval	<a href="#">interval</a>	Status monitor interval

## Epos2HybridPrinter class

Controls the hybrid model printers.

API		Description
Initialization	<a href="#">initWithLang</a>	Initializes the HybridPrinter class.
Communication path	<a href="#">connect</a>	Connects to the printer.
	<a href="#">disconnect</a>	Disconnects from the printer.
Status monitor	<a href="#">startMonitor</a>	Enables status event notification.
	<a href="#">stopMonitor</a>	Disables status event notification.
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected printer.
Transmission	<a href="#">sendData</a>	Transfers a print command.
Transaction	<a href="#">beginTransaction</a>	Starts a transaction.
	<a href="#">endTransaction</a>	Ends a transaction.
Buffer clear	<a href="#">clearCommandBuffer</a>	Clears the command buffer.
Print method	<a href="#">selectPaperType</a>	Specifies a print method.
Paper feed	<a href="#">waitInsertion</a>	Inserts paper.
	<a href="#">cancelInsertion</a>	Cancels waiting for paper insertion.
Paper eject	<a href="#">ejectPaper</a>	Ejects paper.
MICR	<a href="#">readMicrData</a>	Reads by MICR.
	<a href="#">cleanMicrReader</a>	Cleans the MICR mechanism.

API		Description
Forced transmission	forceRecover	Forced transmission function
	forcePulse	
	forceCommand	
	forceReset	
Print method acquisition	paperType	Acquires the print method setting information.
Monitor interval	interval	Printer status update interval
On standby	waitTime	Time from insertion of a paper to start of operation
40cpl mode	mode40Cpl	40cpl mode
Reception of result	setStatusChangeEventDelegate	Registers the event listener registration method.
	setReceiveEventDelegate	

### ***List of supported control operations for HybridPrinter class***

APIs available for the Epos2HybridPrinter class depend on the print method.

The APIs and corresponding print methods are listed below.

API	Control operation				
	Receipt	Slip sheet	Endorse- ment	Validation	MICR
initWithLang	✓	✓	✓	✓	✓
connect	✓	✓	✓	✓	✓
disconnect	✓	✓	✓	✓	✓
startMonitor	✓	✓	✓	✓	✓
stopMonitor	✓	✓	✓	✓	✓
getStatus	✓	✓	✓	✓	✓
sendData	✓	✓	✓	✓	-
beginTransaction	✓	✓	✓	✓	✓
endTransaction	✓	✓	✓	✓	✓
clearCommandBuffer	✓	✓	✓	✓	-
selectPaperType	✓	✓	✓	✓	-
waitInsertion	-	✓	✓	✓	-
cancelInsertion	-	✓	✓	✓	✓
ejectPaper	-	✓	✓	✓	✓
readMicrData	-	-	-	-	✓
cleanMicrReader	-	-	-	-	✓
setStatusChangeEventDelegate	✓	✓	✓	✓	✓
setReceiveEventDelegate	✓	✓	✓	✓	✓

### ***Creating print document by the Epos2HybridPrinter class***

The Epos2HybridPrinter class creates a print document using the same API as the [Epos2Printer class](#).

The APIs and corresponding print methods are listed below.

API	Print method				
	Receipt	Slip sheet	Endorse- ment	Endorse- ment (40cpl)	Validation
Text	addTextAlign	✓	✓	✓	-
	addLineSpace	✓	✓	✓	-
	addTextRotate	✓	✓	✓	✓
	addText	✓	✓	✓	✓
	addTextLang	✓	✓	-	-
	addTextFont	✓	✓	✓	-
	addTextSmooth	✓	-	-	-
	addTextSize	✓	✓	✓	-
	addTextStyle	✓	✓*	✓*	-
Paper feed	addFeedUnit	✓	✓	✓	✓
	addFeedLine	✓	✓	✓	✓
Graphics	addImage	✓	-	-	-
	addLogo	✓	-	-	-
Barcode	addBarcode	✓	-	-	-
	addSymbol	✓	-	-	-
Page mode	addPageBegin	✓	✓	-	-
	addPageEnd	✓	✓	-	-
	addPageArea	✓	✓	-	-
	addPageDirection	✓	✓	-	-
	addPagePosition	✓	✓	-	-
	addPageLine	✓	✓	-	-
	addPageRectangle	✓	✓	-	-
Cut	addCut	✓	-	-	-
Drawer	addPulse	✓	✓	✓	✓
Command	addCommand	✓	✓	✓	✓

\* The reverse parameter is not supported.

## Epos2LineDisplay class

Controls character display on the customer display.

API		Description
Initialization	<a href="#">initWithDisplayModel</a>	Initializes the Epos2LineDisplay class.
Communication path	<a href="#">connect</a>	Connects to the customer display.
	<a href="#">disconnect</a>	Disconnects from the customer display.
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected device.
Transmission	<a href="#">sendData</a>	Sends a command to the customer display.
Buffer clear	<a href="#">clearCommandBuffer</a>	Clears the command buffer.
Reset	<a href="#">addInitialize</a>	Initializes the customer display.
Window	<a href="#">addCreateWindow</a>	Adds a process to execute to the command buffer.
	<a href="#">addDestroyWindow</a>	
	<a href="#">addSetCurrentWindow</a>	
	<a href="#">addClearCurrentWindow</a>	
Cursor	<a href="#">addSetCursorPosition</a>	
	<a href="#">addMoveCursorPosition</a>	
	<a href="#">addSetCursorType</a>	
Text display	<a href="#">addText</a>	
	<a href="#">addReverseText</a>	
	<a href="#">addMarqueeText</a>	
Display setting	<a href="#">addSetBlink</a>	
	<a href="#">addSetBrightness</a>	
Clock	<a href="#">addShowClock</a>	
Command transfer	<a href="#">addCommand</a>	
Reception of result	<a href="#">setReceiveEventDelegate</a>	Registers the callback method for an event.

## Epos2Keyboard class

Controls character entry from the keyboard.

API		Description
Initialization	<a href="#">init</a>	Initializes the Epos2Keyboard class.
Communication path	<a href="#">connect</a>	Connects to the keyboard.
	<a href="#">disconnect</a>	Disconnects from the keyboard.
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected device.

API		Description
String setting	<a href="#">setPrefix</a>	Sets the condition to handle as a continuous string.
String setting acquisition	<a href="#">getPrefix</a>	Acquires the set prefix.
Key detection	<a href="#">setKeyPressEventDelegate</a>	
String detection	<a href="#">setReadStringEventDelegate</a>	Registers the callback method for an event.

## Epos2POSKeyboard class

Controls character entry from the POS keyboard.

API		Description
Initialization	<a href="#">init</a>	Initializes the Epos2POSKeyboard class.
Communication path	<a href="#">connect</a>	Connects to the keyboard.
	<a href="#">disconnect</a>	Disconnects from the keyboard.
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected device.
Key detection	<a href="#">setKeyPressEventDelegate</a>	Registers the callback method for an event.

## Epos2BarcodeScanner class

Controls barcode reading by the barcode scanner.

API		Description
Initialization	<a href="#">init</a>	Initializes the Epos2BarcodeScanner class.
Communication path	<a href="#">connect</a>	Connects to the barcode scanner.
	<a href="#">disconnect</a>	Disconnects from the barcode scanner.
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected device.
Input data reception	<a href="#">setScanEventDelegate</a>	Registers the callback method for an event.

## Epos2MSR class

Controls card reading by the MSR.

API		Description
Initialization	<a href="#">init</a>	Initializes the Epos2MSR class.
Communication path	<a href="#">connect</a>	Connects to the MSR.
	<a href="#">disconnect</a>	Disconnects from the MSR.
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected device.
Data detection	<a href="#">setDataEventDelegate</a>	Registers the callback method for an event.

## Epos2SimpleSerial class

Controls serial communication between the printer and device.

API		Description
Initialization	<a href="#">init</a>	Initializes the Epos2SimpleSerial class.
Communication path	<a href="#">connect</a>	Connects to the serial.
	<a href="#">disconnect</a>	Disconnects from the serial.
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected device.
Command transfer	<a href="#">sendCommand</a>	Transfers a command.
Input data reception	<a href="#">setReceiveEventDelegate</a>	Registers the callback method for an event.

## Epos2OtherPeripheral class

Controls peripheral devices via the developed device control programs.

API		Description
Initialization	<a href="#">init</a>	Initializes the Epos2OtherPeripheral class.
Communication path	<a href="#">connect</a>	Connects to the device.
	<a href="#">disconnect</a>	Disconnects from the device.
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected device.
Transmission	<a href="#">sendData</a>	Data transmission
Reception of result	<a href="#">setReceiveEventDelegate</a>	Registers the callback method for an event.

## Epos2CommBox class

Controls data transmission and reception using the communication box.

API		Description
Initialization	<a href="#">init</a>	Initializes the Epos2CommBox class.
Communication path	<a href="#">connect</a>	Connects to the communication box.
	<a href="#">disconnect</a>	Disconnects from the communication box.
Status acquisition	<a href="#">getStatus</a>	Acquires status of the connected device.
Transmission history	<a href="#">getCommHistory</a>	Acquires the message transmission history.
Transmission	<a href="#">sendMessage</a>	Sends a message to the communication box.
Reception	<a href="#">setReceiveEventDelegate</a>	Registers the callback method for an event.

## Common to all classes

These APIs can be used with all classes.

API		Description
Administration information	<a href="#">getAdmin</a>	Acquires the administration information.
	<a href="#">getLocation</a>	Acquires the installation location information.
Reconnection	<a href="#">setConnectionEventDelegate</a>	Registers the callback method for an event.

## Epos2Discovery class

Controls the device discovery function.

API		Description
Start	<a href="#">start</a>	Starts device search.
Stop	<a href="#">stop</a>	Stops device search.

## Epos2Log class

Controls the log output function.

API		Description
Log	<a href="#">setLogSettings</a>	Sets the log output function.
Version acquisition	<a href="#">SdkVersion</a>	Acquires the Epson ePOS SDK version.

## Epos2BluetoothConnection class

Controls pairing connection with a *Bluetooth* device.

API		Description
<i>Bluetooth</i> communication path	<a href="#">connectDevice</a>	Establishes <i>Bluetooth</i> connection.
	<a href="#">disconnectDevice</a>	Disconnects <i>Bluetooth</i> connection.

## EasySelect class

EasySelect class and EasySelectInfo class offer API commands and member variables for selecting printers using NFC tags, QR codes, or iBeacon data.

EasySelect class analyzes NFC tags, QR codes, and iBeacon data.

API		Description
Analysis of NFC tags	<a href="#">parseNFC</a>	Analyzes NFC tag data.

API		Description
Analysis of QR codes	<a href="#">parseQR</a>	Analyzes QR codes data.
Creation of QR codes	<a href="#">createQR</a>	Creates QR code data that can be analyzed by parseQR.
Analysis of printer information	<a href="#">parseBeacon</a>	Analyzes iBeacon data.

## EasySelectInfo class

Stores data analyzed by [parseNFC](#), [parseQR](#) or [parseBeacon](#). Calls the [connect](#) API command with the information of these member variables to connect with the printer.

Member variables		Description
Printer type	<a href="#">deviceType</a>	Stores printer type information.
Printer name	<a href="#">printerName</a>	Stores a printer name.
MAC address/BD address	<a href="#">macAddress</a>	Stores a MAC address or a BD address.
Target information	<a href="#">target</a>	Stores the target information.

# Epos2Printer Class

## initWithPrinterSeries

Initializes the Epos2Printer class.

### Syntax

- (id) initWithPrinterSeries:(int)printerSeries lang:(int)lang;

### Parameter

#### *printerSeries*

Specifies the target printer model.

Value	Description
EPOS2_TM_M10	TM-m10
EPOS2_TM_M30	TM-m30
EPOS2_TM_P20	TM-P20
EPOS2_TM_P60	TM-P60 (Receipt/Peeler)
EPOS2_TM_P60II	TM-P60II (Receipt/Peeler)
EPOS2_TM_P80	TM-P80
EPOS2_TM_T20	TM-T20, TM-T20II, TM-T20II-i, TM-T20III, TM-T20IIIL, TM-T20X
EPOS2_TM_T60	TM-T60
EPOS2_TM_T70	TM-T70, TM-T70-i, TM-T70II, TM-T70II-DT, TM-T70II-DT2
EPOS2_TM_T81	TM-T81II, TM-T81III
EPOS2_TM_T82	TM-T82, TM-T82II, TM-T82II-i, TM-T82III, TM-T82IIIL, TM-T82X
EPOS2_TM_T83	TM-T83II-i
EPOS2_TM_T83III	TM-T83III
EPOS2_TM_T88	TM-T88IV, TM-T88V, TM-T88VI, TM-T88V-i, TM-T88VI-iHUB, TM-T88V-DT, TM-T88VI-DT2
EPOS2_TM_T90	TM-T90
EPOS2_TM_T100	TM-T100
EPOS2_TM_U220	TM-U220, TM-U220-i
EPOS2_TM_U330	TM-U330
EPOS2_TM_L90	TM-L90

Value	Description
EPOS2_TM_H6000	TM-H6000IV, TM-H6000V, TM-H6000IV-DT

**lang**

Specifies the language of the printer.

Value	Description
EPOS2_MODEL_ANK	ANK model
EPOS2_MODEL_CHINESE	Simplified Chinese model
EPOS2_MODEL_TAIWAN	Taiwan model
EPOS2_MODEL_KOREAN	Korean model
EPOS2_MODEL_THAI	Thai model
EPOS2_MODEL_SOUTHASIA	South Asian model

**Return value**

If the process succeeds, an initialized Epos2Printer class instance will be returned.

If the process fails, nil will be returned. The process may fail due to the following reasons:

Error status	Description
EPOS2_ERR_PARAM	An invalid parameter was specified.
EPOS2_ERR_MEMORY	Memory could not be allocated.
EPOS2_ERR_UNSUPPORTED	A model name or language not supported was specified.

**Supplementary explanation**

When iterating a process, be sure to generate and destroy instances outside the iterated process and not iterate the process at a short interval.

Memory releasing by the OS may affect the process of the Epson ePOS SDK, resulting in an invalid operation.

When connecting to multiple printers, generate instances appropriate to each model.

## connect

Starts communication with the printer.

### Syntax

```
- (int) connect:(NSString *)target timeout:(long)timeout;
```

### Parameter

#### **target**

Specifies the method of connecting to the printer by a character string.

The connection method varies according to the system configuration.

- TM Printer Models

<connection type>:<identifier>

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCP"	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Printer host name</li> </ul>	"TCP:192.168.192.168"
Bluetooth	"BT"	BD address	"BT:00:22:15:7D:70:9C"

- Customer Display Models

<connection type>:<identifier>

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCP"	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Printer host name</li> </ul>	"TCP:192.168.192.168"
Bluetooth	"BT"	BD address	"BT:00:22:15:7D:70:9C"

To connect to the printer via SSL/TLS communication, specify using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCPS"	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Printer host name</li> </ul>	"TCPS:192.168.192.168[local_printer]"

- TM-m30 or TM-T88VI + DM-D30 + barcode scanner model/  
TM-m30 or TM-T88VI + barcode scanner model

To connect via Wi-Fi/Ethernet network communication, specify using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connection type	Identifier	Example
Wi-Fi/Ethernet	"TCP"	<ul style="list-style-type: none"> <li>IP address in IPv4 format</li> <li>MAC address</li> <li>Printer host name</li> </ul>	"TCP:192.168.192.168[local_printer]"

The device ID is fixed as [local\_printer].

To connect via *Bluetooth*, specify using the following syntax.

<connection type>:<identifier>

I/F	Connection type	Identifier	Example
Bluetooth	"BT"	BD address	"BT:00:22:15:7D:70:9C"

- POS Terminal Model

<connection type>:<identifier>[<device ID>]

I/F	Connection type	Identifier	Example
Wi-Fi/Ethernet	<ul style="list-style-type: none"> <li>"TCP"</li> <li>"TCPS"</li> </ul>	<ul style="list-style-type: none"> <li>IP address in IPv4 format</li> <li>MAC address</li> <li>Printer host name</li> </ul>	"TCP:192.168.192.168[local_printer]"

To connect to the printer via SSL/TLS communication, specify TCPS in the connection type.

#### timeout

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

#### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.

Error status	Description
EPOS2_ERR_CONNECT	Failed to open the device.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_ERR_ILLEGAL	Tried to start communication with a printer with which communication had been already established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_NOT_FOUND	The printer could not be found.
EPOS2_ERR_IN_USE	The device was in use.
EPOS2_ERR_TYPE_INVALID	The device type is different.

### Supplementary explanation

- ❑ When communication with the printer is no longer necessary, be sure to call [disconnect](#) to terminate it.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [disconnect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.
- ❑ The printer status is returned to the event registered with the Epos2Printer class.  
For details, refer to Chapter 2 "Programming Flow" and Chapter 6 "To use the same printer from multiple mobile devices."
- ❑ The device ID is an arbitrary character string that is set when the peripheral device is registered to the TM printer (master).  
For details, refer to the Technical Reference Guide of each printer.
- ❑ If you are using DHCP to assign the IP address of the printer, specify the MAC address or host name of the printer as the identifier.
- ❑ For TM-DT series, MAC address cannot be specified.
- ❑ If you specify the host name of the printer as the identifier, use in the environment where it can be found by the DNS server.
- ❑ When connecting with the printer using *Bluetooth*, complete pairing before calling the connect command.
- ❑ Depending on the project settings, *Bluetooth* communication may be disconnected if the application runs in the background.
- ❑ This API will succeed regardless of the connection status of the TM printer (master) and peripheral devices.
- ❑ Devices other than printers are exclusively locked.

## disconnect

Ends communication with the printer.

### Syntax

- (int) disconnect;

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to end communication where it had not been established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_DISCONNECT	Failed to disconnect the device.

### Supplementary explanation

- ❑ If disconnect is conducted during an application background transition event process, wait until disconnect completes.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [connect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.

## startMonitor

Enables printer status event notification.

Acquires and updates the printer status at the interval specified with the [interval](#) property and returns it to the callback function registered by [setStatusChangeEventDelegate](#).

### Syntax

```
- (int) startMonitor;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

### Supplementary explanation

- ❑ Use this API after starting a communication with the printer (after executing the [connect](#) API).
  - ❑ During ESC/POS control, any ASB information items which have been changed during the update interval specified by the [interval](#) property are reported.
- During ePOS-Device XML control, the ASB information at the time of update is reported.

## stopMonitor

Disables status events.

### Syntax

```
- (int)stopMonitor;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

## getStatus

Acquires the current status information.

### Syntax

- (Epos2PrinterStatusInfo \*)getStatus;

### Return value

The current status is returned in the Epos2PrinterStatusInfo type.

The following status information is stored in the object as a member.

Printer status	Status	Description
connection: Connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Status is unknown.
online: Online status	EPOS2_TRUE	Online
	EPOS2_FALSE	Offline
	EPOS2_UNKNOWN	Status is unknown.
coverOpen: Cover status	EPOS2_TRUE	Cover is open.
	EPOS2_FALSE	Cover is closed.
	EPOS2_UNKNOWN	Status is unknown.
paper: Paper status	EPOS2_PAPER_OK	Paper remains.
	EPOS2_PAPER_NEAR_END	Paper is running out.
	EPOS2_PAPER_EMPTY	Paper has run out.
	EPOS2_UNKNOWN	Status is unknown.
paperFeed: Paper feed	EPOS2_TRUE	Paper feed in progress
	EPOS2_FALSE	Stopped
	EPOS2_UNKNOWN	Status is unknown.
panelSwitch: Panel switch (Feed button) status	EPOS2_SWITCH_ON	Pressed
	EPOS2_SWITCH_OFF	Not pressed
	EPOS2_UNKNOWN	Status is unknown.
drawer: Offline status due to the battery level (Mobile models)	EPOS2_DRAWER_HIGH	High
	EPOS2_DRAWER_LOW	Low
	EPOS2_UNKNOWN	Status is unknown.
drawer: Drawer kick connector pin No.3 sta- tus (except for the Mobile models)	EPOS2_DRAWER_HIGH	High
	EPOS2_DRAWER_LOW	Low
	EPOS2_UNKNOWN	Status is unknown.

Printer status	Status	Description
errorStatus: Error status	EPOS2_NO_ERR	Normal
	EPOS2_MECHANICAL_ERR	Mechanical error occurred.
	EPOS2_AUTOCUTTER_ERR	Auto cutter error occurred.
	EPOS2_UNRECOVER_ERR	Unrecoverable error occurred.
	EPOS2_AUTORECOVER_ERR	Automatic recovery error occurred.
	EPOS2_UNKNOWN	Status is unknown.
autoRecoverError: Automatic recovery error status	EPOS2_HEAD_OVERHEAT	Head overheat error
	EPOS2_MOTOR_OVERHEAT	Motor driver IC overheat error
	EPOS2_BATTERY_OVERHEAT	Battery overheat error
	EPOS2_WRONG_PAPER	Paper error
	EPOS2_COVER_OPEN	Cover is open.
	EPOS2_UNKNOWN	Unknown status
buzzer: Buzzer sound status	EPOS2_TRUE	Sounding (Applicable printer only)
	EPOS2_FALSE	Stopped (Applicable printer only)
	EPOS2_UNKNOWN	Status is unknown.
adapter: AC adapter connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected
	EPOS2_UNKNOWN	Status is unknown.
batteryLevel: Remaining battery capacity	EPOS2_BATTERY_LEVEL_6	Remaining battery capacity 6
	EPOS2_BATTERY_LEVEL_5	Remaining battery capacity 5
	EPOS2_BATTERY_LEVEL_4	Remaining battery capacity 4
	EPOS2_BATTERY_LEVEL_3	Remaining battery capacity 3
	EPOS2_BATTERY_LEVEL_2	Remaining battery capacity 2
	EPOS2_BATTERY_LEVEL_1	Remaining battery capacity 1 (almost run out)
	EPOS2_BATTERY_LEVEL_0	Remaining battery capacity 0 (run out)
	EPOS2_UNKNOWN	Status is unknown.

### Supplementary explanation

- ❑ If this API is called while communication is not available, printer states other than "connection" will be set to "EPOS2\_UNKNOWN."
- ❑ The status object is set to the status at the timing of execution of this API and will not be updated.
- ❑ If this function is executed within a callback function, nil will be returned.

## sendData

Sends the print command.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.

This API sends data buffered by an add-type API (e.g., [addText](#)).

### Syntax

- (int) sendData:(long)timeout;

#### Parameter

##### **timeout**

Specifies the timeout period before completion of printing in milliseconds.

Value	Description
Integer from 5000 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

#### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_ILLEGAL	The control commands have not been buffered. This API was called while no communication had been started.

#### Supplementary explanation

For Bluetooth connection, the offline status may not be detected and a timeout error may occur.

Refer to Chapter 6 "To use the same printer from multiple mobile devices" for details.

## beginTransaction

Starts a transaction.

A transaction represents a single printing task such as printing a single sheet of receipt or coupon.

After this API is called, data until the transaction is terminated by [endTransaction](#) will be regarded as a single printing task.

---

### Syntax

- (int) beginTransaction;

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started. Another transaction had been already started by this function.
EPOS2_ERR_FAILURE	An unknown error occurred.

## endTransaction

Ends a transaction.

A transaction represents a single printing task such as printing a single sheet of receipt or coupon.

After [beginTransaction](#) is called, data until the transaction is terminated by this API will be regarded as a single printing task.

### Syntax

```
- (int) endTransaction;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started. This API was called while no transaction had been started.
EPOS2_ERR_FAILURE	An unknown error occurred.

## requestPrintJobStatus

Acquires the print result for the specified print job ID.

### Syntax

```
- (int) requestPrintJobStatus:(NSString*)printJobId;
```

### Parameter

#### **printJobId**

Specifies the print job ID.

Alphanumeric characters, underscore, hyphen, and period in 1 to 30 digits can be used.

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_CONNECT	Communication error
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

### Supplementary explanation

- ❑ The result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.
- ❑ When multiple print processes were performed with the same print job ID, the status of the latest print job is acquired.

## clearCommandBuffer

Clears the command buffer.

### Syntax

```
- (int) clearCommandBuffer;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.

## addTextAlign

Adds text alignment setting to the command buffer.

### Syntax

- (int) addTextAlign:(int)align;

### Parameter

#### *align*

Specifies alignment.

Value	Description
EPOS2_ALIGN_LEFT (default)	Left alignment
EPOS2_ALIGN_CENTER	Center alignment
EPOS2_ALIGN_RIGHT	Right alignment
EPOS2_PARAM_DEFAULT	Specifies the default value (left alignment).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- Use this API at the "beginning of a line." If this API is used elsewhere, it will be ignored.
- Setting of this API is also applied to the barcode/2D symbol.
- When specifying alignment in the page mode, use [addPagePosition](#) API instead of this API.

## addLineSpace

Adds line spacing setting to the command buffer.

### Syntax

- (int) addLineSpace:(long)linespc;

### Parameter

#### *linespc*

Specifies the line spacing (in dots).

Value	Description
Integer from 0 to 255	Line spacing (in dots)

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

If the line spacing for a single line is set smaller than the print character size, paper may be fed for a larger quantity than the set amount to ensure proper printing.

## addTextRotate

Adds text rotation setting to the command buffer.

### Syntax

```
- (int) addTextRotate:(int)rotate;
```

### Parameter

#### **rotate**

Enables or disables text rotation.

Value	Description
EPOS2_TRUE	Specifies text rotation.
EPOS2_FALSE (default)	Disables text rotation.
EPOS2_PARAM_DEFAULT	Specifies the default value (text rotation disabled).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ Use this API at the "beginning of a line." If this API is used elsewhere, it will be ignored.
- ❑ Setting of this API is also applied to the barcode/2D symbol.
- ❑ When specifying text rotation in the page mode, use [addPageDirection](#) API instead of this API.

## addText

Adds a character print command to the command buffer.

### Syntax

---

- (int) addText:(NSString \*)data;

---

### Parameter

#### **data**

Specifies the string to print.

Use the following escape sequences for a horizontal tab and line feed.

String	Description
\t	Horizontal tab (HT)
\n	Line feed (LF)
\\\	Back slash

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

---

### Supplementary explanation

- ❑ To print data other than text after printing text, feed a line or page.  
A line which does not end with a line feed will be discarded as unfixed data by the next [sendData](#).
- ❑ In the page mode, text is printed from the current print position with the base line dot of the characters as the standard.

## addTextLang

Adds language setting to the command buffer.

A text string specified by the [addText](#) API is encoded according to the language specified by this API.

### Syntax

```
- (int) addTextLang:(int)lang;
```

### Parameter

#### *lang*

Specifies the target language.

Value	Description
EPOS2_LANG_EN (default)	English (ANK specification)
EPOS2_LANG_JA	Japanese
EPOS2_LANG_ZH_CN	Simplified Chinese
EPOS2_LANG_ZH_TW	Traditional Chinese
EPOS2_LANG_KO	Korean
EPOS2_LANG_TH	Thai (South Asian specification)
EPOS2_LANG_VI	Vietnamese (South Asian specification)
EPOS2_PARAM_DEFAULT	Specifies the default value (English).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ This API is called before the [addText](#) API.
- ❑ Available languages differ depending on character specifications of the printer. For details, see Technical Reference Guide of the printer.

## addTextFont

Adds character font setting to the command buffer.

### Syntax

```
- (int) addTextFont:(int)font;
```

### Parameter

#### **font**

Specifies the font.

Value	Description
EPOS2_FONT_A (default)	Font A
EPOS2_FONT_B	Font B
EPOS2_FONT_C	Font C
EPOS2_FONT_D	Font D
EPOS2_FONT_E	Font E
EPOS2_PARAM_DEFAULT	Specifies the default value (font A).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addTextSmooth

Adds smoothing setting to the command buffer.

### Syntax

- (int) addTextSmooth:(int)smooth;

### Parameter

#### *smooth*

Enables or disables smoothing.

Value	Description
EPOS2_TRUE	Enables smoothing.
EPOS2_FALSE (default)	Disables smoothing.
EPOS2_PARAM_DEFAULT	Specifies the default value (smoothing disabled).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addTextSize

Adds character scaling factor setting to the command buffer.

### Syntax

```
- (int) addTextSize:(long)width height:(long)height;
```

### Parameter

#### **width**

Specifies the horizontal scaling of characters.

Value	Description
Integer from 1 to 8	Specifies the horizontal scaling factor rate (default: 1).
EPOS2_PARAM_DEFAULT	Specifies the default value (1).
EPOS2_PARAM_UNSPECIFIED	Not specify.

#### **height**

Specifies the vertical scaling of characters.

Value	Description
Integer from 1 to 8	Specifies the vertical scaling factor rate (default: 1).
EPOS2_PARAM_DEFAULT	Specifies the default value (1).
EPOS2_PARAM_UNSPECIFIED	Not specify.

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ If all the parameters are set to "EPOS2\_PARAM\_UNSPECIFIED," EPOS2\_ERR\_PARAM will be returned.
- ❑ For slip, endorsement, or validation printing, an integer from 1 to 2 can be set for the width and height.

## addTextStyle

Adds character style setting to the command buffer.

### Syntax

```
- (int) addTextStyle:(int)reverse ul:(int)ul em:(int)em
color:(int)color;
```

### Parameter

#### **reverse**

Enables or disables the reverse style.

Value	Description
EPOS2_TRUE	Enables the reverse style.
EPOS2_FALSE (default)	Disables the reverse style.
EPOS2_PARAM_UNSPECIFIED	Not specify.
EPOS2_PARAM_DEFAULT	Specifies the default value (reverse style disabled).

#### **ul**

Enables or disables the underscore style.

Value	Description
EPOS2_TRUE	Enables the underscore style.
EPOS2_FALSE (default)	Disables the underscore style.
EPOS2_PARAM_UNSPECIFIED	Not specify.
EPOS2_PARAM_DEFAULT	Specifies the default value (underscore style disabled).

#### **em**

Enables or disables the bold style.

Value	Description
EPOS2_TRUE	Enables the bold style.
EPOS2_FALSE (default)	Disables the bold style.
EPOS2_PARAM_UNSPECIFIED	Not specify.
EPOS2_PARAM_DEFAULT	Specifies the default value (bold style disabled).

#### **color**

Specifies the color.

Value	Description
EPOS2_COLOR_NONE	No printing

Value	Description
EPOS2_COLOR_1 (default)	First color
EPOS2_COLOR_2	Second color
EPOS2_COLOR_3	Third color
EPOS2_COLOR_4	Fourth color
EPOS2_PARAM_UNSPECIFIED	Not specify.
EPOS2_PARAM_DEFAULT	Specifies the default value (first color).

***Return value***

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

If all the parameters are set to "EPOS2\_PARAM\_UNSPECIFIED," EPOS2\_ERR\_PARAM will be returned.

## addHPosition

Adds horizontal character print start position to the command buffer.

### Syntax

- (int) addHPosition:(long)x;

### Parameter

**x**

Specifies the horizontal print start position in dots.

Value	Description
Integer from 0 to 65535	Horizontal print start position (in dots)

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ Calling this API causes the printer positioned at "other than the beginning of the line." This is also true even if 0 is set to "x."
- ❑ After executing this API, [addTextAlign](#) and [addTextRotate](#) cannot be used.

## addFeedUnit

Adds a paper-feed-by-dot command to the command buffer.

### Syntax

- (int) addFeedUnit:(long)unit;

### Parameter

#### **unit**

Specifies the paper feed amount (in dots).

Value	Description
Integer from 0 to 255	Paper feed amount (in dots)

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

Calling this API causes the printer positioned at "the beginning of the line."

## addFeedLine

Adds a paper-feed-by-line command to the command buffer.

### Syntax

- (int) addFeedLine:(long)line;

### Parameter

#### *line*

Specifies the paper feed amount (in lines).

Value	Description
Integer from 0 to 255	Paper feed amount (in lines)

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

Calling this API causes the printer positioned at "the beginning of the line."

## addImage

Adds a raster image print command to the command buffer.

Prints UllImage class graphics.

A specified area of UllImage class graphics is binarized according to the mode, halftone, and brightness parameters and converted into a raster image data.

The converted image is compressed or not compressed before transmission according to the compress parameter value.

One pixel of an image corresponds to one dot of the printer. When a transparent color is contained in the image, the background of the image is assumed to be white.

### Syntax

```
- (int) addImage:(UIImage *)data x:(long)x y:(long)y
width:(long)width height:(long)height color:(int)color
mode:(int)mode halftone:(int)halftone
brightness:(double)brightness compress:(int)compress;
```

### Parameter

#### **data**

Specifies an instance of the UllImage class.

#### **x**

Specifies the horizontal start position of the print area (in pixels).

Value	Description
Integer from 0 to 65534	Horizontal start position of the print area (in pixels)

#### **y**

Specifies the vertical start position of the print area (in pixels).

Value	Description
Integer from 0 to 65534	Vertical start position of the print area (in pixels)

#### **width**

Specifies the width of the print area (in pixels).

Value	Description
Integer from 1 to 65535	Width of the print area (in pixels).

#### **height**

Specifies the height of the print area (in pixels).

Value	Description
Integer from 1 to 65535	Height of the print area (in pixels).

**color**

Specifies the color.

Value	Description
EPOS2_COLOR_NONE	No printing
EPOS2_COLOR_1	First color
EPOS2_COLOR_2	Second color
EPOS2_COLOR_3	Third color
EPOS2_COLOR_4	Fourth color
EPOS2_PARAM_DEFAULT	Specifies the default value (first color).

**mode**

Specifies the color mode.

Value	Description
EPOS2_MODE_MONO	Monochrome (2 scales)
EPOS2_MODE_GRAY16	Multi-gradation (16 scales)
EPOS2_MODE_MONO_HIGH_DENSITY	Monochrome (2 scales), double density
EPOS2_PARAM_DEFAULT	Specifies the default (monochrome (2 scales)).

**halftone**

Specifies the halftone processing method.

Value	Description
EPOS2_HALFTONE_DITHER	Dithering (appropriate for printing graphics only)
EPOS2_HALFTONE_ERROR_DIFFUSION	Error diffusion (appropriate for printing text and graphics)
EPOS2_HALFTONE_THRESHOLD	Threshold (appropriate for printing text only)
EPOS2_PARAM_DEFAULT	Specifies the default (dithering).

Effective for the monochrome (2 scales) color mode only.

**brightness**

Specifies the brightness compensation value.

Value	Description
Real number from 0.1 to 10.0	Brightness compensation (gamma correction) value
EPOS2_PARAM_DEFAULT	Default (1.0)

When a value other than 1.0 is specified for the brightness compensation value, processing gets slower.

**compress**

Enables or disables compression.

Compressing print images can prevent white banding or streaks from occurring on printed images.

This works well when connecting with the printer using *Bluetooth*.

Value	Description
EPOS2_COMPRESS_DEFLATE	Compresses the image.
EPOS2_COMPRESS_NONE	Does not compress the image.
EPOS2_COMPRESS_AUTO	Automatically chooses to or not to compress the image.
EPOS2_PARAM_DEFAULT	Default (automatically chooses to or not to compress the image internally)

#### **Return value**

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

#### **Supplementary explanation**

- ❑ If the area specified by x/y and width/height does not fit within the image size specified by data parameter, EPOS2\_ERR\_PARAM will be returned.
- ❑ Compress can only be specified with the *Bluetooth* model of the following printers. For other printers, specify EPOS2\_COMPRESS\_AUTO.

Model	Firmware version
TM-m10	No restriction
TM-m30	No restriction
TM-P20	No restriction
TM-P60II (Receipt)	5.14 ESC/POS or later
TM-P60II (Peeler)	6.14 ESC/POS or later
TM-P80	1.02 ESC/POS or later
TM-P80AC	2.01 ESC/POS or later
TM-T20II	No restriction
TM-T20III	No restriction
TM-T70II	No restriction
TM-T82III	No restriction

Model	Firmware version
TM-T88V	No restriction
TM-T88VI	No restriction

- Printing may get slower if a transparent image is printed.
- The multi-gradation and the compression of image data are not supported in the page mode. If you set those in the page mode, nothing will be printed.
- Set an image size appropriate for the printer. If you set to print a large image, the API commands will be succeeded, but the printer may print nothing.

## addLogo

Adds a NV logo print command to the command buffer.  
Prints the logo registered in the NV memory of the printer.

### Syntax

---

- (int) addLogo:(long)key1 key2:(long)key2;

---

### Parameter

#### key1

Specifies the key code 1 of the NV logo.

Value	Description
Integer from 1 to 255	Key code 1 of the NV logo

#### key2

Specifies the key code 2 of the NV logo.

Value	Description
Integer from 1 to 255	Key code 2 of the NV logo
EPOS2_PARAM_DEFAULT	Specify this for the printers that do not support key code 2.

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

---

### Supplementary explanation

- ❑ For how to register the NV logo, refer to the Technical Reference Guide of the printer.
- ❑ The page mode does not support multi-gradation printing. Multi-gradation graphics can be printed in the standard mode only.
- ❑ The NV logo specified by this API is printed with the color setting specified by [addTextStyle](#) in advance and stored in the buffer.
- ❑ TM-U220 and TM-U330 use only the key1 parameter, however, you need to set "Printer.PARAM\_DEFAULT" as the key2 parameter for those printers since an empty key2 parameter causes an error.

## addBarcode

Adds a barcode print command to the command buffer.

### Syntax

```
- (int) addBarcode:(NSString *)data type:(int)type hri:(int)hri
font:(int)font width:(long)width height:(long)height;
```

### Parameter

#### **data**

Specifies barcode data as a text string.

Specify a string in accordance with the standard of the barcode specified in type.

Type	Description
UPC-A	If an 11-digit figure is specified, the check digit is automatically appended. If a 12-digit figure is specified, the 12th digit is used as the check digit but verification is not performed.
UPC-E	Specify 0 in the first digit. Specify the manufacturer code in the 2nd to 6th digits. Specify the item code in right justification in the 7th to 11th digits. The number of digits of the item code depends on the manufacturer code. Specify 0 in each unused data. If an 11-digit figure is specified, the check digit is automatically appended. If a 12-digit figure is specified, the 12th digit is used as the check digit but verification is not performed.
EAN13	If an 12-digit figure is specified, the check digit is automatically appended. If a 13-digit figure is specified, the 13th digit is used as the check digit but verification is not performed.
JAN13	
EAN8	If an 7-digit figure is specified, the check digit is automatically appended. If an 8-digit figure is specified, the 8th digit is used as the check digit but verification is not performed.
JAN8	
CODE39	If the first character is * , this character is processed as the start character. If it is not , the start character is automatically added.
ITF	The start and stop codes are automatically added. Addition and verification of the check digit are not performed.
CODABAR	Specify the start character ((A to D, a to d)). Specify the stop character ((A to D, a to d)). Addition and verification of the check digit are not performed.
CODE93	The start and stop characters are automatically added. The check digit is automatically calculated and added.

Type	Description
CODE128	<p>Specify the start character (CODE A, CODE B, CODE C). The stop character is automatically added. The check digit is automatically calculated and added. To encode the following characters, specify the corresponding 2-digit code starting with { :</p> <ul style="list-style-type: none"> <li>• FNC1: {1</li> <li>• FNC2: {2</li> <li>• FNC3: {3</li> <li>• FNC4: {4</li> <li>• CODE A: {A</li> <li>• CODE B: {B</li> <li>• CODE C: {C</li> <li>• SHIFT: {S</li> <li>• {{ }}</li> </ul> <p>When specifying CODE C, specify the barcode data as the control code of the escape sequence.</p>
GS1-128	<p>The start character, FNC1, check digit, and stop characters are automatically added. However, FNC1 used as a data separator is not added. To automatically calculate and add the application ID (AI) and the following check digit, specify "*" at the check digit position. The application ID (AI) can be put in parentheses. The parentheses are used as print characters for HRI and not encoded as data. A blank space can be inserted between the application ID (AI) and data. The blank space is used as print characters for HRI and not encoded as data. To encode the following characters, specify the corresponding 2-digit code starting with { :</p> <ul style="list-style-type: none"> <li>• FNC1: {1</li> <li>• FNC3: {3</li> <li>• { : {{</li> <li>• } : }}{}</li> <li>• FNC1: {1</li> <li>• {{ }}</li> </ul>
GS1 DataBar Omnidirectional	
GS1 DataBar Truncated	Specify a 13-digit product ID (GTIN) excluding the application ID (AI) and check digit.
GS1 DataBar Limited	
GS1 DataBar Expanded	<p>The application ID (AI) can be put in parentheses. The parentheses are used as print characters for HRI and not encoded as data. To encode the following characters, specify the corresponding 2-digit code starting with { :</p> <ul style="list-style-type: none"> <li>• FNC1: {1</li> <li>• { : {{</li> <li>• } : }}{}</li> </ul>

When specifying binary data which cannot be represented as a string, use the following escape sequences.

String	Description
\xnn	Control code (set nn in hexadecimal)
\\"	Back slash

**type**

Specifies the barcode type.

Value	Description
EPOS2_BARCODE_UPC_A	UPC-A
EPOS2_BARCODE_UPC_E	UPC-E
EPOS2_BARCODE_EAN13	EAN13
EPOS2_BARCODE_JAN13	JAN13
EPOS2_BARCODE_EAN8	EAN8
EPOS2_BARCODE_JAN8	JAN8
EPOS2_BARCODE_CODE39	CODE39
EPOS2_BARCODE_ITF	ITF
EPOS2_BARCODE_CODABAR	CODABAR
EPOS2_BARCODE_CODE93	CODE93
EPOS2_BARCODE_CODE128	CODE128
EPOS2_BARCODE_GS1_128	GS1-128
EPOS2_BARCODE_GS1_DATABAR_OMNIDIRECTIONAL	GS1 DataBar Omnidirectional
EPOS2_BARCODE_GS1_DATABAR_TRUNCATED	GS1 DataBar Truncated
EPOS2_BARCODE_GS1_DATABAR_LIMITED	GS1 DataBar Limited
EPOS2_BARCODE_GS1_DATABAR_EXPANDED	GS1 DataBar Expanded

**hri**

Specifies the HRI position.

Value	Description
EPOS2_HRI_NONE (default)	No printing.
EPOS2_HRI ABOVE	Above the barcode
EPOS2_HRI BELOW	Below the barcode
EPOS2_HRI BOTH	Both above and below the barcode
EPOS2_PARAM_DEFAULT	Specifies the default value (no printing).
EPOS2_PARAM_UNSPECIFIED	Not specify.

***font***

Specifies the HRI font.

Value	Description
EPOS2_FONT_A (default)	Font A
EPOS2_FONT_B	Font B
EPOS2_FONT_C	Font C
EPOS2_FONT_D	Font D
EPOS2_FONT_E	Font E
EPOS2_PARAM_DEFAULT	Specifies the default value (font A).
EPOS2_PARAM_UNSPECIFIED	Not specify.

***width***

Specifies the width of a single module in dots.

Value	Description
Integer from 2 to 6	Width of a single module (in dots)
EPOS2_PARAM_UNSPECIFIED	Not specify.

***height***

Specifies the height of the barcode in dots.

Value	Description
Integer from 1 to 255	Height of the barcode (in dots)
EPOS2_PARAM_UNSPECIFIED	Not specify.

***Return value***

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

- Use this API at the "beginning of a line."
- When the barcode data specified in data does not conform to the barcode standard specified in type, an error will not be returned in the return value and the barcode will not be printed.

## addSymbol

Adds a 2D symbol print command to the command buffer.

### Syntax

```
- (int) addSymbol:(NSString *)data type:(int)type
level:(int)level width:(long)width height:(long)height
size:(long)size;
```

### Parameter

#### **data**

Specifies 2D symbol data as a text string.

Specify a string in accordance with the standard of the 2D symbol specified in type.

Type	Description
Standard PDF417	Converts the string into UTF-8, processes the escape sequence(s), and encodes the data.
Truncated PDF417	The maximum number of code words in the data area is 928, the maximum number of code words in a single stage is 30, and the maximum number of stages is 90.
QR Code Model 1	Converts the string into JIS, processes the escape sequence(s), and encodes the data by choosing the data type from the following:
QR Code Model 2	<ul style="list-style-type: none"> <li>• Figure: 0 to 9</li> <li>• Alphanumeric: 0 to 9, A to Z, blank space, \$, %, *, +, -, ., /, :</li> <li>• Kanji: Characters which can be represented with Shift JIS codes</li> <li>• 8-bit byte data: 0x00 to 0xff</li> </ul>
QR Code Micro	Converts the string into UTF-8, processes the escape sequence(s), and encodes the data.
MaxiCode Mode 2	In Mode 2 or 3, if the first data is J]>\x1e01\x1ddy ("yy" is a 2-digit figure), this is processed as the message header and the second and succeeding data sequence is processed as the primary message.
MaxiCode Mode 3	Otherwise, the primary message starts with the fist data.
MaxiCode Mode 4	For the mode 2, specify the primary message in the following format:
MaxiCode Mode 5	<ul style="list-style-type: none"> <li>• Zip code (1- to 9-digit figure) GS:(\x1d)</li> <li>• ISO country code (1- to 3-digit figure) GS:(\x1d)</li> <li>• Service class code (1- to 3-digit figure)</li> </ul>
MaxiCode Mode 6	For the mode 3, specify the primary message in the following format:
GS1 DataBar Stacked	<ul style="list-style-type: none"> <li>• Zip code (data which can be converted with 1 to 6 code sets A) GS (\x1d)</li> <li>• ISO country code (1- to 3-digit figure) GS (\x1d)</li> <li>• Service class code (1- to 3-digit figure)</li> </ul>
GS1 DataBar Stacked Omnidirectional	Converts the string into UTF-8, processes the escape sequence(s), and encodes the data.
	Specify a 13-digit product ID (GTIN) excluding the application ID (AI) and check digit.

Type	Description
GS1 DataBar Expanded Stacked	<p>Converts the string into UTF-8, processes the escape sequence(s), and encodes the data.</p> <p>The application ID (AI) can be put in parentheses.</p> <p>The parentheses are used as print characters for HRI and not encoded as data.</p> <p>To encode the following characters, specify the corresponding 2-digit code starting with {:</p> <ul style="list-style-type: none"> <li>• FNC1:{1</li> <li>• {:{(</li> <li>• }):}{}</li> </ul>
Aztec Code	Converts the string into UTF-8, processes the escape sequence(s), and encodes the data.
DataMatrix	Converts the string into UTF-8, processes the escape sequence(s), and encodes the data.

When specifying binary data which cannot be represented as a string, use the following escape sequences.

String	Description
\xnn	Control code (set nn in hexadecimal)
\\	Back slash

### **type**

Specifies the 2D symbol type.

Value	Description
EPOS2_SYMBOL_PDF417_STANDARD	Standard PDF417
EPOS2_SYMBOL_PDF417_TRUNCATED	Truncated PDF417
EPOS2_SYMBOL_QRCODE_MODEL_1	QR Code Model 1
EPOS2_SYMBOL_QRCODE_MODEL_2	QR Code Model 2
EPOS2_SYMBOL_QRCODE_MICRO	QR Code Micro
EPOS2_SYMBOL_MAXICODE_MODE_2	MaxiCode Mode 2
EPOS2_SYMBOL_MAXICODE_MODE_3	MaxiCode Mode 3
EPOS2_SYMBOL_MAXICODE_MODE_4	MaxiCode Mode 4
EPOS2_SYMBOL_MAXICODE_MODE_5	MaxiCode Mode 5
EPOS2_SYMBOL_MAXICODE_MODE_6	MaxiCode Mode 6
EPOS2_SYMBOL_GS1_DATABAR_STACKED	GS1 DataBar Stacked
EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL	GS1 DataBar Stacked Omnidirectional
EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED	GS1 DataBar Expanded Stacked
EPOS2_SYMBOL_AZTECCODE_FULLRANGE	Aztec Code Full-Range mode

Value	Description
EPOS2_SYMBOL_AZTECCODE_COMPACT	Aztec Code Compact mode
EPOS2_SYMBOL_DATAMATRIX_SQUARE	DataMatrix Square
EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8	DataMatrix Rectangle, 8 lines
EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12	DataMatrix Rectangle, 12 lines
EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16	DataMatrix Rectangle, 16 lines

**level**

Specifies the error correction level.

Specify a value in accordance with the 2D symbol type.

Specify "EPOS2\_PARAM\_DEFAULT" for MaxiCode, 2D GS1 DataBar, and DataMatrix.

PDF417

Value	Description
EPOS2_LEVEL_0	Error correction level 0
EPOS2_LEVEL_1	Error correction level 1
EPOS2_LEVEL_2	Error correction level 2
EPOS2_LEVEL_3	Error correction level 3
EPOS2_LEVEL_4	Error correction level 4
EPOS2_LEVEL_5	Error correction level 5
EPOS2_LEVEL_6	Error correction level 6
EPOS2_LEVEL_7	Error correction level 7
EPOS2_LEVEL_8	Error correction level 8
EPOS2_PARAM_DEFAULT	Specifies the default value (Error correction level 1).
EPOS2_PARAM_UNSPECIFIED	Not specify.

QR Code

Value	Description
EPOS2_LEVEL_L	Error correction level L
EPOS2_LEVEL_M	Error correction level M
EPOS2_LEVEL_Q	Error correction level Q
EPOS2_LEVEL_H	Error correction level H
EPOS2_PARAM_DEFAULT	Specifies the default value (Error correction level M).
EPOS2_PARAM_UNSPECIFIED	Not specify.

Aztec Code

Value	Description
Integer from 5 to 95	Error correction level (in percents)
EPOS2_PARAM_DEFAULT	Specifies the default value (Error correction level 23).
EPOS2_PARAM_UNSPECIFIED	Not specify.

***width***

Specifies the module width.

An integer from 1 to 255 can be specified.

When "EPOS2\_PARAM\_UNSPECIFIED" is specified, the current setting is retained.

The range differs depending on the 2D symbol type.

2D symbol type	Valid value	Default value
PDF417	2 to 8	3
QR Code	3 to 16	3
MaxiCode	1 to 255 (Ignored)	
2D GS1 DataBar	2 to 8	2
Aztec Code	2 to 16	3
DataMatrix	2 to 16	3

***height***

Specifies the module height.

An integer from 1 to 255 can be specified.

When "EPOS2\_PARAM\_UNSPECIFIED" is specified, the current setting is retained.

The range differs depending on the 2D symbol type.

2D symbol type	Valid value	Default value
PDF417	2 to 8 (Scaling factor for width)	3
QR Code		
MaxiCode		
2D GS1 DataBar	1 to 255 (Ignored)	
Aztec Code		
DataMatrix		

QR Code, MaxiCode, 2D GS1 DataBar, Aztec Code, and DataMatrix are ignored.

***size***

Specifies the maximum size of the 2D symbol.

An integer from 0 to 65535 can be specified.

When "EPOS2\_PARAM\_UNSPECIFIED" is specified, the current setting is retained.

The range differs depending on the 2D symbol type.

2D symbol type		Default value	Description
PDF417		0 (auto)	Specifies the number of code words per stage.
QR Code		0 to 65535 (Ignored)	
MaxiCode		0 to 65535 (Ignored)	
2D GS1 DataBar	Expanded Stacked	0 (auto)	Specifies the maximum width of the 2D symbol (106 or more).
	Other	0 to 65535 (Ignored)	
Aztec Code		0 to 65535 (Ignored)	
DataMatrix		0 to 65535 (Ignored)	

#### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

#### Supplementary explanation

- ❑ Use this API at the "beginning of a line."
- ❑ When the 2D symbol data specified in data does not conform to the 2D symbol type specified in type, an error will not be returned in the return value and the 2D symbol will not be printed.
- ❑ During ESC/POS control, specifying values outside the valid ranges for the width and height parameters results in default value printing.
- ❑ During ePOS-Device XML control, specifying values outside the valid ranges for the width and height parameters causes [sendData](#) to return EPOS2\_ERR\_FAILURE.

## addHLine

Adds a horizontal ruled line print command to the command buffer.

Draws a horizontal ruled line.

### Syntax

- (int) addHLine:(long)x1 x2:(long)x2 lineStyle:(int)lineStyle;

### Parameter

#### x1

Specifies the start position to draw a horizontal ruled line (in dots).

Value	Description
Integer from 0 to 65535	Start position to draw a horizontal ruled line (in dots)

#### x2

Specifies the end position to draw a horizontal ruled line (in dots).

Value	Description
Integer from 0 to 65535	End position to draw a horizontal ruled line (in dots)

#### lineStyle

Specifies the ruled line type.

Value	Description
EPOS2_LINE_THIN	Solid line: Thin
EPOS2_LINE_MEDIUM	Solid line: Medium
EPOS2_LINE_THICK	Solid line: Thick
EPOS2_LINE_THIN_DOUBLE	Double line: Thin
EPOS2_LINE_MEDIUM_DOUBLE	Double line: Medium
EPOS2_LINE_THICK_DOUBLE	Double line: Thick
EPOS2_PARAM_DEFAULT	Specifies the default (solid line: thin).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

---

***Supplementary explanation***

- ❑ This API cannot be used in the page mode.
- ❑ Use [addPageLine](#) to draw a horizontal ruled line in the page mode.

## addVLineBegin

Adds a command to start drawing a vertical ruled line to the command buffer.

Starts drawing a vertical line.

### Syntax

```
- (int) addVLineBegin:(long)x lineStyle:(int) lineStyle  
lineId:(int *)lineId;
```

### Parameter

#### x1

Specifies the start position to draw a vertical ruled line (in dots).

Value	Description
Integer from 0 to 65535	Start position to draw a vertical ruled line (in dots)

#### lineStyle

Specifies the ruled line type.

Value	Description
EPOS2_LINE_THIN	Solid line: Thin
EPOS2_LINE_MEDIUM	Solid line: Medium
EPOS2_LINE_THICK	Solid line: Thick
EPOS2_LINE_THIN_DOUBLE	Double line: Thin
EPOS2_LINE_MEDIUM_DOUBLE	Double line: Medium
EPOS2_LINE_THICK_DOUBLE	Double line: Thick
EPOS2_PARAM_DEFAULT	Specifies the default (solid line: thin).

#### lineId

Returns the ID of the ruled line printed by this API.

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- This API cannot be used in the page mode.

- ❑ Use [addPageLine](#) to draw a vertical ruled line in the page mode.
- ❑ This API draws a vertical ruled line until stopped by [addVLineEnd](#).
- ❑ Use this API with the [addVLineEnd](#) API.

## addVLineEnd

Adds a command to stop drawing a vertical ruled line to the command buffer.  
Ends drawing a vertical line.

### Syntax

- (int) addVLineEnd:(int)lineId;

### Parameter

#### *lineId*

Specifies the line ID acquired by [addVLineBegin](#).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ This API cannot be used in the page mode.
- ❑ Use [addPageLine](#) to draw a vertical ruled line in the page mode.
- ❑ Drawing of the vertical ruled line continues until stopped by this API.
- ❑ Use this API with the [addVLineBegin](#) API.

## addPageBegin

Adds a page mode start command to the command buffer.

Starts processing in the page mode.

### Syntax

```
- (int) addPageBegin;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ The page mode does not support multi-gradation printing.
- ❑ Use this API with the [addPageEnd](#) API.

## addPageEnd

Adds a page mode end command to the command buffer.  
Ends processing in the page mode.

### Syntax

```
- (int) addPageEnd;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ The page mode does not support multi-gradation printing.
- ❑ Use this API with the [addPageBegin](#) API.

## addPageArea

Adds page mode print area setting to the command buffer.

Specifies the page mode print area (coordinates). Following this API, call an [addText](#) API to specify print data such as the API.

### Syntax

```
- (int) addPageArea:(long)x y:(long)y width:(long)width
height:(long)height;
```

### Parameter

#### x

Specifies the horizontal origin (in dots).

Value	Description
Integer from 0 to 65535	Horizontal origin (in dots)

"0" specifies the leftmost position of the printable area of the printer.

#### y

Specifies the vertical origin (in dots).

Value	Description
Integer from 0 to 65535	Vertical origin (in dots)

"0" specifies the position where paper is not fed.

#### width

Specifies the width of a print area (in dots).

Value	Description
Integer from 1 to 65535	Width of a print area (in dots)

#### height

Specifies the height of a print area (in dots).

Value	Description
Integer from 1 to 65535	Height of a print area (in dots)

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.

Error status	Description
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

#### ***Supplementary explanation***

- ❑ Define the print area in accordance with the contents to print. If the print data does not fit within the print area, the printed contents will be truncated.
- ❑ Use this API between the [addPageBegin](#) and [addPageEnd](#) APIs.
- ❑ Specify the width and height of the print area in accordance with the print direction setting. Otherwise the print data may be truncated. The print direction is specified by [addPageDirection](#).
- ❑ This API does not work in the standard mode.

## addPageDirection

Adds page mode print direction setting to the command buffer.

Specifies the print direction in the page mode.

### Syntax

```
- (int) addPageDirection:(int) direction;
```

### Parameter

#### *direction*

Specifies the print direction in the page mode.

Value	Description
EPOS2_DIRECTION_LEFT_TO_RIGHT (default)	Do not rotate data. (Data is printed rightward from the upper-left position.)
EPOS2_DIRECTION_BOTTOM_TO_TOP	Rotate data counterclockwise by 90 degrees. (Data is printed upward from the lower-left position.)
EPOS2_DIRECTION_RIGHT_TO_LEFT	Rotate data by 180 degrees. (Data is printed leftward from the lower-right position.)
EPOS2_DIRECTION_TOP_TO_BOTTOM	Rotate data clockwise by 90 degrees. (Data is printed downward from the upper-right position.)
EPOS2_PARAM_DEFAULT	Specifies the default value (no rotation).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ This API does not work in the standard mode.
- ❑ Use this API between the [addPageBegin](#) and [addPageEnd](#) APIs.

## addPagePosition

Adds print position setting within the print area in the page mode to the command buffer.

Specifies the print start position (coordinates) within the area specified by the [addPageArea](#) API.

### Syntax

```
- (int) addPagePosition:(long)x y:(long)y;
```

### Parameter

#### x

Specifies the horizontal print position (in dots).

Value	Description
Integer from 0 to 65535	Horizontal print position (in dots)
EPOS2_PARAM_UNSPECIFIED	Not specify.

#### y

Specifies the vertical print position (in dots).

Value	Description
Integer from 0 to 65535	Vertical print position (in dots)
EPOS2_PARAM_UNSPECIFIED	Not specify.

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ This API does not work in the standard mode.
- ❑ Use this API between the [addPageBegin](#) and [addPageEnd](#) APIs.
- ❑ Specify the print start position (coordinates) in accordance with the contents to print. See below.

Print data	Specification method
When printing a text string	Specify the leftmost position of the baseline for the first character. This can be omitted when printing data with the standard size in left justification. When printing a double-height character, set y to 42 or larger.

Print data	Specification method
When printing a barcode	Specify the lower-left position of the symbol. Specify the height of the barcode in y.
When printing graphics/logo	Specify the lower-left position of the graphic data. Specify the height of the graphic data in y.
When printing a 2D symbol	Specify the upper-left position of the symbol. This can be omitted when printing from the upper-left position.

- If all the parameters are set to "EPOS2\_PARAM\_UNSPECIFIED," EPOS2\_ERR\_PARAM will be returned.

## addPageLine

Adds a page mode line draw command to the command buffer.

Draws a line in the page mode.

### Syntax

```
- (int) addPageLine:(long)x1 y1:(long)y1 x2:(long)x2
y2:(long)y2 lineStyle:(int) lineStyle;
```

### Parameter

#### x1

Specifies the horizontal position to start drawing (in dots).

Value	Description
Integer from 0 to 65535	Horizontal position to start drawing (in dots)

#### y1

Specifies the vertical position to start drawing (in dots).

Value	Description
Integer from 0 to 65535	Vertical position to start drawing (in dots)

#### x2

Specifies the horizontal position to end drawing (in dots).

Value	Description
Integer from 0 to 65535	Horizontal position to end drawing (in dots)

#### y2

Specifies the vertical position to end drawing (in dots).

Value	Description
Integer from 0 to 65535	Vertical position to end drawing (in dots)

### lineStyle

Specifies the ruled line type.

Value	Description
EPOS2_LINE_THIN	Solid line: Thin
EPOS2_LINE_MEDIUM	Solid line: Medium
EPOS2_LINE_THICK	Solid line: Thick
EPOS2_LINE_THIN_DOUBLE	Double line: Thin
EPOS2_LINE_MEDIUM_DOUBLE	Double line: Medium

Value	Description
EPOS2_LINE_THICK_DOUBLE	Double line: Thick
EPOS2_PARAM_DEFAULT	Specifies the default (solid line: thin).

***Return value***

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

- ❑ This API does not work in the standard mode.
- ❑ A diagonal line cannot be drawn.
- ❑ Use this API between the [addPageBegin](#) and [addPageEnd](#) APIs.

## addPageRectangle

Adds a page mode rectangle draw command to the command buffer.

Draws a rectangle in the page mode.

### Syntax

```
- (int) addPageRectangle:(long)x1 y1:(long)y1 x2:(long)x2
y2:(long)y2 lineStyle:(int) lineStyle;
```

### Parameter

#### x1

Specifies the horizontal position to start drawing (in dots).

Value	Description
Integer from 0 to 65535	Horizontal position to start drawing (in dots)

#### y1

Specifies the vertical position to start drawing (in dots).

Value	Description
Integer from 0 to 65535	Vertical position to start drawing (in dots)

#### x2

Specifies the horizontal position to end drawing (in dots).

Value	Description
Integer from 0 to 65535	Horizontal position to end drawing (in dots)

#### y2

Specifies the vertical position to end drawing (in dots).

Value	Description
Integer from 0 to 65535	Vertical position to end drawing (in dots)

### Style

Specifies the ruled line type.

Value	Description
EPOS2_LINE_THIN	Solid line: Thin
EPOS2_LINE_MEDIUM	Solid line: Medium
EPOS2_LINE_THICK	Solid line: Thick
EPOS2_LINE_THIN_DOUBLE	Double line: Thin
EPOS2_LINE_MEDIUM_DOUBLE	Double line: Medium

Value	Description
EPOS2_LINE_THICK_DOUBLE	Double line: Thick
EPOS2_PARAM_DEFAULT	Specifies the default (solid line: thin).

***Return value***

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

- This API does not work in the standard mode.
- Use this API between the [addPageBegin](#) and [addPageEnd](#) APIs.

## addCut

Adds a sheet cut command to the command buffer.

Sets how to cut paper.

### Syntax

- (int) addCut:(int)type;

### Parameter

#### type

Specifies how to cut paper.

Value	Description
EPOS2_CUT_FEED	Feed cut (cut the sheet after feeding paper).
EPOS2_CUT_NO_FEED	Cut without feed (cut the sheet without feeding paper).
EPOS2_CUT_RESERVE	Cut reservation (print the following texts and cut the sheet at the cutting position).
EPOS2_PARAM_DEFAULT	Specifies the default (feed cut (cut the sheet after feeding paper)).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ This API cannot be used in the page mode.
- ❑ If print data is not specified after the cut reservation (EPOS2\_CUT\_RESERVE), the printer will execute the cut after feeding paper up to the position of the reserved cut.
- ❑ Depending on the printer, it may wait approximately 2 seconds for the print data after the cut reservation (EPOS2\_CUT\_RESERVE) before starting the paper feed operation.
- ❑ When using the cut reservation (EPOS2\_CUT\_RESERVE), set the length of one receipt to at least 20 mm.

## addPulse

Adds a drawer kick command to the command buffer.

Sets the drawer kick.

### Syntax

```
- (int) addPulse:(int)drawer time:(int)time;
```

### Parameter

#### **drawer**

Specifies the drawer kick connector.

Value	Description
EPOS2_DRAWER_2PIN	Drawer kick connector pin No.2
EPOS2_DRAWER_5PIN	Drawer kick connector pin No.5
EPOS2_PARAM_DEFAULT	Specifies the default (drawer kick connector pin No.2).

#### **time**

Specifies the on time of the drawer kick signal.

Value	Description
EPOS2_PULSE_100	100-msec signal
EPOS2_PULSE_200	200-msec signal
EPOS2_PULSE_300	300-msec signal
EPOS2_PULSE_400	400-msec signal
EPOS2_PULSE_500	500-msec signal
EPOS2_PARAM_DEFAULT	Specifies the default (100-msec signal).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ This API cannot be used in the page mode.
- ❑ The drawer and optional external buzzer cannot be connected simultaneously.

- ❑ Do not open the drawer repeatedly for a short time. The drawer may be damaged due to too much load.
- ❑ For built-in buzzer equipped models of the following printers, sounding the buzzer is possible using the pulse output commands for drawer kick connectors.

For details on controlling the built-in buzzer, refer to the Technical Reference Guide of the printer.

- TM-T70
- TM-T70II
- TM-T82II
- TM-T82III
- TM-T88IV
- TM-T88V
- TM-T88VI
- TM-T82II-i
- TM-T83II-i
- TM-T88VI-iHUB
- TM-L90

## addSound

Adds buzzer sound setting to the command buffer.

Sets the buzzer.

### Syntax

```
- (int) addSound:(int)pattern repeat:(long)repeat
cycle:(long)cycle;
```

### Parameter

#### **pattern**

Specifies the buzzer tone.

Value	Description
EPOS2_PATTERN_NONE	Stop (Mobile models)
EPOS2_PATTERN_NONE	Stop. However, the buzzer already sounding does not stop. (Except for Mobile models)
EPOS2_PATTERN_A	Pattern A (optional external buzzer)
EPOS2_PATTERN_B	Pattern B (optional external buzzer)
EPOS2_PATTERN_C	Pattern C (optional external buzzer)
EPOS2_PATTERN_D	Pattern D (optional external buzzer)
EPOS2_PATTERN_E	Pattern E (optional external buzzer)
EPOS2_PATTERN_ERROR	Error sound pattern (optional external buzzer)
EPOS2_PATTERN_PAPER_EMPTY	Paper empty sound pattern (optional external buzzer)
EPOS2_PATTERN_1	Pattern 1 (built-in buzzer)
EPOS2_PATTERN_2	Pattern 2 (built-in buzzer)
EPOS2_PATTERN_3	Pattern 3 (built-in buzzer)
EPOS2_PATTERN_4	Pattern 4 (built-in buzzer)
EPOS2_PATTERN_5	Pattern 5 (built-in buzzer)
EPOS2_PATTERN_6	Pattern 6 (built-in buzzer)
EPOS2_PATTERN_7	Pattern 7 (built-in buzzer)
EPOS2_PATTERN_8	Pattern 8 (built-in buzzer)
EPOS2_PATTERN_9	Pattern 9 (built-in buzzer)
EPOS2_PATTERN_10	Pattern 10 (built-in buzzer)
EPOS2_PARAM_DEFAULT	Specifies the default (Pattern A).

***repeat***

Specifies the repeat count.

Value	Description
0	Unlimited
1 to 255	1 to 255 times
EPOS2_PARAM_DEFAULT	Specifies the default (once).

***cycle***

Specifies the buzzer sound interval (in milliseconds).

Value	Description
1000 to 25500	1000 to 25500 milliseconds
EPOS2_PARAM_DEFAULT	Specifies the default (1000 milliseconds).

Effective for Patterns 1 to 10 only.

***Return value***

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

- ❑ This API cannot be used in the page mode.
- ❑ The drawer and optional external buzzer cannot be connected simultaneously.
- ❑ This API cannot be used if the printer is not equipped with a buzzer.
- ❑ The timing to receive the callback of sendData API varies by printer.  
Mobile models: [sendData](#) After running API  
Other than Mobile models: After buzzer stops sounding
- ❑ For built-in buzzer equipped models of the following printers, sounding the buzzer is possible using [addPulse](#).
  - TM-T70
  - TM-T70II
  - TM-T82II
  - TM-T82III
  - TM-T88IV
  - TM-T88V
  - TM-T88VI
  - TM-T82II-i

- TM-T83II-i
- TM-T88VI-iHUB
- TM-L90

## addFeedPosition

Adds a label sheet/black mark sheet feed command to the command buffer.

### Syntax

```
- (int) addFeedPosition:(int)position;
```

### Parameter

#### **position**

Specifies the paper feed position.

Value	Description
EPOS2_FEED_PEELING	Feed the sheet to the peeling position.
EPOS2_FEED_CUTTING	Feed the sheet to the cut position.
EPOS2_FEED_CURRENT_TOF	Feed the sheet to the top of the current label.
EPOS2_FEED_NEXT_TOF	Feed the sheet to the top of the next label.

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ The label sheet/black mark sheet can be controlled in the standard mode.
- ❑ This API cannot be used in the page mode.

## addLayout

Adds layout setting of the label sheet/black mark sheet to the command buffer.

### Syntax

```
- (int) addLayout:(int)type width:(long)width
height:(long)height marginTop:(long)marginTop
marginBottom:(long)marginBottom offsetCut:(long)offsetCut
offsetLabel:(long)offsetLabel;
```

### Parameter

#### **type**

Specifies the paper type.

Value	Description
EPOS2_LAYOUT_RECEIPT	Receipt (without black mark)
EPOS2_LAYOUT_RECEIPT_BM	Receipt (with black mark)
EPOS2_LAYOUT_LABEL	Label sheet (without black mark)
EPOS2_LAYOUT_LABEL_BM	Label sheet (with black mark)

#### **width**

Specifies the paper width (in 0.1mm units).

Value		Description
TM Printer Models	POS Terminal Model	
Integer from 1 to 10000	Integer from 290 to 600	Paper width (in 0.1 mm units)

#### **height**

Specifies the distance from the print reference mark to the next print reference mark (in 0.1mm units).

Sheet type	Value		Description
	TM Printer Models	POS Terminal Model	
Receipt (without black mark)	0	0	No distance specified (auto)
Receipt (with black mark)	0 to 10000	0 to 1550	Distance between the top edges of two consecutive black marks.
Label sheet (without black mark)			Distance between the top edges of two consecutive labels
Label sheet (with black mark)			Distance between the bottom edges of two consecutive black marks.

***marginTop***

Specifies the distance from the print reference mark to the top of the sheet (in 0.1mm units).

Sheet type	Value		Description
	TM Printer Models	POS Terminal Model	
Receipt (without black mark)	0	0	No distance specified (auto)
Receipt (with black mark)	-9999 to 10000	-150 to 1500	Distance from the top edge of the black mark to the top of the sheet
Label sheet (without black mark)	0 to 10000	0 to 1500	Distance from the top edge of the label to the top of the sheet
Label sheet (with black mark)	-9999 to 10000	-15 to 1500	Distance from the bottom edge of the black mark to the top of the sheet

***marginBottom***

Specifies the distance from the eject reference mark to the bottom edge of the printable area (in 0.1mm units).

Sheet type	Value		Description
	TM Printer Models	POS Terminal Model	
Receipt (without black mark)	0	0	No distance specified (auto)
Receipt (with black mark)	0	0	No distance specified (auto)
Label sheet (without black mark)	-9999 to 0	-15 to 0	Distance from the bottom edge of the label (A positive value represents the paper feed direction.)
Label sheet (with black mark)	-9999 to 10000	-15 to 15	Distance from the top of the black mark (A positive value represents the paper feed direction.)

***offsetCut***

Specifies the distance from the eject reference mark to the cut position (in 0.1mm units).

Sheet type	Value		Description
	TM Printer Models	POS Terminal Model	
Receipt (without black mark)	0	0	No distance specified (auto)
Receipt (with black mark)	-9999 to 10000	-290 to 50	Distance from the top edge of the black mark to the cut position
Label sheet (without black mark)	0 to 10000	0 to 50	Distance from the bottom edge of the label to the cut position
Label sheet (with black mark)	0 to 10000	0 to 50	Distance from the top edge of the black mark to the cut position

***offsetLabel***

Specifies the distance from the eject reference mark to the bottom edge of the label (in 0.1mm units).

Sheet type	Value		Description
	TM Printer Models	POS Terminal Model	
Receipt (without black mark)	0	0	No distance specified (auto)
Receipt (with black mark)	0	0	No distance specified (auto)
Label sheet (without black mark)	0	0	No distance specified (auto)
Label sheet (with black mark)	0 to 10000	0 to 15	Distance from the top edge of the black mark to the bottom edge of a label

***Return value***

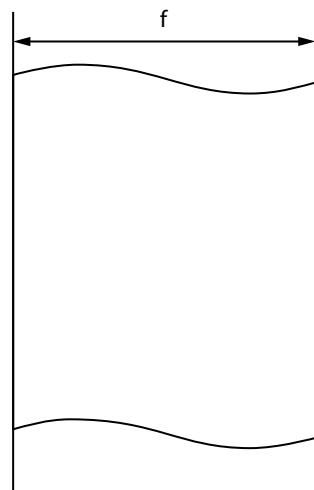
Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

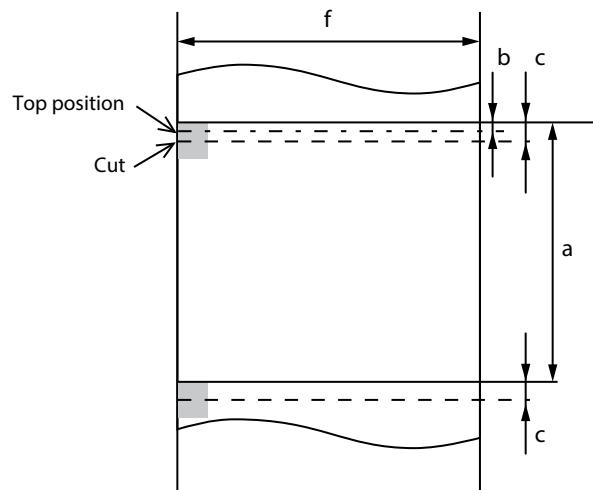
- ❑ This API does not work in the page mode.
- ❑ Available setting values vary by TM printer model. For more details, see the FS (L<Function 33>) command.  
<https://reference.epson-biz.com/pos/reference/>
- ❑ The available parameter values for each type of paper are listed below.  
The following table shows available values for TM printer models, and shows those for POS terminal models in parentheses.

Parameter	Receipt (without black mark)	Label sheet (without black mark)	Label sheet (with black mark)	Receipt (with black mark)	Symbol in dia- gram
width	1 to 10000 (290 to 600)				f
height	0 (0)	0 to 10000 (0 to 1550)		a	
marginTop	0 (0)	0 to 10000 (0 to 1500)	-9999 to 10000 (-15 to 1500)	-9999 to 10000 (-150 to 1500)	b
marginBottom	0 (0)	-9999 to 0 (-15 to 0)	-9999 to 10000 (-15 to 15)	0 (0)	e
offsetCut	0 (0)	0 to 10000 (0 to 50)		-9999 to 10000 (-290 to 50)	c
offsetLabel	0 (0)		0 to 10000 (0 to 15)		d

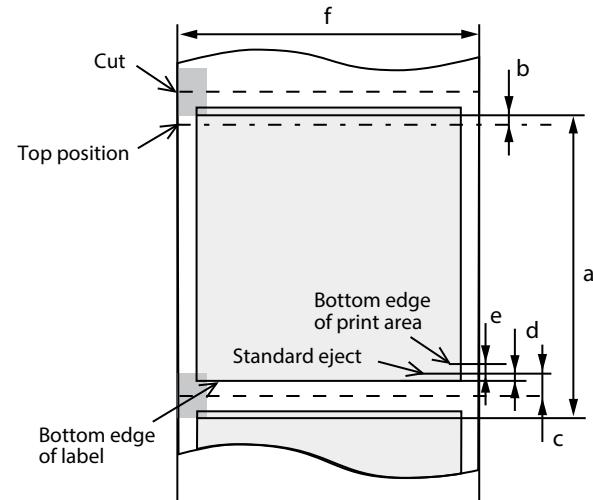
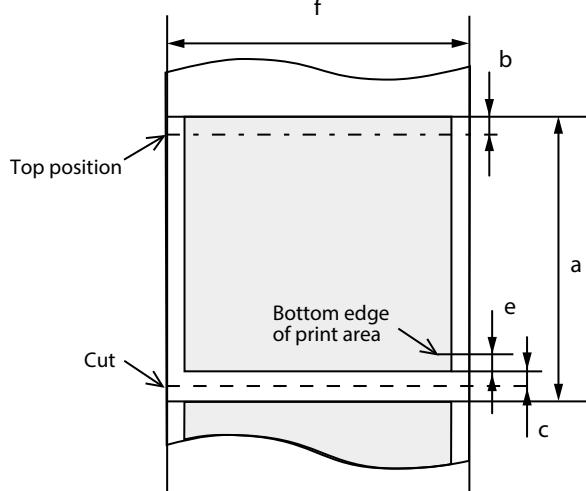
Receipt



&lt;with Black Mark&gt;



Label



## addCommand

Adds a command to the command buffer.

Sends the ESC/POS command.

### Syntax

```
- (int) addCommand:(NSData *)data;
```

### Parameter

#### **data**

Specifies the ESC/POS command.

Specifies the binary data.

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ Refer to the following URL for details of the ESC/POS command.  
[https://reference.epson-biz.com/modules/ref\\_escpos/](https://reference.epson-biz.com/modules/ref_escpos/)
- ❑ Epson ePOS SDK does not check the commands sent using this API.  
If the commands interfere with Epson ePOS SDK operations, other APIs may work wrongly or status values may become invalid.  
This API should be used with a full understanding of ESC/POS commands and the receipt printer specifications.

## getMaintenanceCounter

Acquires the value of the printer's maintenance counter.

The value acquired by this API is notified to the callback method specified in the delegate parameter.

### Syntax

```
- (int) getMaintenanceCounter:(long)timeout
type:(int)Type
delegate:(id<Epos2MaintenanceCounterDelegate>)delegate;
```

### Parameter

#### timeout

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 5000 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

#### type

Specifies the type of maintenance counter to be acquired.

Value	Description
EPOS2_MAINTENANCE_COUNTER_PAPER_FEED	Number of paper feed lines
EPOS2_MAINTENANCE_COUNTER_AUTO_CUTTER	Number of times auto cutter is operated

#### delegate

Registers the callback method that returns the processing result of this API.

```
- (void) onGetMaintenanceCounter:(int)code type:(int)Type
value:(int)value;
```

##### □ code

The processing result is stored.

Error status	Description
EPOS2_CODE_SUCCESS	Processed successfully.
EPOS2_CODE_ERR_AUTORECOVER	Automatic recovery error occurred.
EPOS2_CODE_ERR_COVER_OPEN	Cover open error occurred.
EPOS2_CODE_ERR_CUTTER	Auto cutter error occurred.
EPOS2_CODE_ERR_MECHANICAL	Mechanical error occurred.
EPOS2_CODE_ERR_EMPTY	No paper is left in the roll paper end detector.
EPOS2_CODE_ERR_PARAM	An invalid parameter was passed.

Error status	Description
EPOS2_CODE_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_CODE_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_CODE_ERR_PROCESSING	Could not run the process.
EPOS2_CODE_ERR_ILLEGAL	This API was called while no communication had been started.
EPOS2_CODE_ERR_FAILURE	An unknown error occurred.

**type**

The type of maintenance counter acquired is stored.

**value**

The value of the acquired maintenance counter is stored.

#### **Return value**

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_FAILURE	An unknown error occurred.

#### **Supplementary explanation**

This API cannot be used simultaneously with other APIs.

After executing this API, do not execute any other API until the callback is returned.

Do not turn off the power supply to the printer while executing this API.

This API can be used in the system configuration of the TM printer model and customer display model.  
With the system configuration of the TM-m30 or TM-T88VI + DM-D30 + barcode scanner model, this API can be used when connecting via *Bluetooth*.

This API cannot be used with SSL/TLS communication.

## resetMaintenanceCounter

Resets the value of the printer's maintenance counter.

The value acquired by this API is notified to the callback method specified in the delegate parameter.

### Syntax

```
- (int) resetMaintenanceCounter:(long)timeout
    type:(int)Type
    delegate:(id<Epos2MaintenanceCounterDelegate>)delegate;
```

### Parameter

#### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 5000 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

#### **type**

Specifies the type of maintenance counter to be reset.

Value	Description
EPOS2_MAINTENANCE_COUNTER_PAPER_FEED	Number of paper feed lines
EPOS2_MAINTENANCE_COUNTER_AUTO_CUTTER	Number of times auto cutter is operated

#### **delegate**

Registers the callback method that returns the processing result of this API.

```
- (void) onResetMaintenanceCounter:(int)code type:(int)Type;
```

code

The processing result is stored.

Error status	Description
EPOS2_CODE_SUCCESS	Processed successfully.
EPOS2_CODE_ERR_AUTORECOVER	Automatic recovery error occurred.
EPOS2_CODE_ERR_COVER_OPEN	Cover open error occurred.
EPOS2_CODE_ERR_CUTTER	Auto cutter error occurred.
EPOS2_CODE_ERR_MECHANICAL	Mechanical error occurred.
EPOS2_CODE_ERR_EMPTY	No paper is left in the roll paper end detector.
EPOS2_CODE_ERR_PARAM	An invalid parameter was passed.

Error status	Description
EPOS2_CODE_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_CODE_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_CODE_ERR_PROCESSING	Could not run the process.
EPOS2_CODE_ERR_ILLEGAL	This API was called while no communication had been started.
EPOS2_CODE_ERR_FAILURE	An unknown error occurred.

**type**

The type of maintenance counter reset is stored.

---

#### **Return value**

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed. The conditions to execute this API were not fulfilled.
EPOS2_ERR_FAILURE	An unknown error occurred.

---

#### **Supplementary explanation**

- This API cannot be used simultaneously with other APIs.  
After executing this API, do not execute any other API until the callback is returned.
- Do not turn off the power supply to the printer while executing this API.
- Do not execute this API more than 10 times per day. If executed more than this number of times, the printer may become unable to operate.
- This API can be used in the system configuration of the TM printer model and customer display model.  
With the system configuration of the TM-m30 or TM-T88VI + DM-D30 + barcode scanner model, this API can be used when connecting via *Bluetooth*.
- This API cannot be used with SSL/TLS communication.

## getPrinterSetting

Acquires the set value of the printer setting.

The value acquired by this API is notified to the callback method specified in the delegate parameter.

### Syntax

```
- (int) getPrinterSetting:(long)timeout
type:(int)Type
delegate:(id<Epos2PrinterSettingDelegate>)delegate;
```

### Parameter

#### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 5000 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

#### **type**

Specifies the printer setting item to be acquired.

Value	Description
EPOS2_PRINTER_SETTING_PAPERWIDTH	Paper width
EPOS2_PRINTER_SETTING_PRINTDENSITY	Print density
EPOS2_PRINTER_SETTING_PRINTSPEED	Print speed

#### **delegate**

Registers the callback method that returns the processing result of this API.

```
- (void) onGetPrinterSetting:(int)code type:(int)Type
value:(int)value;
```

code

The processing result is stored.

Error status	Description
EPOS2_CODE_SUCCESS	Processed successfully.
EPOS2_CODE_ERR_AUTORECOVER	Automatic recovery error occurred.
EPOS2_CODE_ERR_COVER_OPEN	Cover open error occurred.
EPOS2_CODE_ERR_CUTTER	Auto cutter error occurred.
EPOS2_CODE_ERR_MECHANICAL	Mechanical error occurred.
EPOS2_CODE_ERR_EMPTY	No paper is left in the roll paper end detector.

Error status	Description
EPOS2_CODE_ERR_PARAM	An invalid parameter was passed.
EPOS2_CODE_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_CODE_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_CODE_ERR_PROCESSING	Could not run the process.
EPOS2_CODE_ERR_ILLEGAL	This API was called while no communication had been started.
EPOS2_CODE_ERR_FAILURE	An unknown error occurred.

**type**

The processing result is stored.

Value	Description
EPOS2_PRINTER_SETTING_PAPERWIDTH	Paper width
EPOS2_PRINTER_SETTING_PRINTDENSITY	Print density
EPOS2_PRINTER_SETTING_PRINTSPEED	Print speed

**value**

The acquired set value of the printer setting is stored.

Value	Description
EPOS2_PRINTER_SETTING_PAPERWIDTH58_0	Paper width 58 mm
EPOS2_PRINTER_SETTING_PAPERWIDTH60_0	Paper width 60 mm
EPOS2_PRINTER_SETTING_PAPERWIDTH80_0	Paper width 80 mm
EPOS2_PRINTER_SETTING_PRINTDENSITYDIP	Print density DIP switch setting
EPOS2_PRINTER_SETTING_PRINTDENSITY70	Print density 70%
EPOS2_PRINTER_SETTING_PRINTDENSITY75	Print density 75%
EPOS2_PRINTER_SETTING_PRINTDENSITY80	Print density 80%
EPOS2_PRINTER_SETTING_PRINTDENSITY85	Print density 85%
EPOS2_PRINTER_SETTING_PRINTDENSITY90	Print density 90%
EPOS2_PRINTER_SETTING_PRINTDENSITY95	Print density 95%
EPOS2_PRINTER_SETTING_PRINTDENSITY100	Print density 100%
EPOS2_PRINTER_SETTING_PRINTDENSITY105	Print density 105%
EPOS2_PRINTER_SETTING_PRINTDENSITY110	Print density 110%
EPOS2_PRINTER_SETTING_PRINTDENSITY115	Print density 115%
EPOS2_PRINTER_SETTING_PRINTDENSITY120	Print density 120%

Value	Description
EPOS2_PRINTER_SETTING_PRINTDENSITY125	Print density 125%
EPOS2_PRINTER_SETTING_PRINTDENSITY130	Print density 130%
EPOS2_PRINTER_SETTING_PRINTSPEED1	Print speed level 1
EPOS2_PRINTER_SETTING_PRINTSPEED2	Print speed level 2
EPOS2_PRINTER_SETTING_PRINTSPEED3	Print speed level 3
EPOS2_PRINTER_SETTING_PRINTSPEED4	Print speed level 4
EPOS2_PRINTER_SETTING_PRINTSPEED5	Print speed level 5
EPOS2_PRINTER_SETTING_PRINTSPEED6	Print speed level 6
EPOS2_PRINTER_SETTING_PRINTSPEED7	Print speed level 7
EPOS2_PRINTER_SETTING_PRINTSPEED8	Print speed level 8
EPOS2_PRINTER_SETTING_PRINTSPEED9	Print speed level 9
EPOS2_PRINTER_SETTING_PRINTSPEED10	Print speed level 10
EPOS2_PRINTER_SETTING_PRINTSPEED11	Print speed level 11
EPOS2_PRINTER_SETTING_PRINTSPEED12	Print speed level 12
EPOS2_PRINTER_SETTING_PRINTSPEED13	Print speed level 13
EPOS2_PRINTER_SETTING_PRINTSPEED14	Print speed level 14

#### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_FAILURE	An unknown error occurred.

#### Supplementary explanation

- ❑ This API cannot be used simultaneously with other APIs.  
After executing this API, do not execute any other API until the callback is returned.
- ❑ Do not turn off the power supply to the printer while executing this API.
- ❑ This API can be used in the system configuration of the TM printer model and customer display model.  
With the system configuration of the TM-m30 or TM-T88VI + DM-D30 + barcode scanner model, this API can be used when connecting via *Bluetooth*.
- ❑ This API cannot be used with SSL/TLS communication.

## setPrinterSetting

Changes the set value of the printer setting.

The value acquired by this API is notified to the callback method specified in the delegate parameter.

### Syntax

```
- (int) setPrinterSetting:(long)timeout
    setttingList:(NSDictionary *)list
    delegate:(id<Epos2PrinterSettingDelegate>)delegate;
```

### Parameter

#### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 5000 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

#### **list**

Specifies the list combining the changed printer setting item (type) and the set value (value).

#### **type**

Specifies the printer setting item to be changed.

Value	Description
EPOS2_PRINTER_SETTING_PAPERWIDTH	Paper width
EPOS2_PRINTER_SETTING_PRINTDENSITY	Print density
EPOS2_PRINTER_SETTING_PRINTSPEED	Print speed

#### **value**

Specifies the set value of the printer setting to be changed.

Value	Description
EPOS2_PRINTER_SETTING_PAPERWIDTH58_0	Paper width 58 mm
EPOS2_PRINTER_SETTING_PAPERWIDTH60_0	Paper width 60 mm
EPOS2_PRINTER_SETTING_PAPERWIDTH80_0	Paper width 80 mm
EPOS2_PRINTER_SETTING_PRINTDENSITYDIP	Print density DIP switch setting
EPOS2_PRINTER_SETTING_PRINTDENSITY70	Print density 70%
EPOS2_PRINTER_SETTING_PRINTDENSITY75	Print density 75%
EPOS2_PRINTER_SETTING_PRINTDENSITY80	Print density 80%
EPOS2_PRINTER_SETTING_PRINTDENSITY85	Print density 85%

Value	Description
EPOS2_PRINTER_SETTING_PRINTDENSITY90	Print density 90%
EPOS2_PRINTER_SETTING_PRINTDENSITY95	Print density 95%
EPOS2_PRINTER_SETTING_PRINTDENSITY100	Print density 100%
EPOS2_PRINTER_SETTING_PRINTDENSITY105	Print density 105%
EPOS2_PRINTER_SETTING_PRINTDENSITY110	Print density 110%
EPOS2_PRINTER_SETTING_PRINTDENSITY115	Print density 115%
EPOS2_PRINTER_SETTING_PRINTDENSITY120	Print density 120%
EPOS2_PRINTER_SETTING_PRINTDENSITY125	Print density 125%
EPOS2_PRINTER_SETTING_PRINTDENSITY130	Print density 130%
EPOS2_PRINTER_SETTING_PRINTSPEED1	Print speed level 1
EPOS2_PRINTER_SETTING_PRINTSPEED2	Print speed level 2
EPOS2_PRINTER_SETTING_PRINTSPEED3	Print speed level 3
EPOS2_PRINTER_SETTING_PRINTSPEED4	Print speed level 4
EPOS2_PRINTER_SETTING_PRINTSPEED5	Print speed level 5
EPOS2_PRINTER_SETTING_PRINTSPEED6	Print speed level 6
EPOS2_PRINTER_SETTING_PRINTSPEED7	Print speed level 7
EPOS2_PRINTER_SETTING_PRINTSPEED8	Print speed level 8
EPOS2_PRINTER_SETTING_PRINTSPEED9	Print speed level 9
EPOS2_PRINTER_SETTING_PRINTSPEED10	Print speed level 10
EPOS2_PRINTER_SETTING_PRINTSPEED11	Print speed level 11
EPOS2_PRINTER_SETTING_PRINTSPEED12	Print speed level 12
EPOS2_PRINTER_SETTING_PRINTSPEED13	Print speed level 13
EPOS2_PRINTER_SETTING_PRINTSPEED14	Print speed level 14

**delegate**

Registers the callback method that returns the processing result of this API.

- **(void) onSetPrinterSetting:(int)code;**

code

The processing result is stored.

Error status	Description
EPOS2_CODE_SUCCESS	Processed successfully.
EPOS2_CODE_ERR_AUTORECOVER	Automatic recovery error occurred.

Error status	Description
EPOS2_CODE_ERR_COVER_OPEN	Cover open error occurred.
EPOS2_CODE_ERR_CUTTER	Auto cutter error occurred.
EPOS2_CODE_ERR_MECHANICAL	Mechanical error occurred.
EPOS2_CODE_ERR_EMPTY	No paper is left in the roll paper end detector.
EPOS2_CODE_ERR_PARAM	An invalid parameter was passed.
EPOS2_CODE_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_CODE_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_CODE_ERR_PROCESSING	Could not run the process.
EPOS2_CODE_ERR_ILLEGAL	This API was called while no communication had been started.
EPOS2_CODE_ERR_FAILURE	An unknown error occurred.

#### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_FAILURE	An unknown error occurred.

#### Supplementary explanation

- ❑ This API cannot be used simultaneously with other APIs.  
After executing this API, do not execute any other API until the callback is returned.
- ❑ Do not turn off the power supply to the printer while executing this API.
- ❑ If communication with the printer is disconnected during execution of this API, the printer may become unable to operate. In such a case, turn the power supply to the printer off and then on again.
- ❑ Communication with the printer disconnects as the printer automatically restarts during execution of this API. Reconnect as necessary.  
In a network environment that uses DHCP, the IP address may change due to restart of the printer.  
In such a case, search for the printer using [Epos2Discovery class](#) and reconnect.
- ❑ This API can be used in the system configuration of the TM printer model and customer display model.  
With the system configuration of the TM-m30 or TM-T88VI + DM-D30 + barcode scanner model, this API can be used when connecting via *Bluetooth*.

## forceRecover

Forcibly sends the error recovery command from a recoverable error status (example: auto cutter error).

For details on recoverable errors, refer to the Technical Reference Guide of each printer.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.

---

### Syntax

- (int) forceRecover:(long) timeout;

---

#### Parameter

##### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 0 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

---

#### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

---

#### Supplementary explanation

- ❑ After recovering from a recoverable error, the buffer of the printer is reset.
- ❑ For TM-H6000V, the “Command execution during offline” setting must be enabled.  
Refer to TM-H6000V Utility User’s Manual for more information.
- ❑ Available during ePOS-Device XML control.

## forcePulse

Forcibly sends the drawer kick command.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.

### Syntax

```
- (int) forcePulse:(int)drawer pulseTime:(int)pulseTime
               timeout:(long)timeout;
```

#### Parameter

##### **drawer**

Specifies the drawer kick connector.

Value	Description
EPOS2_DRAWER_2PIN	Drawer kick connector pin No.2
EPOS2_DRAWER_5PIN	Drawer kick connector pin No.5
EPOS2_PARAM_DEFAULT	Specifies the default (drawer kick connector pin No.2).

##### **time**

Specifies the on time of the drawer kick signal.

Value	Description
EPOS2_PULSE_100	100-msec signal
EPOS2_PULSE_200	200-msec signal
EPOS2_PULSE_300	300-msec signal
EPOS2_PULSE_400	400-msec signal
EPOS2_PULSE_500	500-msec signal
EPOS2_PARAM_DEFAULT	Specifies the default (100-msec signal).

##### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 0 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

---

**Return value**

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

---

**Supplementary explanation**

- ❑ The drawer and optional external buzzer cannot be connected simultaneously.
- ❑ For TM-H6000V, the “Command execution during offline” setting must be enabled.  
Refer to TM-H6000V Utility User’s Manual for more information.
- ❑ Available during ePOS-Device XML control.

## forceStopSound

Forcibly sends the buzzer sound command.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.

### Syntax

---

- (int) forceStopSound:(long)timeout;

---

### Parameter

#### timeout

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 0 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

---

### Supplementary explanation

- ❑ The drawer and optional external buzzer cannot be connected simultaneously.
- ❑ This API cannot be used if the printer is not equipped with a buzzer.
- ❑ For TM-H6000V, the “Command execution during offline” setting must be enabled.  
Refer to TM-H6000V Utility User’s Manual for more information.
- ❑ Available during ePOS-Device XML control.

## forceCommand

Forcibly sends the ESC/POS command.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.

### Syntax

```
- (int) forceCommand:(NSData *)data timeout:(long)timeout;
```

### Parameter

#### **data**

Forcibly sends the ESC/POS command.

Specifies the binary data.

#### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 0 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

### Supplementary explanation

- ❑ For TM-H6000V, the “Command execution during offline” setting must be enabled.  
Refer to TM-H6000V Utility User’s Manual for more information.
- ❑ Available during ePOS-Device XML control.

## forceReset

Forcibly sends the printer reset command.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.

### Syntax

---

```
- (int) forceReset:(long)timeout;
```

---

### Parameter

#### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 0 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

---

### Supplementary explanation

- ❑ For TM-H6000V, the “Command execution during offline” setting must be enabled.  
Refer to TM-H6000V Utility User’s Manual for more information.
- ❑ Available during ePOS-Device XML control.

## setStatusChangeEventDelegate

Registers a callback method for a status change event.

### Syntax

```
- (void) setStatusChangeEventDelegate:  
(id<Epos2PtrStatusChangeDelegate>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2PtrStatusChangeDelegate protocol.

### Protocol declaration

```
@protocol Epos2PtrStatusChangeDelegate <NSObject>  
@required  
- (void) onPtrStatusChange:(Epos2Printer *)printerObj  
eventType:(int) eventType;  
@end
```

### Parameter

#### **printerObj**

The callback source object is stored.

#### **eventType**

The type of the event that occurred is stored.

Event type	Description
EPOS2_EVENT_ONLINE	Online
EPOS2_EVENT_OFFLINE	Offline
EPOS2_EVENT_POWER_OFF	Power off
EPOS2_EVENT_COVER_CLOSE	Cover close
EPOS2_EVENT_COVER_OPEN	Cover open
EPOS2_EVENT_PAPER_OK	Paper remains.
EPOS2_EVENT_PAPER_NEAR_END	Paper has almost run out.
EPOS2_EVENT_PAPER_EMPTY	Paper has run out.
EPOS2_EVENT_DRAWER_HIGH	Drawer kick connector pin No.3 status = "H"
EPOS2_EVENT_DRAWER_LOW	Drawer kick connector pin No.3 status = "L"
EPOS2_EVENT_BATTERY_ENOUGH	Battery is enough.
EPOS2_EVENT_BATTERY_EMPTY	Battery has run out.

---

***Supplementary explanation***

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.

## setReceiveEventDelegate

Registers a callback method for a response document reception event.

### Syntax

```
- (void)
setReceiveEventDelegate:(id<Epos2PtrReceiveDelegate>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2PtrReceiveDelegate protocol.

### Protocol declaration

```
@protocol Epos2PtrReceiveDelegate <NSObject>
@required
- (void)onPtrReceive:(Epos2Printer *)printerObj
code:(int)code status:(Epos2PrinterStatusInfo *)status
printJobId:(NSString *)printJobId;
@end
```

### Parameter

#### **printerObj**

The callback source object is stored.

#### **code**

The processing result is stored.

Error status	Description
EPOS2_CODE_SUCCESS	Print succeeded.
EPOS2_CODE_PRINTING	Printing
EPOS2_CODE_ERR_AUTORECOVER	Automatic recovery error occurred.
EPOS2_CODE_ERR_COVER_OPEN	Cover open error occurred.
EPOS2_CODE_ERR_CUTTER	Auto cutter error occurred.
EPOS2_CODE_ERR_MECHANICAL	Mechanical error occurred.
EPOS2_CODE_ERR_EMPTY	No paper is left in the roll paper end detector.
EPOS2_CODE_ERR_UNRECOVERABLE	Unrecoverable error occurred.
EPOS2_CODE_ERR_FAILURE	Error exists in the requested document syntax.
EPOS2_CODE_ERR_NOT_FOUND	Printer specified by the device ID does not exist.
EPOS2_CODE_ERR_SYSTEM	Error occurred with the printing system.

Error status	Description
EPOS2_CODE_ERR_PORT	Error was detected with the communication port.
EPOS2_CODE_ERR_TIMEOUT	Print timeout occurred.
EPOS2_CODE_ERR_JOB_NOT_FOUND	Specified print job ID does not exist.
EPOS2_CODE_ERR_SPOOLER	Print queue is full.
EPOS2_CODE_ERR_BATTERY_LOW	Battery has run out.
EPOS2_CODE_ERR_TOO_MANY_REQUESTS	The number of print jobs sent to the printer has exceeded the allowable limit.
EPOS2_CODE_ERR_REQUEST_ENTITY_TOO_LARGE	The size of the print job data exceeds the capacity of the printer.

***status***

Status at the timing when the process was run is stored as the `Epos2PrinterStatusInfo` type.

***printJobId***

- When the spooler function has been enabled, a print job ID is stored.
- When the spooler function is disabled, nil is stored.

***Supplementary explanation***

- When this API is run multiple times, the callback method specified later takes effect.
- If nil is specified in delegate when calling this API, the registered callback method is canceled.
- When a communication error occurs during ePOS-Device XML control, communication disconnection is not notified.  
To notify the disconnection event, implement the [setConnectionEventDelegate](#).
- When controlling multiple printers at a time, identify which printer has finished printing by comparing the `Printer` object in the caller and the `printerObj` parameter.

## interval

Updates the printer status (EPOS2\_EVENT\_POWER\_OFF event) and specifies a notification interval.

### Syntax

#### Setter

`- (int) setInterval:(long) interval`

#### Getter

`- (long) getInterval`

### Value

Updates the printer status (EPOS2\_EVENT\_POWER\_OFF event) and specifies a notification interval. The default value is 3,000.

Value	Description
Integer from 1000 to 60000	Interval to update the printer status (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (3,000).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.

### Supplementary explanation

Events other than EPOS2\_EVENT\_POWER\_OFF are updated and notified at an interval of less than 1 second. The update interval cannot be changed.

# Epos2HybridPrinter class

## initWithLang

Initializes the Epos2HybridPrinter class.

### Syntax

- (id) initWithLang:(int)lang;

### Parameter

#### *lang*

Specifies the language of the printer.

Value	Description
EPOS2_MODEL_ANK	English (ANK specification)
EPOS2_MODEL_JAPANESE	Japanese
EPOS2_MODEL_CHINESE	Simplified Chinese
EPOS2_MODEL_TAIWAN	Traditional Chinese
EPOS2_MODEL_KOREAN	Korean
EPOS2_MODEL_THAI	Thai
EPOS2_MODEL_SOUTHASIA	South Asian specification

### Return value

If the process succeeds, an initialized Epos2HybridPrinter class instance will be returned.

If the process fails, nil will be returned. The process may fail due to the following reasons:

Error status	Description
EPOS2_ERR_PARAM	An invalid parameter was specified.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_UNSUPPORTED	A language not supported was specified.

### Supplementary explanation

When iterating a process, be sure to generate and destroy instances outside the iterated process and not iterate the process at a short interval.

Memory releasing by the OS may affect the process of the Epson ePOS SDK, resulting in an invalid operation.

## connect

Starts communication with the printer.

### Syntax

```
- (int) connect:(NSString *)target timeout:(long)timeout;
```

### Parameter

#### target

Specifies the method of connecting to the printer by a character string.

The connection method varies according to the system configuration.

- TM Printer Models

<connection type>:<identifier>

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCP"	<ul style="list-style-type: none"> <li>IP address in IPv4 format</li> <li>MAC address</li> <li>Host name</li> </ul>	"TCP:192.168.192.168"
Bluetooth	"BT"	BD address	"BT:00:22:15:7D:70:9C"

To connect to the printer via SSL/TLS communication, specify using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCPS"	<ul style="list-style-type: none"> <li>IP address in IPv4 format</li> <li>MAC address</li> <li>Host name</li> </ul>	"TCPS:192.168.192.168[local_printer]"

- Customer Display Models

<connection type>:<identifier>

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCP"	<ul style="list-style-type: none"> <li>IP address in IPv4 format</li> <li>MAC address</li> <li>Host name</li> </ul>	"TCP:192.168.192.168"
Bluetooth	"BT"	BD address	"BT:00:22:15:7D:70:9C"

To connect to the printer via SSL/TLS communication, specify using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCPS"	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCPS:192.168.192.168[local_printer]"

### **timeout**

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

---

### **Return value**

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Failed to open the device.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_ERR_ILLEGAL	Tried to start communication with a printer with which communication had been already established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_NOT_FOUND	The device could not be found.
EPOS2_ERR_IN_USE	The device was in use.
EPOS2_ERR_TYPE_INVALID	The device type is different.

---

### **Supplementary explanation**

- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [disconnect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.
- ❑ The device ID is an arbitrary character string that is set when the peripheral device is registered to the TM printer (master). For details, refer to the Technical Reference Guide of each printer.

- ❑ If you specify TCPS in the connection to a printer that does not support SSL/TLS communication, ERR\_PARAM is returned.
- ❑ Devices other than printers are exclusively locked.

## disconnect

Ends communication with the printer.

### Syntax

- (int) disconnect;

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to end communication where it had not been established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

### Supplementary explanation

- ❑ When connected to the printer with *Bluetooth*, executing this API while a slip sheet is inserted by `readMicrData` causes the slip sheet to be ejected.
- ❑ Executing this API while waiting for paper insertion after executing `waitForInsertion`, `readMicrData`, and `cleanMicrReader` cancels waiting for paper insertion.  
At that time, processing result of `waitForInsertion`, `readMicrData`, and `cleanMicrReader` is not notified.
- ❑ If `disconnect` is conducted during an application background transition event process, wait until `disconnect` completes.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and `connect` cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.

## startMonitor

Enables printer status event monitoring.

Acquires and updates the printer status at the interval specified by the [interval](#) property and returns it to the callback method registered by [setStatusChangeEventDelegate](#).

### Syntax

```
- (int) startMonitor;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

### Supplementary explanation

During ESC/POS control, any ASB information items which have been changed during the update interval specified by the [interval](#) property are reported.

During ePOS-Device XML control, the ASB information at the time of update is reported.

## stopMonitor

Disables status events.

### Syntax

```
- (int)stopMonitor;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

## getStatus

Acquires the current status information.

### Syntax

- (Epos2HybridPrinterStatusInfo \*)getStatus;

### Return value

The current status is returned in the Epos2HybridPrinterStatusInfo type.

The following status information is stored in the object as a property.

Printer status	Status	Description
connection:	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected
online:	EPOS2_TRUE	Online
	EPOS2_FALSE	Offline
	EPOS2_UNKNOWN	Status is unknown.
coverOpen:	EPOS2_TRUE	Cover is open.
	EPOS2_FALSE	Cover is closed.
	EPOS2_UNKNOWN	Status is unknown.
paper:	EPOS2_PAPER_OK	Paper remains.
	EPOS2_PAPER_NEAR_END	Paper is running out.
	EPOS2_PAPER_EMPTY	Paper has run out.
	EPOS2_UNKNOWN	Status is unknown.
paperFeed:	EPOS2_TRUE	Paper feed in progress
	EPOS2_FALSE	Stopped
	EPOS2_UNKNOWN	Status is unknown.
panelSwitch (Feed button):	EPOS2_SWITCH_ON	Pressed
	EPOS2_SWITCH_OFF	Not pressed
	EPOS2_UNKNOWN	Status is unknown.
Drawer kick connector pin No.3 status:	EPOS2_DRAWER_HIGH	High
	EPOS2_DRAWER_LOW	Low
	EPOS2_UNKNOWN	Status is unknown.

Printer status	Status	Description
errorStatus: Error status	EPOS2_NO_ERR	Normal
	EPOS2_MECHANICAL_ERR	Mechanical error occurred.
	EPOS2_AUTOCUTTER_ERR	Auto cutter error occurred.
	EPOS2_UNRECOVER_ERR	Unrecoverable error occurred.
	EPOS2_AUTORECOVER_ERR	Automatic recovery error occurred.
	EPOS2_UNKNOWN	Status is unknown.
autoRecoverError: Automatic recovery error status	EPOS2_HEAD_OVERHEAT	Head overheat error
	EPOS2_MOTOR_OVERHEAT	Motor driver IC overheat error
	EPOS2_WRONG_PAPER	Paper error
	EPOS2_COVER_OPEN	Cover is open.
	EPOS2_UNKNOWN	Status is unknown.
insertionWaiting: Paper insertion wait status	EPOS2_INSERTION_WAIT_SLIP	Waiting for slip sheet insertion
	EPOS2_INSERTION_WAIT_VALIDATION	Waiting for validation sheet insertion
	EPOS2_INSERTION_WAIT_MICR	Waiting for slip sheet insertion
	EPOS2_INSERTION_WAIT_NONE	Not waiting for paper insertion
	EPOS2_UNKNOWN	Status is unknown.
removalWaiting: Paper removal wait status	EPOS2_REMOVAL_WAIT_PAPER	Waiting for paper removal
	EPOS2_REMOVAL_WAIT_NONE	Not waiting for paper removal
	EPOS2_UNKNOWN	Status is unknown.
slipPaper: Status of paper conveyance route for the slip mechanism	EPOS2_SLIP_PAPER_OK	Paper remains.
	EPOS2_SLIP_PAPER_EMPTY	Paper has run out.
	EPOS2_UNKNOWN	Status is unknown.

### Supplementary explanation

- ❑ If this API is called while communication is not available, printer states other than "connection" will be set to "EPOS2\_UNKNOWN."
- ❑ The status object is set to the status at the timing of execution of this API and will not be updated.
- ❑ When a head overheat error occurs, EPOS2\_UNKNOWN may be returned in autoRecoverError.
- ❑ EPOS2\_INSERTION\_WAIT\_SLIP in insertionWaiting does not distinguish between slip sheet insertion for slip printing and endorsement printing.

## sendData

Sends the print command and performs printing in the print method specified by [selectPaperType](#).

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2HybridPrinter class.

### Syntax

```
- (int) sendData:(long)timeout;
```

#### Parameter

##### **timeout**

Specifies the timeout period before completion of printing in milliseconds.

Value	Description
Integer from 5000 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

#### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_ILLEGAL	The control commands have not been buffered. This API was called while no communication had been started.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

## beginTransaction

Starts a transaction.

A transaction represents a single printing task such as printing a single sheet of receipt or coupon.

After this API is called, data until the transaction is terminated by [endTransaction](#) will be regarded as a single printing task.

### Syntax

- (int) beginTransaction

### Return value

If the process succeeds, EPOS2\_SUCCESS will be returned.

If the process fails, one of the following values be returned.

Error status	Description
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started. Another transaction had been already started by this function.
EPOS2_ERR_FAILURE	An unknown error occurred.

## endTransaction

Ends a transaction.

A transaction represents a single printing task such as printing a single sheet of receipt or coupon.

After [beginTransaction](#) is called, data until the transaction is terminated by this API will be regarded as a single printing task.

---

### Syntax

- (int) **endTransaction**;

---

### Return value

If the process succeeds, EPOS2\_SUCCESS will be returned.

If the process fails, one of the following values be returned.

Error status	Description
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started. This API was called while no transaction had been started.
EPOS2_ERR_FAILURE	An unknown error occurred.

---

### Supplementary explanation

Do not execute this API during the period from paper insertion through paper eject during slip, endorsement, validation, and MICR control.

## clearCommandBuffer

Clears the command buffer.

The contents buffered in the command buffer are retained until this API is called.

---

### Syntax

- (int) clearCommandBuffer;

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.

## selectPaperType

Specifies a print method.

### Syntax

- (int) selectPaperType:(int)paperType;

### Parameter

#### **paperType**

Specifies a print method.

Value	Description
EPOS2_PAPER_TYPE_RECEIPT	Receipt printing
EPOS2_PAPER_TYPE_SLIP	Slip printing
EPOS2_PAPER_TYPE_ENDORSE	Endorsement printing
EPOS2_PAPER_TYPE_VALIDATION	Validation printing
EPOS2_PARAM_DEFAULT	Specifies the default (receipt printing).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started. This API was called while waiting for paper insertion. This API was called while paper has already been inserted. This API was called while transmitting data. This API was called while waiting for paper removal.
EPOS2_ERR_CONNECT	Communication failed.
EPOS2_ERR_UNSUPPORTED	A print method not supported by the printer was specified.

### Supplementary explanation

The print method specified by this API affects [waitInsertion](#) and [sendData](#) APIs.

## waitInsertion

Causes the printer to wait for paper insertion.

After running this API, set the paper appropriate for the print method specified by the [selectPaperType](#).

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2HybridPrinter class.

### Syntax

---

- (int) waitInsertion:(long)timeout;

---

### Parameter

#### **timeout**

Specifies the timeout period before completion of paper insertion in milliseconds.

Value	Description
Integer from 5000 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

## cancellInsertion

Cancels the paper insertion wait status.

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2HybridPrinter class.

### Syntax

```
- (int)cancelInsertion;
```

### Return value

If the process succeeds, EPOS2\_SUCCESS will be returned.

If the process fails, one of the following values be returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	<p>This API was called while no communication had been started.</p> <p>This API was called while receipt printing was specified as the print method.</p> <p>This API was called while not waiting for paper insertion.</p> <p>This API was called while paper has already been inserted.</p> <p>This API was called while reading MICR.</p> <p>This API was called while waiting for paper removal.</p>
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

## ejectPaper

Ejects the papers.

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2HybridPrinter class when the eject command has been transmitted to the printer.

---

### Syntax

- (int)ejectPaper;

---

### Return value

If the process succeeds, EPOS2\_SUCCESS will be returned.

If the process fails, one of the following values be returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

---

### Supplementary explanation

Cannot communicate with the printer until the paper ejected after receiving the callback is removed.

## readMicrData

Performs read by MICR.

Inserting a slip sheet after executing this API starts reading MICR.

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2HybridPrinter class.

### Syntax

```
- (int)readMicrData:(int)micrFont timeout:(long)timeout;
```

#### Parameter

##### **micrFont**

Specifies the font of characters to read.

Value	Description
EPOS2_MICR_FONT_E13B	Specifies E13B as the read font.
EPOS2_MICR_FONT_CMC7	Specifies CMC7 as the read font.
EPOS2_PARAM_DEFAULT	Specifies the default value (font E13B).

##### **timeout**

Specifies the timeout period before completion of MICR reading in milliseconds.

Value	Description
Integer from 5000 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

#### Return value

If the process succeeds, EPOS2\_SUCCESS will be returned.

If the process fails, one of the following values be returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_UNSUPPORTED	The printer is not equipped with MICR.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

## cleanMicrReader

Cleans the MICR mechanism.

Inserting a cleaning sheet after executing this API starts cleaning the MICR mechanism.

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2HybridPrinter class.

### Syntax

```
- (int)cleanMicrReader:(long)timeout;
```

### Parameter

#### **timeout**

Specifies the timeout period before completion of MICR mechanism cleaning in milliseconds.

Value	Description
Integer from 5000 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

### Return value

If the process succeeds, EPOS2\_SUCCESS will be returned.

If the process fails, one of the following values be returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_UNSUPPORTED	The printer is not equipped with MICR.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

## forceRecover

Forcibly sends the error recovery command.

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.

### Syntax

```
- (int) forceRecover:(long)timeout;
```

### Parameter

#### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 0 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_CONNECT	Communication failed.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

### Supplementary explanation

- ❑ For TM-H6000V, the “Command execution during offline” setting must be enabled.  
Refer to TM-H6000V Utility User’s Manual for more information.
- ❑ Available during ePOS-Device XML control.

## forcePulse

Forcibly sends the drawer kick command.

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.

### Syntax

```
- (int) forcePulse:(int)drawer pulseTime:(int)pulseTime
    timeout:(long)timeout;
```

### Parameter

#### **drawer**

Specifies the drawer kick connector.

Value	Description
EPOS2_DRAWER_2PIN	Drawer kick connector pin No.2
EPOS2_DRAWER_5PIN	Drawer kick connector pin No.5
EPOS2_PARAM_DEFAULT	Specifies the default (drawer kick connector pin No.2).

#### **pulseTime**

Specifies the on time of the drawer kick signal.

Value	Description
EPOS2_PULSE_100	100-msec signal
EPOS2_PULSE_200	200-msec signal
EPOS2_PULSE_300	300-msec signal
EPOS2_PULSE_400	400-msec signal
EPOS2_PULSE_500	500-msec signal
EPOS2_PARAM_DEFAULT	Specifies the default (100-msec signal).

#### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 0 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.

Error status	Description
EPOS2_ERR_CONNECT	Communication failed.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

#### ***Supplementary explanation***

- ❑ The drawer and optional external buzzer cannot be connected simultaneously.
- ❑ For TM-H6000V, the “Command execution during offline” setting must be enabled.  
Refer to TM-H6000V Utility User’s Manual for more information.
- ❑ Available during ePOS-Device XML control.

## forceCommand

Forcibly sends the ESC/POS command.

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2Printer class.

### Syntax

---

```
- (int) forceCommand:(NSData *)data timeout:(long)timeout;
```

---

### Parameter

#### **data**

Forcibly sends the ESC/POS command.

Specifies the binary data.

#### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 0 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_CONNECT	Communication failed.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

---

### Supplementary explanation

- ❑ For TM-H6000V, the “Command execution during offline” setting must be enabled.  
Refer to TM-H6000V Utility User’s Manual for more information.
- ❑ Available during ePOS-Device XML control.

## forceReset

Forcibly sends the printer reset command.

The processing result of this API is returned to the callback method set by the [setReceiveEventDelegate](#) API of the Epos2EPOS2 class.

### Syntax

```
- (int) forceReset:(long)timeout;
```

#### Parameter

##### **timeout**

Specifies the timeout period before completion of command transmission in milliseconds.

Value	Description
Integer from 0 to 600000	Timeout period (in milliseconds)
EPOS2_PARAM_DEFAULT	Specifies the default value (10000).

#### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_CONNECT	Communication failed.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

#### Supplementary explanation

- ❑ For TM-H6000V, the “Command execution during offline” setting must be enabled.  
Refer to TM-H6000V Utility User’s Manual for more information.
- ❑ Available during ePOS-Device XML control.

## **paperType**

Acquires the print method setting information.

---

### **Syntax**

#### **Getter**

`- (int) getPaperType`

---

#### **Value**

Acquires the set print method information.

Value	Description
EPOS2_PAPER_TYPE_RECEIPT	Specifies receipt printing.
EPOS2_PAPER_TYPE_SLIP	Specifies slip printing.
EPOS2_PAPER_TYPE_ENDORSE	Specifies endorsement printing.
EPOS2_PAPER_TYPE_VALIDATION	Specifies validation printing.

---

### **Supplementary explanation**

The [selectPaperType](#) API is used to change the set value.

## interval

Specifies the interval to update the printer status.

### Syntax

#### Setter

- (int) setInterval:(long) interval

#### Getter

- (long) getInterval

### Value

Specifies the interval to update the printer status (in milliseconds). The default value is 3000.

Value	Description
Integer from 1000 to 600000	Interval to update the printer status (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (3000).

### Return value

Value	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.

### Supplementary explanation

The new set value takes effect upon the next printer status notification.

## waitTime

Specifies the time from insertion of a paper to start of insertion operation.

### Syntax

#### Setter

- (int) setWaitTime:(long) time

#### Getter

- (long) getWaitTime

### Value

Default: 500

Value	Description
Integer from 0 to 6400	Specifies the value in milliseconds.
EPOS2_PARAM_DEFAULT	Specifies the default value (500).

### Return value

Value	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.

### Supplementary explanation

Set values are rounded down to the nearest 100 milliseconds.

Example: 1 -> 0, 101 -> 100, 150 -> 100

## mode40Cpl

Enables or disables the 40cpl mode.

---

### Syntax

#### Setter

- (int) setMode40Cpl:(int) mode

#### Getter

- (int) getMode40Cpl

---

### Value

Default: 40cpl mode enabled

Value	Description
EPOS2_TRUE	40cpl mode enabled
EPOS2_FALSE	40cpl mode disabled
EPOS2_PARAM_DEFAULT	Specifies the default (40cpl mode enabled).

---

### Return value

Value	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.

---

### Supplementary explanation

This API does not work in the page mode.

## setStatusChangeEventDelegate

Registers a callback method for a status change event.

### Syntax

```
- (void)
setStatusChangeEventDelegate:(id<Epos2HybdStatusChangeD
elegate>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2HybdStatusChangeDelegate protocol.

### Protocol declaration

```
@protocol Epos2HybdStatusChangeDelegate <NSObject>
@required
- (void) onHybdStatusChange:(Epos2HybridPrinter
*)HybridPrinter_Obj
eventType:(int)eventType;
@end
```

### Parameter

#### **printerObj**

The callback source object is stored.

#### **eventType**

The type of the event that occurred is stored.

Event type	Description
EPOS2_EVENT_ONLINE	Online
EPOS2_EVENT_OFFLINE	Offline
EPOS2_EVENT_POWER_OFF	Power off
EPOS2_EVENT_COVER_CLOSE	Cover close
EPOS2_EVENT_COVER_OPEN	Cover open
EPOS2_EVENT_PAPER_OK	Paper remains.
EPOS2_EVENT_PAPER_NEAR_END	Paper has almost run out.
EPOS2_EVENT_PAPER_EMPTY	Paper has run out.
EPOS2_EVENT_DRAWER_HIGH	Drawer kick connector pin No.3 status = "H"
EPOS2_EVENT_DRAWER_LOW	Drawer kick connector pin No.3 status = "L"
EPOS2_EVENT_INSERTION_WAIT_SLIP	Waiting for slip sheet insertion

Event type	Description
EPOS2_EVENT_INSERTION_WAIT_VALIDATION	Waiting for validation sheet insertion
EPOS2_EVENT_INSERTION_WAIT_MICR	Waiting for slip sheet insertion
EPOS2_EVENT_INSERTION_WAIT_NONE	Not waiting for paper insertion
EPOS2_EVENT_REMOVAL_WAIT_PAPER	Waiting for paper removal
EPOS2_EVENT_REMOVAL_WAIT_NONE	Not waiting for paper removal
EPOS2_EVENT_SLIP_PAPER_OK	Paper remains in the paper conveyance route for the slip mechanism
EPOS2_EVENT_SLIP_PAPER_EMPTY	No paper in the paper conveyance route for the slip mechanism

#### ***Supplementary explanation***

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.

## setReceiveEventDelegate

Register the callback method for response document receive events.

### Syntax

```
- (void)
setReceiveEventDelegate:(id<Epos2HybdReceiveDelegate>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2HybdReceiveDelegate protocol.

### Protocol declaration

```
@protocol Epos2HybdReceiveDelegate <NSObject>
@required
- (void) onHybdReceive:(Epos2HybridPrinter *)
hybridPrinterObj
method:(int)method
code:(int)code
micrData:(NSString *)micrData
status:(Epos2HybridPrinterStatusInfo *)status
@end
```

### Parameter

#### **hybridPrinterObj**

The callback source object is stored.

#### **method**

The method information is stored.

Code	Description
EPOS2_METHOD_WAITINSERTION	Result of the waitInsertion API
EPOS2_METHOD_SENDDATA	Result of the sendDataAPI
EPOS2_METHOD_CANCELINSERTION	Result of the cancelInsertion API
EPOS2_METHOD_EJECTPAPER	Result of the ejectPaper API
EPOS2_METHOD_READMICRDATA	Result of the readMicrData API
EPOS2_METHOD_CLEANMICRREADER	Result of the cleanMicrReader API

**code**

The processing result is stored.

Code	Description
EPOS2_CODE_SUCCESS	Processing successful.
EPOS2_CODE_CANCELED	Cancels the insertion wait status.
EPOS2_CODE_PRINTING	Printing
EPOS2_CODE_ERR_AUTOMATICAL	Automatic recovery error occurred.
EPOS2_CODE_ERR_COVER_OPEN	Cover open error occurred.
EPOS2_CODE_ERR_CUTTER	Auto cutter error occurred.
EPOS2_CODE_ERR_MECHANICAL	Mechanical error occurred.
EPOS2_CODE_ERR_EMPTY	No paper is left in the roll paper end detector.
EPOS2_CODE_ERR_UNRECOVERABLE	Unrecoverable error occurred.
EPOS2_CODE_ERR_FAILURE	Error exists in the requested document syntax.
EPOS2_CODE_ERR_NOT_FOUND	Printer specified by the device ID does not exist.
EPOS2_CODE_ERR_SYSTEM	Error occurred with the printing system.
EPOS2_CODE_ERR_PORT	Error was detected with the communication port.
EPOS2_CODE_ERR_TIMEOUT	Timeout occurred.
EPOS2_CODE_ERR_JOB_NOT_FOUND	Specified job ID does not exist.
EPOS2_CODE_ERR_SPOOLER	Print queue is full.
EPOS2_CODE_ERR_TOO_MANY_REQUESTS	Print data exceeding the printer firmware capacity was transmitted.
EPOS2_CODE_ERR_REQUEST_ENTITY_TOO_LARGE	Print data exceeding the maximum capacity per transfer was transmitted.
EPOS2_CODE_ERR_PAPER_PULLED_OUT	Paper removal was detected.
EPOS2_CODE_ERR_CANCEL_FAILED	Failed to cancel waiting for paper insertion.
EPOS2_CODE_ERR_NO_MICR_DATA	A slip sheet out of the standard was inserted.
EPOS2_CODE_ERR_NO_MAGNETIC_DATA	Cannot detect the magnetic waveform.
EPOS2_CODE_ERR_RECOGNITION	A character which cannot be analyzed was detected.
EPOS2_CODE_ERR_READ	Error occurred during MICR read operation.
EPOS2_CODE_ERR_NOISE_DETECTED	Noise error was detected.
EPOS2_CODE_ERR_COVER_OPEN	Cover open error occurred during MICR read operation.
EPOS2_CODE_ERR_PAPER_JAM	Paper jam error occurred during MICR read operation.

Code	Description
EPOS2_CODE_ERR_PAPER_TYPE	Pinter operation differs from the specified print method.
EPOS2_CODE_ERR_WAIT_INSERTION	Could not run the process while waiting for paper insertion.
EPOS2_CODE_ERR_ILLEGAL	The function was used in an illegal way.
EPOS2_CODE_ERR_INSERTED	Could not run the process while paper had already been inserted.
EPOS2_CODE_ERR_WAIT_REMOVAL	Could not run the process while waiting for paper removal.
EPOS2_CODE_ERR_DEVICE_BUSY	The specified device is in process and the process cannot be executed.

***micrData***

MICR read result is stored.

***status***

Status at the timing when the process was run is stored as the `Epos2PrinterStatusInfo` type.

***Supplementary explanation***

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.
- ❑ When a communication error occurs during ePOS-Device XML control, communication disconnection is not notified.  
To notify the disconnection event, implement the [setConnectionEventDelegate](#).
- ❑ When controlling multiple printers at a time, identify which printer has finished printing by comparing the `HybridPrinter` object in the caller and the `hybridPrinterObj` parameter.

# Epos2LineDisplay Class

## initWithDisplayModel

Initializes the Epos2LineDisplay class.

### Syntax

- (id) initWithDisplayModel:(int) displayModel;

### Parameter

#### *displaySeries*

Specifies the model name of the target customer display.

Value	Description
EPOS2_DM_D110	DM-D110
EPOS2_DM_D210	DM-D210
EPOS2_DM_D30	DM-D30

### Return value

If the process succeeds, an initialized Epos2LineDisplay class instance will be returned.

If the process fails, nil will be returned. The process may fail due to the following reasons:

Error status	Description
EPOS2_ERR_PARAM	An invalid parameter was specified.
EPOS2_ERR_MEMORY	Memory could not be allocated.

### Supplementary explanation

When iterating a process, be sure to generate and destroy instances outside the iterated process and not iterate the process at a short interval.

Memory releasing by the OS may affect the process of the Epson ePOS SDK, resulting in an invalid operation.

## connect

Starts communication with the customer display.

### Syntax

```
- (int) connect:(NSString *)target timeout:(long)timeout;
```

### Parameter

#### target

Specifies the method of connecting to the printer by a character string.

The connection method varies according to the system configuration.

- Customer Display Models

<connection type>:<identifier>

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCP"	<ul style="list-style-type: none"> <li>IP address in IPv4 format</li> <li>MAC address</li> <li>Host name</li> </ul>	"TCP:192.168.192.168"
Bluetooth	"BT"	BD address	"BT:00:22:15:7D:70:9C"

To connect to the printer via SSL/TLS communication, specify using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCPS"	<ul style="list-style-type: none"> <li>IP address in IPv4 format</li> <li>MAC address</li> <li>Host name</li> </ul>	"TCPS:192.168.192.168[local_display]"

- TM-m30 or TM-T88VI + DM-D30 + barcode scanner model

To connect via Wi-Fi/Ethernet network communication, specify using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCP"	<ul style="list-style-type: none"> <li>IP address in IPv4 format</li> <li>MAC address</li> <li>Host name</li> </ul>	"TCP:192.168.192.168[local_display]"

To connect via *Bluetooth*, specify using the following syntax.

<connection type>:<identifier>

I/F	Connec-tion type	Identifier	Example
<i>Bluetooth</i>	"BT"	BD address	"BT:00:22:15:7D:70:9C"

- POS Terminal Model

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	<ul style="list-style-type: none"> <li>• "TCP"</li> <li>• "TCPS"</li> </ul>	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCP:192.168.192.168[local_disp lay]"

To connect to the printer via SSL/TLS communication, specify TCPS in the connection type.

#### **timeout**

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

---

#### **Return value**

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Failed to open the device.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time. The printer is offline.
EPOS2_ERR_ILLEGAL	Tried to start communication with a printer with which communication had been already established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_NOT_FOUND	The device could not be found.

Error status	Description
EPOS2_ERR_IN_USE	The device was in use.
EPOS2_ERR_TYPE_INVALID	The device type is different.

### Supplementary explanation

- ❑ Devices other than printers are exclusively locked.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [disconnect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.
- ❑ The device ID is an arbitrary character string that is set when the peripheral device is registered to the TM printer (master).  
For details, refer to the Technical Reference Guide of each printer.
- ❑ Depending on the project settings, *Bluetooth* communication may be disconnected if the application runs in the background.
- ❑ This API will succeed regardless of the connection status of the TM printer (master) and peripheral devices.

## disconnect

Ends communication with the customer display.

### Syntax

- (int) disconnect;

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to end communication where it had not been established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_DISCONNECT	Failed to disconnect the device.

### Supplementary explanation

- ❑ If disconnect is conducted during an application background transition event process, wait until disconnect completes.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [connect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.

## getStatus

Acquires the current status information.

### Syntax

- (Epos2DisplayStatusInfo \*)getStatus;

### Return value

The current status is returned in the Epos2DisplayStatusInfo type.

The following status information is stored in the object as a property.

Printer status	Status	Description
connection: Connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected

### Supplementary explanation

- The status object is set to the status at the timing of execution of this API and will not be updated.
- If this function is executed within a callback function, nil will be returned.
- If "FALSE" is returned when connecting a DM-D30, the TM printer is not connected to the terminal.

## sendData

Sends the command buffer.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method set by the [setReceiveEventDelegateAPI](#) of the Epos2LineDisplay class.

This API sends data buffered by an add-type API (e.g., [addText](#)).

---

### Syntax

- (int) sendData;

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_ILLEGAL	The control commands have not been buffered. This API was called while no communication had been started.

## clearCommandBuffer

Clears the command buffer.

### Syntax

```
- (int) clearCommandBuffer;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.

## addInitialize

Initializes the customer display. Initialization changes the customer display status as follows.

- ❑ All the displayed characters are erased and all the windows are destroyed.
- ❑ Cursor settings are initialized to the default and the cursor position is returned to the origin of the customer display.
- ❑ The display blinking and brightness settings are initialized to the default.

### Syntax

- (int)addInitialize;

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addCreateWindow

Adds window configuration to the command buffer.

### Syntax

```
- (int)addCreateWindow:(long)number x:(long)x y:(long)y
width:(long)width height:(long)height scrollMode:(int)
scrollMode;
```

### Parameter

#### **number**

Specifies the window number.

Value	Description
Integer from 1 to 4	Window number

#### **x**

Specifies the x coordinate of the window origin on the customer display.

Value	Description
Integer from 1 to 20	X coordinate on the customer display

#### **y**

Specifies the y coordinate of the window origin on the customer display.

Value	Description
Integer from 1 to 2	Y coordinate on the customer display

#### **width**

Specifies the window width.

Value	Description
Integer from 1 to 20	Window width

#### **height**

Specifies the window height.

Value	Description
Integer from 1 to 2	Window height

#### **scrollMode**

Specifies the window scroll mode.

Value	Description
EPOS2_SCROLL_OVERWRITE	When the current display position is at the rightmost position of the upper line, displaying a new character moves the display position to the leftmost position of the lower line. When the current display position is at the rightmost position of the lower line, displaying a new character moves the display position to the leftmost position of the upper line.
EPOS2_SCROLL_VERTICAL	When the current display position is at the rightmost position of the upper line, displaying a new character moves the display position to the leftmost position of the lower line. When the current display position is at the rightmost position of the lower line, displaying a new character scrolls up the characters on the lower line and clears the lower line.
EPOS2_SCROLL_HORIZONTAL	When the current display position is at the rightmost position, displaying a new character scrolls all the characters already displayed on the cursor line to the left by one character and the new character is displayed at the rightmost position.
EPOS2_PARAM_DEFAULT	Specifies the default value (Overwrite).

#### ***Return value***

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

#### ***Supplementary explanation***

To add a window, be careful so that the existing window(s) should not be overlapped by the new window on the customer display.

## addDestroyWindow

Adds a command to destroy the defined window to the command buffer.

### Syntax

```
- (int)addDestroyWindow:(long)number;
```

### Parameter

#### number

Specifies the number of the window to destroy.

Value	Description
Integer from 1 to 4	Number of the window to destroy

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addSetCurrentWindow

Adds a command to move to another window to the command buffer.

A specified window is displayed and the cursor is moved to the origin of the new window.

### Syntax

```
- (int)addSetCurrentWindow:(long)number;
```

### Parameter

#### **number**

Specifies a window number of a destination window.

Value	Description
Integer from 1 to 4	Window number of a destination window

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addClearCurrentWindow

Adds a window clear command for the current window to the command buffer.

### Syntax

```
- (int)addClearCurrentWindow;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addSetCursorPosition

Adds cursor position setting to the command buffer.

### Syntax

```
- (int)addSetCursorPosition:(long)x y:(long)y;
```

### Parameter

#### x

Specifies the destination x coordinate.

Value	Description
Integer from 1 to 20	Destination x coordinate

#### y

Specifies the destination y coordinate.

Value	Description
Integer from 1 to 2	Destination y coordinate

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

Use [addMoveCursorPosition](#) to move within a window.

## addMoveCursorPosition

Adds cursor position setting within the current window to the command buffer.

### Syntax

```
- (int)addMoveCursorPosition:(int)position;
```

### Parameter

#### **position**

Specifies the new cursor position within the current window.

Value	Description
EPOS2_MOVE_TOP_LEFT	Sets the new position to the top left edge.
EPOS2_MOVE_TOP_RIGHT	Sets the new position to the top right edge.
EPOS2_MOVE_BOTTOM_LEFT	Sets the new position to the bottom left edge.
EPOS2_MOVE_BOTTOM_RIGHT	Sets the new position to the bottom right edge.
EPOS2_PARAM_DEFAULT	Specifies the default value (top left edge).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addSetCursorType

Adds cursor display setting to the command buffer.

### Syntax

```
- (int) addSetCursorType:(int) type;
```

### Parameter

#### **type**

Specifies the cursor display method.

Value	Description
EPOS2_CURSOR_NONE	No cursor display
EPOS2_CURSOR_UNDERLINE	Underscore
EPOS2_PARAM_DEFAULT	Specifies the default value (no cursor display).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addText

Adds string display setting to the command buffer.

### Syntax

- ❑ (int) addText:(NSString \*)data;
- ❑ (int) addText:(NSString \*)data lang:(int)lang;
- ❑ (int) addText:(NSString \*)data x:(long)x y:(long)y;
- ❑ (int) addText:(NSString \*)data x:(long)x y:(long)y lang:(int)lang;

### Parameter

#### **data**

Specifies the string to display.

#### **lang**

Specifies the language to display the string.

Value	Description
EPOS2_LANG_EN (default)	English
EPOS2_LANG_JA	Japanese
EPOS2_PARAM_DEFAULT	Specifies the default value (English).

#### **x**

Specifies the x coordinate of the display position.

Value	Description
Integer from 1 to 20	X coordinate of the display position

#### **y**

Specifies the y coordinate of the display position.

Value	Description
Integer from 1 to 2	Y coordinate of the display position

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.

Error status	Description
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

- ❑ If the coordinates of the display position are omitted, the coordinates of the cursor position upon execution of addText are used.
- ❑ Parameters x and y specify coordinates with the origin at the top left of the line display.

## addReverseText

Adds reverse text display setting to the command buffer.

### Syntax

- ❑ (int) addReverseText:(NSString \*)data;
- ❑ (int) addReverseText:(NSString \*)data lang:(int)lang;
- ❑ (int) addReverseText:(NSString \*)data x:(long)x y:(long)y;
- ❑ (int) addReverseText: (NSString \*)data x:(long)x y:(long)y lang:(int)lang;

### Parameter

#### **data**

Specifies the string to display.

#### **lang**

Specifies the language to display the string.

Value	Description
EPOS2_LANG_EN (default)	English
EPOS2_LANG_JA	Japanese
EPOS2_PARAM_DEFAULT	Specifies the default value (English).

#### **x**

Specifies the x coordinate of the display position.

Value	Description
Integer from 1 to 20	X coordinate of the display position

#### **y**

Specifies the y coordinate of the display position.

Value	Description
Integer from 1 to 2	Y coordinate of the display position

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.

Error status	Description
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

- If the coordinates of the display position are omitted, the coordinates of the cursor position upon execution of [addText](#) are used.
- Parameters x and y specify coordinates with the origin at the top left of the line display.

## addMarqueeText

Adds marquee display setting to the command buffer.

The marquee is displayed on a single line in the horizontal scroll mode, without regard to the scroll mode setting of the display window.

### Syntax

```
- (int)addMarqueeText:(NSString *)data format:(int)format
unitWait:(long)unitWait repeatWait:(long)repeatWait
repeatCount:(long)repeatCount lang:(int)lang;
```

### Parameter

#### **data**

Specifies the string to display.

#### **format**

Specifies how to display the string.

Value	Description
EPOS2_MARQUEE_WALK	Displays the text from the rightmost position of the window.
EPOS2_MARQUEE_PLACE	Displays the text from the leftmost position of the window.
EPOS2_PARAM_DEFAULT	Specifies the default value (Walk).

#### **unitWait**

Specifies the display interval per character (in milliseconds).

Value	Description
Integer from 1 to 2000	Display interval per character (in milliseconds).

#### **repeatWait**

Specifies the display repeat interval (in milliseconds).

Value	Description
Integer from 1 to 2000	Display repeat interval (in milliseconds)

#### **repeatCount**

Specifies the display repeat count.

Value	Description
Integer from 1 to 127	Display repeat count
0	Unlimited

***lang***

Specifies the language to display the string.

Value	Description
EPOS2_LANG_EN	English
EPOS2_LANG_JA	Japanese
EPOS2_PARAM_DEFAULT	Specifies the default value (English).

***Return value***

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

- ❑ When using DM-D30 and when using a combination of TM-H6000V with DM-D110/DM-D210, "0" is only allowed in repeatCount.
- ❑ When controlling DM-D30, its marquee display may be distorted if the interval for displaying text is too short due to the characteristics of the LCD.  
It is recommended to set unitWait and repeatWait so that the interval for displaying text is 600 msec or longer.

## addSetBlink

Adds screen blink setting to the command buffer.

### Syntax

```
- (int)addSetBlink:(long)interval;
```

### Parameter

#### **interval**

Specifies the blink interval (in milliseconds). The setting value is rounded to the nearest 50 milliseconds.

Value	Description
Integer from 1 to 12700	Blink interval (in milliseconds)
0	Continuously lit
EPOS2_PARAM_DEFAULT	Specifies the default (continuously lit).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addSetBrightness

Adds brightness setting of the customer display to the command buffer.

### Syntax

```
- (int)addSetBrightness:(int)brightness;
```

### Parameter

#### brightness

Specifies the brightness value of the customer display.

Value	Description
EPOS2_BRIGHTNESS_20	Sets the customer display brightness to 20%.
EPOS2_BRIGHTNESS_40	Sets the customer display brightness to 40%.
EPOS2_BRIGHTNESS_60	Sets the customer display brightness to 60%.
EPOS2_BRIGHTNESS_100	Sets the customer display brightness to 100%.
EPOS2_PARAM_DEFAULT	Specifies the default value (brightness 100%).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## addShowClock

Adds time display setting to the command buffer.

Displaying the time clears all the displayed text. When another command is sent while the time is displayed, the time disappears.

### Syntax

```
- (int)addShowClock;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

Not available for DM-D30.

## addCommand

Adds the ESC/POS command to the command buffer.

### Syntax

---

```
- (int) addCommand:(NSData *)data;
```

---

### Parameter

#### **data**

Specifies the ESC/POS command.

Specifies the binary data.

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ Refer to the following URL for details of the ESC/POS command.  
[https://reference.epson-biz.com/modules/ref\\_escpos\\_dm\\_d\\_en/](https://reference.epson-biz.com/modules/ref_escpos_dm_d_en/)
- ❑ Epson ePOS SDK does not check the commands sent using this API.  
If the commands interfere with Epson ePOS SDK operations, other APIs may work wrongly or status values may become invalid.  
This API should be used with a full understanding of ESC/POS commands and the customer display specifications.

## setReceiveEventDelegate

Registers a callback method for a response document reception event.

### Syntax

```
- (void)
setReceiveEventDelegate:(id<Epos2DispReceiveDelegate>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2DispReceiveDelegate protocol.

### Protocol declaration

```
@protocol Epos2DispReceiveDelegate <NSObject>
@required
- (void)onDispReceive:(Epos2LineDisplay *)displayObj
code:(int)code;
@end
```

### Parameter

#### **displayObj**

The callback source object is stored.

#### **code**

The processing result is stored.

Error status	Description
EPOS2_SUCCESS	Display completed.
EPOS2_CODE_ERR_NOT_FOUND	The device was not found.
EPOS2_CODE_ERR_INVALID_WINDOW	An unregistered window was specified.
EPOS2_CODE_ERR_PORT	An internal communication error with the device occurred.
EPOS2_CODE_ERR_TIMEOUT	A timeout error occurred during communication with the device.
EPOS2_CODE_ERR_TOO_MANY_REQUESTS	The number of display data sent to the display has exceeded the allowable limit.
EPOS2_CODE_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.

- ❑ When a communication error occurs during ePOS-Device XML control, communication disconnection is not notified.  
To notify the disconnection event, implement the [setConnectionEventDelegate](#).

## Epos2Keyboard class

### init

Initializes the Epos2Keyboard class.

#### Syntax

- (id) init;

#### Return value

If the process succeeds, an initialized Epos2Keyboard class instance will be returned.

If the process fails, nil will be returned. The process may fail due to the following reasons:

Error status	Description
EPOS2_ERR_MEMORY	Memory could not be allocated.

#### Supplementary explanation

When iterating a process, be sure to generate and destroy instances outside the iterated process and not iterate the process at a short interval.

Memory releasing by the OS may affect the process of the Epson ePOS SDK, resulting in an invalid operation.

## connect

Starts communication with the keyboard.

### Syntax

```
- (int) connect:(NSString *)target timeout:(long)timeout;
```

### Parameter

#### **target**

Specifies the method of connecting to the printer by a character string.

The connection method varies according to the system configuration.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	<ul style="list-style-type: none"> <li>• "TCP"</li> <li>• "TCPS"</li> </ul>	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCP:192.168.192.168[local_keyboard]"

To connect to the printer via SSL/TLS communication, specify TCPS in the connection type.

#### **timeout**

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Failed to open the device.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_ERR_ILLEGAL	Tried to start communication with a printer with which communication had been already established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

Error status	Description
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_NOT_FOUND	The device could not be found.
EPOS2_ERR_IN_USE	The device was in use.
EPOS2_ERR_TYPE_INVALID	The device type is different.

### ***Supplementary explanation***

- ❑ The device ID is an arbitrary character string that is set when the peripheral device is registered to the TM printer (master).  
For details, refer to the Technical Reference Guide of each printer.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [disconnect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.
- ❑ This API will succeed regardless of the connection status of the TM printer (master) and peripheral devices.
- ❑ Devices other than printers are exclusively locked.

## disconnect

Ends communication with the keyboard.

### Syntax

- (int) disconnect;

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to end communication where it had not been established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_DISCONNECT	Failed to disconnect the device.

### Supplementary explanation

- ❑ If disconnect is conducted during an application background transition event process, wait until disconnect completes.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [connect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.

## getStatus

Acquires the current status information.

### Syntax

```
- (Epos2KeyboardStatusInfo *)getStatus;
```

### Return value

The current status is returned in the Epos2KeyboardStatusInfo type.

The following status information is stored in the object as a property.

Printer status	Status	Description
connection: Connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected

### Supplementary explanation

- ❑ The status object is set to the status at the timing of execution of this API and will not be updated.
- ❑ If this function is executed within a callback function, nil will be returned.

## setPrefix

Sets the list of prefixes for string entry.

### **Syntax**

---

```
- (int)setPrefix:(NSData *)prefixes;
```

---

### **Parameter**

#### **prefixes**

Specifies the key code arrangement.

Refer to "[Key code list](#)" for the key codes.

Specifying nil disables setPrefix.

---

### **Return value**

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Communication failed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

---

### **Supplementary explanation**

Entering nil or "" (blank) clears the current setting.

## getPrefix

Acquires the list of prefixes currently set.

---

### Syntax

```
- (NSData *)getPrefix;
```

---

### Return value

The list of prefixes currently set by setPrefix is returned.

## setKeyPressEventDelegate

Registers a callback method for a key press event.

---

### Syntax

```
- (void)
setKeyPressEventDelegate:(id<Epos2KbdKeyPressDelegate>)delegate;
```

---

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2KbdKeyPressDelegate protocol.

---

### Protocol declaration

```
@protocol Epos2KbdKeyPressDelegate <NSObject>
@required
- (void)onKbdKeyPress:(Epos2Keyboard *)keyboardObj
keyCode:(int)keyCode ascii:(NSString *)ascii;
@end
```

---

### Parameter

#### **keyboardObj**

The callback source object is stored.

#### **keyCode**

The code of the pressed key is stored.

#### **ascii**

The character corresponding to the code of the pressed key is stored. If no character corresponds to the key code, "" (blank character) is stored.

Depending on the keyboard used, double-byte characters may be entered.

---

### Supplementary explanation

- When this API is run multiple times, the callback method specified later takes effect.
- If nil is specified in delegate when calling this API, the registered callback method is canceled.

## setReadStringEventDelegate

Registers a callback method which receives characters starting with one of the strings specified by [setPrefix](#) and ending with the Enter key as a string.

### Syntax

```
- (void)
setReadStringEventDelegate:(id<Epos2KbdReadStringDelegate
>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2KbdReadStringDelegate protocol.

### Protocol declaration

```
@protocol Epos2KbdReadStringDelegate <NSObject>
@required
- (void)onKbdReadString:(Epos2Keyboard *)keyboardObj
readString:(NSString *)readString prefix:(int)prefix;
@end
```

### Parameter

#### **keyboardObj**

The callback source object is stored.

#### **readString**

The detected string is stored.

#### **prefix**

Key code recognized as the start of a string is stored.

### Supplementary explanation

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.

# Epos2POSKeyboard class

## init

Initializes the Epos2POSKeyboard class.

### Syntax

- (id) init;

### Return value

If the process succeeds, an initialized Epos2POSKeyboard class instance will be returned.

If the process fails, nil will be returned. The process may fail due to the following reasons:

Error status	Description
EPOS2_ERR_MEMORY	Memory could not be allocated.

## connect

Starts communication with the POS keyboard.

### Syntax

```
- (int) connect:(NSString *)target timeout:(long)timeout;
```

### Parameter

#### target

Specifies the method of connecting to the printer by a character string.

Specify the connection method using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Description
Wi-Fi/Ethernet	<ul style="list-style-type: none"> <li>• "TCP"</li> <li>• "TCPS"</li> </ul>	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCP:192.168.192.168[local_pos keyboard]"

To connect to the printer via SSL/TLS communication, specify TCPS in the connection type.

#### timeout

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_ERR_CONNECT	Failed to open the device.
EPOS2_ERR_ILLEGAL	Tried to start communication with a printer with which communication had been already established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

Error status	Description
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_NOT_FOUND	The device could not be found.
EPOS2_ERR_IN_USE	The device was in use.
EPOS2_ERR_TYPE_INVALID	The device type is different.

#### ***Supplementary explanation***

- ❑ The device ID is a logical device name that is set when the POS keyboard is registered to the TM printer (master). For details, refer to the TM-DT Series Peripheral Device Control Guide.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [disconnect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.
- ❑ Devices other than printers are exclusively locked.

## disconnect

Ends communication with the POS keyboard.

### Syntax

- (int) disconnect;

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to end communication where it had not been established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_DISCONNECT	Failed to disconnect the device.

### Supplementary explanation

- ❑ If disconnect is conducted during an application background transition event process, wait until disconnect completes.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [connect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.

## getStatus

Acquires the current status information.

### Syntax

```
- (Epos2POSKeyboardStatusInfo *)getStatus;
```

### Return value

The current status is returned in the Epos2POSKeyboardStatusInfo type.

The following status information is stored in the object as a property.

Keyboard status	Status	Description
connection : Connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected

### Supplementary explanation

The status object is set to the status at the timing of execution of this API and will not be updated.

## setKeyPressEventDelegate

Registers the callback method for key press events.

### Syntax

```
- (void)  
setKeyPressEventDelegate:(id<Epos2POSKeyboardDelegate>)delegate;
```

### Parameter

#### delegate

Specifies an object conforming to the Epos2POSKeyboardDelegate protocol.

### Protocol declaration

```
@protocol Epos2POSKeyboardDelegate <NSObject>  
@required  
- (void)onKbdKeyPress:(Epos2POSKeyboard *)keyboardObj  
posKeyCode:(int)posKeyCode;  
@end
```

### Parameter

#### keyboardObj

The callback source object is stored.

#### posKeyCode

The code of the pressed key is stored.

### Supplementary explanation

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.

# Epos2BarcodeScanner Class

## init

Initializes the Epos2BarcodeScanner class.

### Syntax

- (id) init;

### Return value

If the process succeeds, an initialized Epos2BarcodeScanner class instance will be returned.

If the process fails, nil will be returned. The process may fail due to the following reasons:

Error status	Description
EPOS2_ERR_MEMORY	Memory could not be allocated.

### Supplementary explanation

When iterating a process, be sure to generate and destroy instances outside the iterated process and not iterate the process at a short interval.

Memory releasing by the OS may affect the process of the Epson ePOS SDK, resulting in an invalid operation.

## connect

Starts communication with the barcode scanner.

### Syntax

```
- (int) connect:(NSString *)target timeout:(long)timeout;
```

### Parameter

#### target

Specifies the method of connecting to the printer by a character string.

The connection method varies according to the system configuration.

- TM-m30 or TM-T88VI + DM-D30 + barcode scanner model/  
TM-m30 or TM-T88VI + barcode scanner model

To connect via Wi-Fi/Ethernet network communication, specify using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	"TCP"	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCP:192.168.192.168[local_scanner]"

To connect via *Bluetooth*, specify using the following syntax.

<connection type>:<identifier>

I/F	Connec-tion type	Identifier	Example
Bluetooth	"BT"	BD address	"BT:00:22:15:7D:70:9C"

- POS Terminal Model

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	<ul style="list-style-type: none"> <li>• "TCP"</li> <li>• "TCPS"</li> </ul>	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCP:192.168.192.168[local_scanner]"

To connect to the printer via SSL/TLS communication, specify TCPS in the connection type.

#### timeout

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Failed to open the device.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_ERR_ILLEGAL	Tried to start communication with a printer with which communication had been already established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_NOT_FOUND	The device could not be found.
EPOS2_ERR_IN_USE	The device was in use.
EPOS2_ERR_TYPE_INVALID	The device type is different.

### Supplementary explanation

- The device ID is an arbitrary character string that is set when the peripheral device is registered to the TM printer (master).  
For details, refer to the Technical Reference Guide of each printer.
- When using multi-threading to connect to multiple printers or peripheral devices, this API and [disconnect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.
- This API will succeed regardless of the connection status of the TM printer (master) and peripheral devices.
- Set the barcode reader suffix (delimiter) to CR (carriage return code). Data cannot be obtained using any other settings.
- Devices other than printers are exclusively locked. Do not control the scanner and printer connected to the scanner from multiple applications at the same time.
- If a combination of TM-m30 or TM-T88VI + barcode scanner is used on a connection established via *Bluetooth*, the barcode data read during printing is notified after the printing is complete.

## disconnect

Ends communication with the barcode scanner.

### Syntax

- (int) disconnect;

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to end communication where it had not been established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_DISCONNECT	Failed to disconnect the device.

### Supplementary explanation

- ❑ If disconnect is conducted during an application background transition event process, wait until disconnect completes.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [connect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.

## getStatus

Acquires the current status information.

### Syntax

- (Epos2ScannerStatusInfo \*)getStatus;

### Return value

The current status is returned in the Epos2ScannerStatusInfo type.

The following status information is stored in the object as a property.

Printer status	Status	Description
connection: Connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected

### Supplementary explanation

- ❑ The status object is set to the status at the timing of execution of this API and will not be updated.
- ❑ If this function is executed within a callback function, nil will be returned.
- ❑ When TM printer and a barcode scanner are used together connected via *Bluetooth*, the communication status of the barcode scanner is acquired. If connected in one of the other ways, the status of the printer is acquired.
- ❑ If a combination of TM-m30 or TM-T88VI + barcode scanner is used on a connection established via *Bluetooth*, the connection status of TM-m30 or TM-T88VI and the barcode scanner is obtained. If the combination is used by some other connection method, the connection status of the smart device and TM-m30 or TM-T88VI is obtained.

## setScanEventDelegate

Registers a callback method for a barcode data entry event.

### Syntax

```
- (void) setScanEventDelegate:  
    (id<Epos2ScanDelegate>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2ScanDelegate protocol.

### Protocol declaration

```
@protocol Epos2ScanDelegate <NSObject>  
@required  
- (void) onScanData:(Epos2BarcodeScanner *)scannerObj  
scanData:(NSString *)scanData;  
@end
```

### Parameter

#### **scannerObj**

The callback source object is stored.

#### **scanData**

The detected string is stored.

### Supplementary explanation

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.
- ❑ The notification timing of the barcode data entry event differs depending on how it is connected. Refer to the description of the target parameter of the [connect](#) API for details.

## Epos2MSR class

### init

Initializes the Epos2MSR class.

#### Syntax

- (id) init;

#### Return value

If the process succeeds, an initialized Epos2MSR class instance will be returned.

If the process fails, nil will be returned. The process may fail due to the following reasons:

Error status	Description
EPOS2_ERR_MEMORY	Memory could not be allocated.

## connect

Starts communication with the MSR.

### Syntax

```
- (int) connect:(NSString *)target timeout:(long)timeout;
```

### Parameter

#### target

Specifies the method of connecting to the printer by a character string.

Specify the connection method using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Description
Wi-Fi/Ethernet	<ul style="list-style-type: none"> <li>• "TCP"</li> <li>• "TCPS"</li> </ul>	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCP:192.168.192.168[local_msr ]"

To connect to the printer via SSL/TLS communication, specify TCPS in the connection type.

#### timeout

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_ERR_CONNECT	Failed to open the device.
EPOS2_ERR_ILLEGAL	Tried to start communication with a printer with which communication had been already established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

Error status	Description
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_NOT_FOUND	The device could not be found.
EPOS2_ERR_IN_USE	The device was in use.
EPOS2_ERR_TYPE_INVALID	The device type is different.

### ***Supplementary explanation***

- ❑ The device ID is set when the MSR is registered to the TM printer (master).  
The value differs depending on the control method.

Control method	Device ID	Reference
Device control program	Logical device name	TM-DT Series Peripheral Device Control Guide
Device control script	Arbitrary character string	Technical Reference Guide of the printer

- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [disconnect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.
- ❑ Devices other than printers are exclusively locked.

## disconnect

Ends communication with the MSR.

### Syntax

- (int) disconnect;

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to end communication where it had not been established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_DISCONNECT	Failed to disconnect the device.

### Supplementary explanation

- ❑ If disconnect is conducted during an application background transition event process, wait until disconnect completes.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [connect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.

## getStatus

Acquires the current status information.

### Syntax

- (Epos2MSRStatusInfo \*)getStatus;

### Return value

The current status is returned in the Epos2MSRStatusInfo type.

The following status information is stored in the object as a property.

MSR status	Status	Description
connection : Connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected

### Supplementary explanation

The status object is set to the status at the timing of execution of this API and will not be updated.

## setDataEventDelegate

Registers a callback method for a card data detection event.

### Syntax

```
- (void)
setDataEventDelegate:(id<Epos2MSRDataDelegate>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2MSRDataDelegate protocol.

### Protocol declaration

```
@protocol Epos2MSRDataDelegate <NSObject>
@required
- (void)onMSRData:(Epos2MSR *)msrObj
data:(Epos2MSRData *)data;
@end
```

### Parameter

#### **msrObj**

The callback source object is stored.

#### **data**

Acquires the read card data.

The result is stored in the Epos2MSRData structure.

Property	Description
(NSString *)track1	Entire data of track 1
(NSString *)track2	Entire data of track 2
(NSString *)track4	Entire data of track 4 (JIS2 track)
(NSString *)accountNumber	Account number
(NSString *)expirationData	Expiration date ("YYMM" format)
(NSString *)surname	Surname
(NSString *)firstName	First Name
(NSString *)middleInitial	Middle name/initial
(NSString *)title	Title
(NSString *)serviceCode	Service code
(NSString *)track1_dd	Arbitrary data of track 1
(NSString *)track2_dd	Arbitrary data of track 2

---

***Supplementary explanation***

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.

# Epos2SimpleSerial Class

## init

Initializes the Epos2SimpleSerial class.

### Syntax

- (id) init;

### Return value

If the process succeeds, an initialized Epos2SimpleSerial class instance will be returned.

If the process fails, nil will be returned. The process may fail due to the following reasons:

Error status	Description
EPOS2_ERR_MEMORY	Memory could not be allocated.

### Supplementary explanation

When iterating a process, be sure to generate and destroy instances outside the iterated process and not iterate the process at a short interval.

Memory releasing by the OS may affect the process of the Epson ePOS SDK, resulting in an invalid operation.

## connect

Starts communication with the serial communication device.

### Syntax

```
- (int) connect:(NSString *)target timeout:(long)timeout;
```

### Parameter

#### target

Specifies the method of connecting to the printer by a character string.

Specify the connection method using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	<ul style="list-style-type: none"> <li>• "TCP"</li> <li>• "TCPS"</li> </ul>	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCP:192.168.192.168[local_serial]"

To connect to the printer via SSL/TLS communication, specify TCPS in the connection type.

#### timeout

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Failed to open the device.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_ERR_ILLEGAL	Tried to start communication with a printer with which communication had been already established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

Error status	Description
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_NOT_FOUND	The device could not be found.
EPOS2_ERR_IN_USE	The device was in use.
EPOS2_ERR_TYPE_INVALID	The device type is different.

### ***Supplementary explanation***

- ❑ The device ID is an arbitrary character string that is set when the peripheral device is registered to the TM printer (master).  
For details, refer to the Technical Reference Guide of each printer.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [disconnect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.
- ❑ This API will succeed regardless of the connection status of the TM printer (master) and peripheral devices.
- ❑ Devices other than printers are exclusively locked.

## disconnect

Ends communication with the serial communication device.

### Syntax

- (int) disconnect;

### Return value

The result of the API is returned.

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to start communication with a printer with which communication had been already established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_DISCONNECT	Failed to disconnect the device.

### Supplementary explanation

- ❑ If disconnect is conducted during an application background transition event process, wait until disconnect completes.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [connect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.

## getStatus

Acquires the current status information.

### Syntax

- (Epos2SimpleSerialStatusInfo \*)getStatus;

### Return value

The current status is returned in the Epos2SimpleSerialStatusInfo type.

The following status information is stored in the object as a property.

Printer status	Status	Description
connection: Connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected

### Supplementary explanation

- ❑ The status object is set to the status at the timing of execution of this API and will not be updated.
- ❑ If this function is executed within a callback function, nil will be returned.

## sendCommand

Transfers a command.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method set by the [setReceiveEventDelegateAPI](#) of the Epos2SimpleSerial class.

---

### Syntax

- (int)sendCommand:(NSData \*)data;

---

### Parameter

#### **data**

Specifies the command.

---

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

## setReceiveEventDelegate

Registers a callback method for a reception event from the device.

### Syntax

```
- (void)
setReceiveEventDelegate:(id<Epos2SimpleSerialReceiveDelegate>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2SimpleSerialReceiveDelegate protocol.

### Protocol declaration

```
@protocol Epos2SimpleSerialReceiveDelegate <NSObject>
@required
- (void)onSimpleSerialReceive:(Epos2SimpleSerial *)serialObj
data:(NSData *)data;
@end
```

### Parameter

#### **serialObj**

The callback source object is stored.

#### **data**

Receives reception data.

### Supplementary explanation

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.
- ❑ When a communication error occurs during ePOS-Device XML control, communication disconnection is not notified.

To notify the disconnection event, implement the [setConnectionEventDelegate](#).

## Epos2OtherPeripheral class

### init

Initializes the Epos2OtherPeripheral class.

#### Syntax

- (id) init;

#### Return value

If the process succeeds, an initialized Epos2OtherPeripheral class instance will be returned.

If the process fails, nil will be returned. The process fails. The cause may be due to the following reasons:

Error status	Description
EPOS2_ERR_MEMORY	Memory could not be allocated.

## connect

Starts communication with the peripheral device.

### Syntax

```
- (int)connect: (NSString *)target timeout:(long)timeout;
```

### Parameter

#### target

Specifies the method of connecting to the printer by a character string.

Specify the connection method using the following syntax.

<connection type>:<identifier>[<device ID>]

I/F	Connec-tion type	Identifier	Description
Wi-Fi/Ethernet	<ul style="list-style-type: none"> <li>• "TCP"</li> <li>• "TCPS"</li> </ul>	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCP:192.168.192.168[local_other]"

To connect to the printer via SSL/TLS communication, specify TCPS in the connection type.

#### timeout

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_ERR_CONNECT	Failed to open the device.
EPOS2_ERR_MEMORY	Sufficient memory required for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_NOT_FOUND	The device could not be found.

Error status	Description
EPOS2_ERR_IN_USE	The device was in use.
EPOS2_ERR_TYPE_INVALID	The device type is different.
EPOS2_ILLEGAL	Tried to start communication with a printer with which communication had been already established.

### ***Supplementary explanation***

- ❑ The device ID is a logical device name that is set when the peripheral device is registered to the TM printer (master).  
For details, refer to the TM-DT Series Peripheral Device Control Guide.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [disconnect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.
- ❑ Devices other than printers are exclusively locked.

## disconnect

Ends communication with the peripheral device.

### Syntax

- (int)disconnect;

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to end communication where it had not been established.
EPOS2_ERR_MEMORY	Necessary memory could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_DISCONNECT	Failed to disconnect the device.

### Supplementary explanation

- ❑ If disconnect is conducted during an application background transition event process, wait until disconnect completes.
- ❑ When using multi-threading to connect to multiple printers or peripheral devices, this API and [connect](#) cannot be started for other printers or peripheral devices until this API finishes processing. Start the next process after this API finishes processing.

## getStatus

Acquires the current status information.

### Syntax

```
- (Epos2OtherPeripheralStatusInfo *)getStatus;
```

### Return value

The current status is returned in the Epos2OtherPeripheralStatusInfo type.

The following status information is stored in the object as a property.

Device status	Status	Description
connection : Connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected

### Supplementary explanation

The status object is set to the status at the timing of execution of this API and will not be updated.

## sendData

Sends data to the peripheral device. Specifies the arbitrary function of the device control program side, and passes JSON data made from a set of the property name and value.

For details, refer to the TM-DT Series Peripheral Device Control Guide.

### Syntax

```
- (int)sendData:(NSString *)methodName data:NSString
           *)data;
```

### Parameter

#### **methodName**

Specifies the function name to be executed.

#### **data**

Specifies the parameter to be passed to the function in JSON string.

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Communication failed.
EPOS2_ERR_MEMORY	Sufficient memory required for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

## setReceiveEventDelegate

Registers a callback method for a notification of reception data from the peripheral device event.

### Syntax

```
- (void)
setReceiveEventDelegate:(id<Epos2OtherReceiveDelegate>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2OtherReceiveDelegate protocol.

### Protocol declaration

```
@protocol Epos2OtherReceiveDelegate <NSObject>
@required
- (void)onOtherReceive:(Epos2OtherPeripheral *)otherObj
eventName:(NSString *)eventName data:(NSString *)data;
@end
```

### Parameter

#### **otherObj**

The callback source object is stored.

#### **eventName**

The event name is stored.

#### **data**

Reception data is stored in the JSON string.

### Supplementary explanation

- When this API is run multiple times, the callback method specified later takes effect.
- If nil is specified in delegate when calling this API, the registered callback method is canceled.

## Epos2CommBox Class

### init

Initializes the Epos2CommBox class.

#### Syntax

- (id) init;

#### Return value

If the process succeeds, an initialized Epos2CommBox class instance will be returned.

If the process fails, nil will be returned. The process may fail due to the following reasons:

Error status	Description
EPOS2_ERR_MEMORY	Memory could not be allocated.

#### Supplementary explanation

When iterating a process, be sure to generate and destroy instances outside the iterated process and not iterate the process at a short interval.

Memory releasing by the OS may affect the process of the Epson ePOS SDK, resulting in an invalid operation.

## connect

Starts communication with the communication box.

### Syntax

```
- (int)connect: (NSString *)target timeout:(long)timeout
myId:(NSString *)myId;
```

### Parameter

#### **target**

Specifies the method of connecting to the printer by a character string.

Specify the connection method using the following syntax.

<connection type>:<identifier>[<box ID>]

I/F	Connec-tion type	Identifier	Example
Wi-Fi/Ethernet	<ul style="list-style-type: none"> <li>• "TCP"</li> <li>• "TCPS"</li> </ul>	<ul style="list-style-type: none"> <li>• IP address in IPv4 format</li> <li>• MAC address</li> <li>• Host name</li> </ul>	"TCP:192.168.192.168[Box1]"

To connect to the printer via SSL/TLS communication, specify TCPS in the connection type.

#### **timeout**

Specifies the maximum time (in milliseconds) to wait for communication with the printer to be established.

Value	Description
Integer from 1000 to 300000	Maximum wait time before an error is returned (in milliseconds).
EPOS2_PARAM_DEFAULT	Specifies the default value (15000).

#### **myId**

Specifies a member ID to identify the application itself in the communication box.

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Could not open the device.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.

Error status	Description
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_ALREADY_OPENED	Communication box is already open.
EPOS2_ERR_ALREADY_USED	Specified member ID is already in use.
EPOS2_ERR_BOX_COUNT_OVER	The number of created communication boxes has exceeded the upper limit.
EPOS2_ERR_BOX_CLIENT_OVER	The number of members belong to the communication box has exceeded the upper limit.

#### ***Supplementary explanation***

- This API will succeed regardless of the connection status of the TM printer (master) and peripheral devices.
- Devices other than printers are exclusively locked.

## disconnect

Ends communication with the communication box.

### Syntax

```
- (int)disconnect;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Communication failed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

### Supplementary explanation

If disconnect is conducted during an application background transition event process, wait until disconnect completes.

## getStatus

Acquires the current status information.

### Syntax

```
- (Epos2CommBoxStatusInfo *)getStatus;
```

### Return value

The current status is returned in the Epos2CommBoxStatusInfo type.

The following status information is stored in the object as a property.

Printer status	Status	Description
connection: Connection status	EPOS2_TRUE	Connected
	EPOS2_FALSE	Disconnected

### Supplementary explanation

- ❑ The status object is set to the status at the timing of execution of this API and will not be updated.
- ❑ If this function is executed within a callback function, nil will be returned.

## getCommHistory

Acquires the transmission history of the communication box.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method.

---

### Syntax

```
- (int)getCommHistory:(id<Epos2GetCommHisotoryDelegate>)
delegate;
```

---

#### Parameter

##### **delegate**

Specifies an object conforming to the Epos2GetCommHistoryDelegate protocol.

---

#### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_CONNECT	Communication failed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

---

#### Protocol declaration

```
@protocol Epos2GetCommHistoryDelegate <NSObject>
@required
- (void)onGetCommHistory:(Epos2CommBox *)commBoxObj
code:(int)code historyList:(NSArray *)historyList;
@end
```

---

#### Parameter

##### **commBoxObj**

The callback source object is stored.

##### **code**

Error status	Description
EPOS2_SUCCESS	Processed successfully.
EPOS2_CODE_FAILURE	An unknown error occurred.

**historyList**

The transmission history of the communication box is stored.

(NSDictionary *)historyList[index]	
Key	Description
(NSString *)senderId	The member ID of the transmitter is stored. If no member ID was specified when running the connect method, "" (blank character) is set.
(NSString *)receiverId	The member ID of the receiver is stored. If data was sent to all the members of the communication box, "" (blank character) is set.
(NSString *)message	Received data is set.

## sendMessage

Sends a message to the communication box.

The return value of this API is the result of sending data to the devices.

The processing result of the devices using this API is returned to the callback method.

### Syntax

```
- (int)sendMessage:(NSString *)message targetId:(NSString *)targetId
delegate:(id<Epos2CommBoxSendMessageDelegate>)delegate;
```

#### Parameter

##### **message**

Specifies data to send to the communication box.

##### **targetId**

Specifies the member ID of the receiver.

When nil or "" (blank character) is specified, data is sent to all the members other than the transmitter.

##### **delegate**

Specifies an object conforming to the Epos2CommBoxSendMessageDelegate protocol.

#### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.
EPOS2_ERR_ILLEGAL	This API was called while no communication had been started.

---

**Protocol declaration**

```
@protocol Epos2CommBoxSendMessageDelegate <NSObject>
@required
- (void) onCommBoxSendMessage:(Epos2CommBox
*)commBoxObj code:(int)code count:(long)count;
@end
```

---

**Parameter****commBoxObject**

The callback source object is stored.

**code**

Error status	Description
EPOS2_CODE_SUCCESS	Processed successfully.
EPOS2_CODE_ERR_NOT_FOUND	Specified member ID cannot be found.
EPOS2_CODE_ERR_FAILURE	An unknown error occurred.

**count**

Number of clients which tried to send the message is stored.

## setReceiveEventDelegate

Registers a callback method for a message reception event of the communication box.

### Syntax

```
- (void)
setReceiveEventDelegate:(id<Epos2CommBoxReceiveDelegate
>)delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2CommBoxReceiveDelegate protocol.

### Protocol declaration

```
@protocol Epos2CommBoxReceiveDelegate <NSObject>
@required
- (void)onCommBoxReceive:(Epos2CommBox
*)commBoxObj senderId:(NSString *)senderId
receiverId:(NSString *)receiverId message:(NSString
*)message;
@end;
```

### Parameter

#### **commBoxObj**

The callback source object is stored.

#### **SenderId**

The member ID of the transmitter is stored.

If no member ID was specified when running the connect method, "" (blank character) is set.

#### **receiverId**

The member ID of the receiver is stored.

If data was sent to all the members of the communication box, "" (blank character) is set.

#### **message**

The received message is stored.

### Supplementary explanation

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.
- ❑ When a communication error occurs during ePOS-Device XML control, communication disconnection is not notified.  
To notify the disconnection event, implement the [setConnectionEventDelegate](#).

## Common to all classes

### getAdmin

Acquires the administrator name set with printer.

---

#### Syntax

```
- (NSString *)getAdmin;
```

---

#### Return value

A string for the administrator name.

---

#### Supplementary explanation

- If not set, "" (blank character) is returned for the TM printer.
- The administrator name is set by EPSON TMNet WebConfig.
- This API cannot be used with *Bluetooth* communication.

## getLocation

Acquires the installation location information set with printer.

---

### Syntax

```
- (NSString *)getLocation;
```

---

### Return value

A string for the installation location.

---

### Supplementary explanation

- If not set, "" (blank character) is returned for the TM printer.
- The installation location information is set by EPSON TMNet WebConfig.
- This API cannot be used with *Bluetooth* communication.

## setConnectionEventDelegate

Registers a callback method which receives a notification that the reconnection process has been started.

### Syntax

```
- (void)
setConnectionEventDelegate:(id<Epos2ConnectionDelegate>)
delegate;
```

### Parameter

#### **delegate**

Specifies an object conforming to the Epos2ConnectionDelegate protocol.

### Protocol declaration

```
@protocol Epos2ConnectionDelegate <NSObject>
@required
- (void) onConnection:(id)deviceObj
eventType:(int)eventType;
@end
```

### Parameter

#### **deviceObj**

The callback source object is stored.

#### **eventType**

The type of the event that occurred is stored.

Event type	Description
EPOS2_EVENT_RECONNECTING	Reconnection start event
EPOS2_EVENT_RECONNECT	Reconnection completion event
EPOS2_EVENT_DISCONNECT	Disconnection event

### Supplementary explanation

- ❑ When this API is run multiple times, the callback method specified later takes effect.
- ❑ If nil is specified in delegate when calling this API, the registered callback method is canceled.
- ❑ It takes about 30 seconds for the disconnection event to occur after the disconnection.
- ❑ Do not make any call operation when EPOS2\_EVENT\_RECONNECTING has occurred.  
Wait until EPOS2\_EVENT\_RECONNECT or EPOS2\_EVENT\_DISCONNECT occurs.
- ❑ EPOS2\_EVENT\_DISCONNECT occurs in the following cases:  
When disconnect is running  
When connection fails after occurrence of EPOS2\_EVENT\_RECONNECTING
- ❑ When EPOS2\_EVENT\_DISCONNECT occurs, it is not necessary to call disconnect.  
When disconnect is called, ERR\_ILLEGAL will be returned in the return value.

# Epos2Discovery Class

## start

Starts searching for the specified device type.

Each device is reported by the callback as it is detected.

---

### Syntax

```
+ (int) start:(Epos2FilterOption *)filterOption
delegate:(id<Epos2DiscoveryDelegate>)delegate;
```

---

### Parameter

#### **filterOption**

In order to filter the search result, set the filter option in the Epos2FilterOption type and specify it in the parameter. When nil is specified, search is run with the default settings.

The following information is stored in the Epos2FilterOption type.

**portType**

Selects the port to search.

Value	Description
EPOS2_PORTTYPE_ALL (default)	Search for all devices which can be connected via TCP and <i>Bluetooth</i> .
EPOS2_PORTTYPE_TCP	Search for devices connected to the network.
EPOS2_PORTTYPE_BLUETOOTH	Search for devices which can be connected via <i>Bluetooth</i> .

**broadcast**

Specify a Broadcast Address for TCP search as a string.

Value	Description
"255.255.255.255" (default)	-

**deviceModel**

Specifies the device model to search for.

Value	Description
EPOS2_MODEL_ALL	Search for all models.

**deviceType**

Specifies the device type to search for.

Value	Description
EPOS2_TYPE_ALL (default)	Search for all devices.
EPOS2_TYPE_PRINTER	Search for printers.

Value	Description
EPOS2_TYPE_HYBRID_PRINTER	Searches for hybrid model printers.
EPOS2_TYPE_DISPLAY	Search for customer displays.
EPOS2_TYPE_KEYBOARD	Search for keyboards.
EPOS2_TYPE_SCANNER	Search for barcode scanners.
EPOS2_TYPE_SERIAL	Search for serial communication devices.
EPOS2_TYPE_POS_KEYBOARD	Search for the POS keyboard.
EPOS2_TYPE_MSR	Search for the MSR.
EPOS2_TYPE_OTHER_PERIPHERAL	Search for other peripheral devices.

**delegate**

Specifies an object conforming to the Epos2DiscoveryDelegate protocol.

**Return value**

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_ILLEGAL	Tried to start search when search had been already done.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_ERR_FAILURE	An unknown error occurred.
EPOS2_ERR_PROCESSING	Could not run the process.

**Protocol declaration**

```
@protocol Epos2DiscoveryDelegate <NSObject>
@required
- (void)onDiscovery:(Epos2DeviceInfo *)deviceInfo;
@end
```

**Parameter****deviceInfo**

The device information of the detected device is stored in the Epos2DeviceInfo type.

The following device information is stored.

deviceType

The device type is stored.

Device type	Status
For a printer	EPOS2_TYPE_PRINTER
For hybrid model printers	EPOS2_TYPE_HYBRID_PRINTER
For a customer display	EPOS2_TYPE_DISPLAY
For a keyboard	EPOS2_TYPE_KEYBOARD
For a barcode scanner	EPOS2_TYPE_SCANNER
For a serial communication device	EPOS2_TYPE_SERIAL
For POS keyboard	EPOS2_TYPE_POS_KEYBOARD
For MSR	EPOS2_TYPE_MSR
For other peripheral devices	EPOS2_TYPE_OTHER_PERIPHERAL

**target**

The connection target of a device which can be specified by connectAPI is stored as a string.

Example)

"TCP:192.168.192.168"  
 "BT:00:22:15:7D:70:9C"  
 "TCP:192.168.192.168[local\_printer]"  
 "TCP:192.168.192.168[local\_display]"  
 "TCP:12:34:56:78:56:78"

**deviceName**

The name set to the device is stored.

If it could not be acquired, "" (blank character) is stored.

Example)

For a printer: "TM-T88V"

**ipAddress**

The IP address is stored.

If it could not be acquired, "" (blank character) is stored.

Example)

TCP: "192.168.192.168"

BT: ""(blank character)

**macAddress**

The MAC address is stored.

If it could not be acquired, "" (blank character) is stored.

Example)

TCP: "12:34:56:78:56:78"

BT: ""(blank character)

**bdAddress**

The BD address is stored.

If it could not be acquired, "" (blank character) is stored.

Example)

TCP: ""(blank character)

BT: "12:34:56:78:56:78"

---

#### ***Supplementary explanation***

- ❑ The search result of this API is reported to the callback function for each device detected.  
An already opened device is also reported. However, an already opened *Bluetooth* device is not reported.
- ❑ In search for TCP devices, if multiple devices with the same IP address exist, the device information is treated as a single device. Consistency for such device information is not guaranteed.
- ❑ If the printer has its TCP address and TCPS address, and the both are detected, only the TCPS address is reported to the callback function.
- ❑ Hybrid model printers can be detected as deviceType of EPOS2\_TYPE\_PRINTER and EPOS2\_TYPE\_HYBRID\_PRINTER.
- ❑ After the search begins and the process ends, make sure to end the search.

## stop

Stops search.

### Syntax

```
+ (int) stop;
```

### Return value

Error status	Description
EPOS2_SUCCESS	The function was executed successfully.
EPOS2_ERR_ILLEGAL	Tried to stop a search while it had not been started.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

After the search begins and the process ends, make sure to end the search.

# Epos2Log Class

## setLogSettings

Sets the log output function.

### Syntax

```
+ (int) setLogSettings:(int) period output:(int) output
    ipAddress:(NSString *)ipAddress port:(int)port
    logSize:(int)logSize logLevel:(int)logLevel;
```

### Parameter

#### **period**

Specifies whether the log output function setting is temporary or permanent.

The configuration file is not created for temporary setting but is created for permanent setting.

Value	Description
EPOS2_PERIOD_TEMPORARY	Temporarily reflects the setting.
EPOS2_PERIOD_PERMANENT	Permanently reflects the setting.

#### **output**

Enables or disables the log output function and specifies the log output location.

Value	Description
EPOS2_OUTPUT_DISABLE	Disables the log output function.
EPOS2_OUTPUT_STORAGE	Output to the storage of the terminal.
EPOS2_OUTPUT_TCP	Output via TCP.

#### **ipAddress**

Specifies the IP address for TCP communication.

Specifies the IP address in the IPv4 format.

nil can be specified when the log output function is disabled or the log is output to the storage of the terminal.

#### **port**

Specifies the port number for TCP communication.

Also specifies a value within the valid range even when the log output function is disabled or the log is output to the storage of the terminal.

Value	Description
Integer from 0 to 65535	Port number

***logSize***

Specifies the maximum capacity of the log stored in the storage.

Also specifies a value within the valid range even when the log output function is disabled or the log is output to TCP.

Value	Description
Integer from 1 to 50	Maximum capacity of the log stored (in MB)

***logLevel***

Specifies the log output level.

Value	Description
EPOS2_LOGLEVEL_LOW	Low level

***Return value***

Error status

If the process succeeds, EPOS2\_SUCCESS will be returned.

If the process fails, one of the following values be returned.

Error status	Description
EPOS2_ERR_PARAM	An invalid parameter was passed.
EPOS2_ERR_FAILURE	An unknown error occurred.

***Supplementary explanation***

When setting output to EPOS2\_OUTPUT\_STORAGE, enable the file sharing setting of iTunes. Follow the procedure below.

1. Add "UIFileSharingEnabled" to nfo.plist of the application. Automatically changed to "Application supports iTunes file sharing".
2. Set Value of "Application supports iTunes file sharing" to "YES".

## SdkVersion

Acquires the Epson ePOS SDK version.

---

### Syntax

#### Getter

`- (NSString) getSdkVersion`

---

#### Supplementary explanation

The version of SDK used can be acquired as a character string.

Example: "Ver.2.0.0"

# Epos2BluetoothConnection Class

## connectDevice

Shows a list of *Bluetooth* devices available for pairing and pairs a selected device with the terminal.  
Acquires the *Bluetooth* address of the printer newly paired with the terminal.

### Syntax

```
- (int) connectDevice:(NSMutableString *) macAddress;
```

### Parameter

#### macAddress

The BD address of the printer newly paired is returned.

Format	Description
BT:00:11:22:33:44:55	Separated by ":" (colon).

### Return value

The result of the API is returned.

Error status	Description
EPOS2_BT_SUCCESS	The function was executed successfully.
EPOS2_BT_ERR_PARAM	An invalid parameter was passed.
EPOS2_BT_ERR_UNSUPPORTED	The function was executed on an unsupported OS.
EPOS2_BT_ERR_CANCEL	Pairing connection was canceled.
EPOS2_BT_ERR_ALREADY_CONNECT	A printer already paired was selected.
EPOS2_BT_ERR_ILLEGAL_DEVICE	An invalid device was selected.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

- Use this API before calling [connect](#) API.
- This API is supported by iOS7.0 or later only.
- When using on an iOS terminal with the arm64 architecture, add "arm64" to the architectures used to build the application.
- Complete pairing and connecting with the *Bluetooth* device, and then start the application, or use `connectDevice` API to establish pairing and connection with the device.

## disconnectDevice

Disconnects from a *Bluetooth* device paired with the terminal.

### Syntax

```
- (int) disconnectDevice:(NSString *) macAddress;
```

### Parameter

#### *macAddress*

Specify the BD address of a paired printer to disconnect.

Format	Description
BT: 00:11:22:33:44:55	Separated by ":" (colon).
BT: 00-11-22-33-44-55	Separated by "-" (hyphen).
BT: 001122334455	No separation

### Return value

The result of the API is returned.

Error status	Description
EPOS2_BT_SUCCESS	The function was executed successfully.
EPOS2_BT_ERR_PARAM	An invalid parameter was passed.
EPOS2_BT_ERR_CONNECT	A communication error occurred.
EPOS2_BT_ERR_MEMORY	Memory necessary for processing could not be allocated.
EPOS2_BT_ERR_ILLEGAL	The function was used in an illegal way.
EPOS2_BT_ERR_UNSUPPORTED	The function was used with an unsupported printer.
EPOS2_ERR_FAILURE	An unknown error occurred.

### Supplementary explanation

Use this API after calling [disconnect](#) API.

# EasySelect Class

## parseNFC

Analyzes NFC tags data.

### Syntax

```
- (NSArray<EposEasySelectInfo *> *)  
parseNFC:(NFCNDEFMessage *)message  
timeout:(long)timeout
```

### Parameter

#### **message**

Specifies the NDEF message of the acquired NFC tag.

NDEF message to be analyzed	Description
Network data	For Network (uniquely defined data)
BTSSP	For <i>Bluetooth</i> (NFR standard)

#### **timeout**

Specifies the wait time for a NFC tag to be analyzed.

Value	Description
Integer from 0 to 60000	Wait time for analysis (in msec units)
PARSE_NFC_TIMEOUT_DEFAULT	Specifies the default value (500).

### Return value

The NFC tag analysis result is stored in NSArray and returned to the member variables of the EasySelectInfo class.

When the analysis has failed, nil is returned.

### Supplementary explanation

- ❑ Import CoreNFC.framework for using this API.
- ❑ nil or "" (blank) will be returned if information for the member variables of the EasySelectInfo class cannot be acquired from the message.
- ❑ If nil or "" (blank) is returned to analysis data, refer to the following.

Status	Cause	Countermeasure
nil or "" (blank) is returned to EasySelectInfo.printerName	Printer name information is not included in the NFC tag.	Define the printer name information in the NFC tag.

Status	Cause	Countermeasure
"" (blank) is returned to EasySelect-Info.macAddress	<ul style="list-style-type: none"><li>• Communication with the printer is terminated.</li><li>• Timeout occurred for the MAC address response from the printer.</li></ul>	Check if there is no problem in the connection and power of the printer.

## parseQR

Analyzes QR tags data.

---

### Syntax

- (EposEasySelectInfo\*) parseQR:(NSString \*)data

---

### Parameter

#### **data**

Specifies QR code data that has been read by using iOS API.

---

### Return value

The QR code analysis result is returned to the member variables of the EasySelectInfo class.

When the analysis has failed, nil is returned.

---

### Supplementary explanation

Create the QR code using [createQR](#) API and print it to be read.

Some printers can print the QR code on a status sheet. For details, refer to the Technical Reference Guide of the printer.

## createQR

Creates QR code data that can be analyzed by [parseQR](#).

### Syntax

```
- (NSString *) createQR:(NSString *)printerName
DeviceType:(int)deviceType
MacAddress(NSString *):macAddress
```

### Parameter

#### **printerName**

Specifies a printer name.

#### **deviceType**

Specifies a printer type.

Value	Description
EPOS_EASY_SELECT_DEVTYPE_TCP	Slave printer (wired / wireless)
EPOS_EASY_SELECT_DEVTYPE_BLUETOOTH	Bluetooth compatible printer

#### **macAddress**

Specifies a MAC address (for a slave printer), or a BD address (for a *Bluetooth* compatible printer). The following shows the address format.

Format	Description
00:11:22:33:44:55	Separate the digits by colons.
00-11-22-33-44-55	Separate the digits by hyphens.
001122334455	No separation

### Return value

QR code print data is returned. Specify this data by [addSymbol](#) to print the QR code.

When failed to create the print data, nil is returned.

### Supplementary explanation

To see the printer name, MAC address, and BD address, print a status sheet from the printer.

For instructions on how to print the status sheet, refer to the Technical Reference Guide of the printer.

## parseBeacon

Analyzes printer information in iBeacon data.

### Syntax

```
- (EposEasySelectInfo *) parseBeacon:(CLBeacon *)beacon
```

### Parameter

#### **beacon**

Specifies iBeacon data acquired by CLLocationManager of iOS.

### Return value

The iBeacon data analysis result is returned to the member variables of the EasySelectInfo class.

Item	Description
deviceType	Fixed to EASY_SELECT_DEVTYPE_TCP.
printerName	Printer name. Returns a blank when the analysis failed.
macAddress	Fixed to nil.
target	Returns the IP address in the IPv4 format. Returns a blank if the address format is other than IPv4, or the iOS device is not connected to the network.

### Supplementary explanation

- ❑ Use this command only when the iOS device and the printer are in the same network.  
If the printer is connected to a different network, the printer cannot be selected using the information of EasySelectInfo class.
- ❑ Import CoreLocation.framework for using this API.

## EasySelectInfo Class

### deviceType

Stores printer type information.

Stored data	Description
EPOS_EASY_SELECT_DEVTYPE_TCP	Slave printer
EPOS_EASY_SELECT_DEVTYPE_BLUETOOTH	<i>Bluetooth</i> compatible printer

#### Syntax

```
int deviceType;
```

### printerName

Stores printer name information.

#### Syntax

```
NSString *printerName;
```

### macAddress

Stores a MAC address or a BD address.

#### Syntax

```
NSString *macAddress;
```

### target

Stores analyzed target information.

#### Syntax

```
NSString *target;
```

## Status list

### Error Status and countermeasures

Error Status	Cause	Countermeasure
EPOS2_ERR_PARAM	An invalid parameter was passed. <Example> A value outside the supported range was specified.	Check the value specified in the parameter.
EPOS2_ERR_CONNECT	Failed to communicate with the device. <Example> Failed to connect to the printer.	Run disconnect for the appropriate class and then connect to restore communication.  To connect via <i>Bluetooth</i> , establish a pairing connection with connectDevice, and then perform the process described above.
EPOS2_ERR_TIMEOUT	Failed to communicate with the devices within the specified time.	Check the timeout period. Set the timeout period to longer than the time required for printing.
EPOS2_ERR_MEMORY	Memory necessary for processing could not be allocated.	Close unnecessary applications.
EPOS2_ERR_ILLEGAL	The function was used in an illegal way. <Example> Tried to start communication with a printer with which communication had been already established.	Use the API in the correct manner.
EPOS2_ERR_PROCESSING	Could not run the process. <Example> The specified process could not be run because a similar process was being run by another thread.	The timing of the processes has overlapped. Re-execute the API in which the error occurred.
EPOS2_ERR_UNSUPPORTED	<ul style="list-style-type: none"> <li>• A model name or language not supported was specified.</li> <li>• A print method not supported by the printer was specified.</li> </ul>	<ul style="list-style-type: none"> <li>• A function cannot be used if it is not supported by the specified model.</li> <li>• Specify a print method supported by the printer.</li> </ul>
EPOS2_ERR_NOT_FOUND	The specified target could not be found. <Example> The printer specified as the connection target does not exist.	Check if the connection type and/or IP address are correct.
EPOS2_ERR_IN_USE	The specified device is in use. <Example> The device is being used by another application.	Stop using the device from another application.

Error Status	Cause	Countermeasure
EPOS2_ERR_TYPE_INVALID	The device class is not correct (Epos2Printer, Epos2LineDisplay).	Check the class of the connected device and connect to it with the correct device class.
	An unsupported connection method is specified.	Check the system configuration, and specify the appropriate connection method.
EPOS2_ERR_DISCONNECT	Failed to disconnect from the device.	Check connection with the device.
EPOS2_ERR_ALREADY_OPENED	Communication box is already open.	Finish communication with the communication box.
EPOS2_ERR_ALREADY_USED	Specified member ID is already in use.	Specify a different member ID.
EPOS2_ERR_BOX_COUNT_OVER	The number of created communication boxes has exceeded the upper limit.	Delete an unnecessary communication box.
EPOS2_ERR_BOX_CLIENT_OVER	The number of members belong to the communication box has exceeded the upper limit.	Delete a member who is not using the communication box.
EPOS2_ERR_FAILURE	An unknown error occurred.	Check for a problem with the execution environment.

## Callback Codes and countermeasures

CallbackCode	Cause	Countermeasure
EPOS2_CODE_SUCCESS	Processed successfully.	-
EPOS2_CODE_ERR_TIMEOUT	The process exceeded the specified timeout period.	Adjust the timeout period.
EPOS2_CODE_ERR_NOT_FOUND	<ul style="list-style-type: none"> <li>The connection type and/or IP address are not correct.</li> <li>The specified device is not connected.</li> </ul>	<ul style="list-style-type: none"> <li>Check if the connection type and/or IP address are correct.</li> <li>Check connection with the device.</li> </ul>
EPOS2_CODE_ERR_AUTORECOVER	<ul style="list-style-type: none"> <li>Head overheat error occurred.</li> <li>Motor driver IC overheat error occurred.</li> <li>Battery overheat error occurred.</li> </ul>	Start the process after the device is cooled down.
	The print reference mark on the label sheet cannot be found.	Open and close the cover.
EPOS2_CODE_ERR_COVER_OPEN	<ul style="list-style-type: none"> <li>Cover is open.</li> <li>Cover was opened during MICR read operation.</li> </ul>	Close the printer cover.
EPOS2_CODE_ERR_CUTTER	Auto cutter error occurred.	Remove the error cause and power off and then on the printer.
EPOS2_CODE_ERR_MECHANICAL	Mechanical error occurred.	Remove the error cause and power off and then on the printer.
EPOS2_CODE_ERR_EMPTY	Paper has run out.	Refill the paper.
EPOS2_CODE_ERR_UNRECOVERABLE	Unrecoverable error occurred.	Power off and then on the printer. Contact the distributor or service center if the problem persists.
EPOS2_CODE_ERR_SYSTEM	An error occurred with the TM-i firmware or TM-DT software.	Turn off and then turn on the power supply to the TM-i series/TM-DT series, and restart the OS.
EPOS2_CODE_ERR_PORT	Forced transmission was run in the online state.	Run forced transmission in the offline state.
EPOS2_CODE_ERR_INVALID_WINDOW	An unregistered window was specified.	Check the specified window.
EPOS2_CODE_ERR_JOB_NOT_FOUND	A print job ID which did not exist was specified.	Check the specified job ID.
EPOS2_CODE_PRINTING	<code>requestPrintJobStatus</code> was run by specifying a print job ID which was being printed.	Run the process after printing completes.
EPOS2_CODE_ERR_SPOOLER	Print data exceeding the spooler capacity was transmitted.	Check if communication with the printer is disconnected.
EPOS2_CODE_ERR_BATTERY_LOW	Battery has run out.	Replace the battery or connect the AC adapter.

CallbackCode	Cause	Countermeasure
EPOS2_CODE_ERR_FAILURE	An unknown error occurred.	Check for a problem with the execution environment.
EPOS2_CODE_ERR_TOO_MANY_REQUESTS	The number of print jobs or data to be displayed on a display has exceeded the allowable limit of the printer's firmware.	Wait for the printer to process some of the tasks, then send the jobs or data again.
EPOS2_CODE_ERR_REQUEST_ENTITY_TOO_LARGE	Print job data with the size exceeding the capacity of the printer firmware was transmitted.	Check the content of the print job, reduce the size of the data, and then resend the print job.
EPOS2_CCHANGER_CODE_ER_R_OPOSCODE	A device vendor definition error occurred.	In the OPOS driver manual, refer to ResultCodeExtended properties.
EPOS2_CODE_ERR_NO_MICR_DATA	MICR data cannot be detected.	Check the slip sheet and clean the MICR mechanism if necessary.
EPOS2_CODE_ERR_ILLEGAL_LENGTH	Paper length is not appropriate.	Check the paper length.
EPOS2_CODE_ERR_NO_MAGNETIC_DATA	Magnetic waveform cannot be detected.	<ul style="list-style-type: none"> <li>• Check the font to read.</li> <li>• Clean the MICR mechanism.</li> </ul>
EPOS2_CODE_ERR_RECOGNITION	Illegible MICR text was detected.	Check the status of the slip sheet.
EPOS2_CODE_ERR_READ	Error occurred during MICR read operation.	Remove the error cause and try again. If the error persists, restart the printer.
EPOS2_CODE_ERR_NOISE_DETECTIED	Noise error was detected.	Remove the error cause and try the noise measurement again. If the error persists, restart the printer.
EPOS2_CODE_ERR_PAPER_JAM	Paper jam error occurred during MICR read operation.	Remove the jammed paper.
EPOS2_CODE_ERR_PAPER_PULLED_OUT	<ul style="list-style-type: none"> <li>• Paper was removed during insertion.</li> <li>• Paper was removed during MICR read operation.</li> <li>• Paper was removed after it had been inserted.</li> </ul>	Reset the paper.
EPOS2_CODE_ERR_CANCEL_FAILED	Failed to cancel waiting for paper insertion.	Check the status of the printer and try the process again.
EPOS2_CODE_ERR_PAPER_TYPE	Printer operation differs from the specified print method.	Specify a correct print method again.
EPOS2_CODE_ERR_WAIT_INSERTION	Could not run the process while waiting for paper insertion.	<ul style="list-style-type: none"> <li>• Reset the paper and try the process again.</li> <li>• Cancel waiting for paper insertion and try the process again.</li> </ul>
EPOS2_CODE_ERR_ILLEGAL	<p>The function was used in an illegal way.  <i>&lt;Example&gt;</i>            Tried to cancel waiting for paper insertion while paper had already been inserted.</p>	Use the API in an appropriate manner.
EPOS2_CODE_ERR_INSERTED	Could not run the process while paper had already been inserted.	Eject the paper and try the process again.

CallbackCode	Cause	Countermeasure
EPOS2_CODE_ERR_WAIT_REMOVAL	Could not run the process while waiting for paper removal.	Remove the paper and try the process again.
EPOS2_CODE_ERR_DEVICE_BUSY	The specified device is in process.	Execute the process after the process completes.

## Printer Status and countermeasures

### Printer class

Printer Status	Cause	Countermeasure
status.connection==EPOS2_FALSE	<ul style="list-style-type: none"> <li>The printer is powered off.</li> <li>No connection is established with the printer.</li> </ul>	Check the power and communication status of the printer.
status.online==EPOS2_FALSE	Offline status.	Remove a cause which forces the printer offline (e.g., the cover is open or paper has run out).
status.online==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.coverOpen==EPOS2_TRUE	Cover is open.	Close the printer cover.
status.coverOpen==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.paper==EPOS2_PAPER_NEAR_END	Running short of paper.	Replace the paper.
status.paper==EPOS2_PAPER_EMPTY	Paper has run out.	Refill the paper.
status.paper==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.paperFeed==EPOS2_TRUE	Paper is being fed by pressing the Paper Feed button.	Run the process after paper feed completes.
status.paperFeed==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.panelSwitch==EPOS2_SWITCH_ON	Panel switch is being operated.	Run the process after the operation completes.
status.panelSwitch==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.drawer== EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.errorStatus== EPOS2_MECHANICAL_ERR	Mechanical error occurred.	Remove the error cause and power off and then on the printer.
status.errorStatus== EPOS2_AUTOCUTTER_ERR	Auto cutter error occurred.	Remove the error cause and power off and then on the printer.
status.errorStatus== EPOS2_UNRECOVER_ERR	Unrecoverable error occurred.	Power off and then on the printer. Contact the distributor or service center if the problem persists.

Printer Status	Cause	Countermeasure
status.errorStatus== EPOS2_AUTORECOVER_ERR	<ul style="list-style-type: none"> <li>• Head overheat error occurred.</li> <li>• Motor driver IC overheat error occurred.</li> <li>• Battery overheat error occurred.</li> </ul>	Start the process after the device is cooled down.
	The print reference mark on the label sheet cannot be found.	Open and close the cover.
status.errorStatus==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.autoRecoverError== EPOS2_HEAD_OVERHEAT	Head overheat error occurred.	Run the process after the device gets cooled down.
status.autoRecoverError== EPOS2_MOTOR_OVERHEAT	Motor driver IC overheat error occurred.	Run the process after the device gets cooled down.
status.autoRecoverError== EPOS2_BATTERY_OVERHEAT	Battery overheat error occurred.	Run the process after the device gets cooled down.
status.autoRecoverError== EPOS2_WRONG_PAPER	The print reference mark on the label sheet cannot be found.	Open and close the cover.
status.autoRecoverError== EPOS2_COVER_OPEN	Cover is open.	Close the printer cover.
status.autoRecoverError== EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.buzzer==EPOS2_TRUE	Buzzer is sounding.	Check the buzzer sounding condition of the printer, and run the process after removing the cause for buzzer sounding.
status.buzzer==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.adapter==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.batteryLevel== EPOS2_BATTERY_LEVEL_1	Running short of battery.	Charge the battery or connect the AC adapter.
status.batteryLevel== EPOS2_BATTERY_LEVEL_0	Battery has run out.	Replace the battery or connect the AC adapter.
status.batteryLevel==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.

### HybridPrinter class

Printer Status	Cause	Countermeasure
status.connection==EPOS2_FALSE	<ul style="list-style-type: none"> <li>• The printer is powered off.</li> <li>• No connection is established with the printer.</li> </ul>	Check the power and communication status of the printer.

Printer Status	Cause	Countermeasure
status.online==EPOS2_FALSE	Offline status.	Remove a cause which forces the printer offline (e.g., the cover is open or paper has run out).
status.online==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.coverOpen==EPOS2_TRUE	Cover is open.	Close the printer cover.
status.coverOpen==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.paper==EPOS2_PAPER_NEAR_END	Running short of paper.	Replace the paper.
status.paper==EPOS2_PAPER_EMPTY	Paper has run out.	Refill the paper.
status.paper==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.paperFeed==EPOS2_TRUE	Paper is being fed by pressing the Paper Feed button.	Run the process after paper feed completes.
status.paperFeed== HybridPrinter.UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.panelSwitch==EPOS2_SWITCH_ON	Panel switch is being operated.	Run the process after the operation completes.
status.panelSwitch==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.drawer==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.errorStatus== EPOS2_MECHANICAL_ERR	Mechanical error occurred.	Remove the error cause and power off and then on the printer.
status.errorStatus== EPOS2_AUTOCUTTER_ERR	Auto cutter error occurred.	Remove the error cause and power off and then on the printer.
status.errorStatus== EPOS2_UNRECOVER_ERR	Unrecoverable error occurred.	Power off and then on the printer. Contact the distributor or service center if the problem persists.
status.errorStatus== EPOS2_AUTORECOVER_ERR	<ul style="list-style-type: none"> <li>• Head overheat error occurred.</li> <li>• Motor driver IC overheat error occurred.</li> </ul>	Start the process after the device is cooled down.
status.errorStatus==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.autoRecoverError== EPOS2_HEAD_OVERHEAT	Head overheat error occurred.	Run the process after the device gets cooled down.
status.autoRecoverError== EPOS2_HEAD_OVERHEAT	Motor driver IC overheat error occurred	Run the process after the device gets cooled down.
status.autoRecoverError== EPOS2_WRONG_PAPER	The print reference mark on the label sheet cannot be found.	Open and close the cover.

Printer Status	Cause	Countermeasure
status.autoRecoverError== EPOS2_COVER_OPEN	Cover is open.	Close the printer cover.
status.autoRecoverError== EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.insertionWaiting== EPOS2_INSERTION_WAIT_SLIP	Waiting for slip sheet insertion.	Insert a slip sheet.
status.insertionWaiting== EPOS2_INSERTION_WAIT_VALIDATION	Waiting for validation sheet insertion.	Insert a validation sheet.
status.insertionWaiting== EPOS2_INSERTION_WAIT_MICR	Waiting for slip sheet insertion for MICR reading.	Insert a slip sheet.
status.insertionWaiting== EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.removalWaiting== EPOS2_REMOVAL_WAIT_PAPER	Waiting for paper removal.	Remove the paper.
status.removalWaiting== EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.
status.slipPaper==EPOS2_UNKNOWN	No connection is established with the printer.	Check the communication status of the printer.

## Key code list

Constant	Code	Constant	Code
EPOS2_VK_BACK	0x08	EPOS2_VK_L	0x4C
EPOS2_VK_TAB	0x09	EPOS2_VK_M	0x4D
EPOS2_VK_RETURN	0x0D	EPOS2_VK_N	0x4E
EPOS2_VK_SHIFT	0x10	EPOS2_VK_O	0x4F
EPOS2_VK_CONTROL	0x11	EPOS2_VK_P	0x50
EPOS2_VK_MENU	0x12	EPOS2_VK_Q	0x51
EPOS2_VK_CAPITAL	0x14	EPOS2_VK_R	0x52
EPOS2_VK_ESCAPE	0x1B	EPOS2_VK_S	0x53
EPOS2_VK_CONVERT	0x1C	EPOS2_VK_T	0x54
EPOS2_VK_NONCONVERT	0x1D	EPOS2_VK_U	0x55
EPOS2_VK_SPACE	0x20	EPOS2_VK_V	0x56
EPOS2_VK_PRIOR	0x21	EPOS2_VK_W	0x57
EPOS2_VK_NEXT	0x22	EPOS2_VK_X	0x58
EPOS2_VK_END	0x23	EPOS2_VK_Y	0x59
EPOS2_VK_HOME	0x24	EPOS2_VK_Z	0x5A
EPOS2_VK_LEFT	0x25	EPOS2_VK_MULTIPLY	0x6A
EPOS2_VK_UP	0x26	EPOS2_VK_ADD	0x6B
EPOS2_VK_RIGHT	0x27	EPOS2_VK_SUBTRACT	0x6D
EPOS2_VK_DOWN	0x28	EPOS2_VK_F1	0x70
EPOS2_VK_INSERT	0x2D	EPOS2_VK_F2	0x71
EPOS2_VK_DELETE	0x2E	EPOS2_VK_F3	0x72
EPOS2_VK_0	0x30	EPOS2_VK_F4	0x73
EPOS2_VK_1	0x31	EPOS2_VK_F5	0x74
EPOS2_VK_2	0x32	EPOS2_VK_F6	0x75
EPOS2_VK_3	0x33	EPOS2_VK_F7	0x76
EPOS2_VK_4	0x34	EPOS2_VK_F8	0x77
EPOS2_VK_5	0x35	EPOS2_VK_F9	0x78
EPOS2_VK_6	0x36	EPOS2_VK_F10	0x79
EPOS2_VK_7	0x37	KEPOS2_VK_F11	0x7A
EPOS2_VK_8	0x38	EPOS2_VK_F12	0x7B
EPOS2_VK_9	0x39	EPOS2_VK_OEM_1	0xBA
EPOS2_VK_A	0x41	EPOS2_VK_OEM_PLUS	0xBB
EPOS2_VK_B	0x42	EPOS2_VK_OEM_COMMA	0xBC

Constant	Code	Constant	Code
EPOS2.VK.C	0x43	EPOS2.VK.OEM_MINUS	0xBD
EPOS2.VK.D	0x44	EPOS2.VK.OEM_PERIOD	0xBE
EPOS2.VK.E	0x45	EPOS2.VK.OEM_2	0xBF
EPOS2.VK.F	0x46	EPOS2.VK.OEM_3	0xC0
EPOS2.VK.G	0x47	EPOS2.VK.OEM_4	0xDB
EPOS2.VK.H	0x48	EPOS2.VK.OEM_5	0xDC
EPOS2.VK.I	0x49	EPOS2.VK.OEM_6	0xDD
EPOS2.VK.J	0x4A	EPOS2.VK.OEM_7	0xDE
EPOS2.VK.K	0x4B	EPOS2.VK.OEM_ATTN	0xF0

# Device Specifications

Provides information about restriction on the use of APIs depend on devices such as printer and peripheral device, and the parameter setting value.



Refer to the Technical Reference Guide of each printer for more information on each printer.

## List of Supported Classes

The following lists the classes supported by each printer.

	<a href="#">Epos2Printer class</a> <sup>*1</sup>	<a href="#">Epos2HybridPrinter class</a>	<a href="#">Epos2LineDisplay class</a> <sup>*1</sup>	<a href="#">Epos2Keyboard class</a>	<a href="#">Epos2POSKeyboard class</a>	<a href="#">Epos2BarcodeScanner class</a>	<a href="#">Epos2MSR class</a>	<a href="#">Epos2SimpleSerial class</a>	<a href="#">Epos2OtherPeripheral class</a>	<a href="#">Epos2CommBox class</a>	<a href="#">Common to all classes</a>	<a href="#">Epos2Discovery class</a>	<a href="#">Epos2Log class</a>	<a href="#">Epos2BluetoothConnection class</a>	<a href="#">EasySelect class</a> <sup>*1</sup>	<a href="#">EasySelectInfo class</a>
TM-m10	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-m30	✓	-	✓	-	-	✓ <sup>*3</sup>	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-T20	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T20II	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-T20III	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-T20IIIL	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T20X	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T60	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T70	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T70II	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-T81II	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T81III	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T82	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T82II	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T82III	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-T82IIIL	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T82X	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-T83III	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓

		<a href="#">Epos2Printer class</a> *1	<a href="#">Epos2HybridPrinter class</a>	<a href="#">Epos2LineDisplay class</a> *1	<a href="#">Epos2Keyboard class</a>	<a href="#">Epos2POSKeyboard class</a>	<a href="#">Epos2BarcodeScanner class</a>	<a href="#">Epos2MSR class</a>	<a href="#">Epos2SimpleSerial class</a>	<a href="#">Epos2OtherPeripheral class</a>	<a href="#">Epos2CommBox class</a>	<a href="#">Common to all classes</a>	<a href="#">Epos2Discovery class</a>	<a href="#">Epos2Log class</a>	<a href="#">Epos2BluetoothConnection class</a>	<a href="#">EasySelect class</a> *1	<a href="#">EasySelectInfo class</a>
TM-T88V		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-T88VI		✓	-	✓	-	-	✓ <sup>*4</sup>	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-T100		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-U220		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-U330		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-P20		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-P60 (Receipt)		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-P60 (Peeler)		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	✓	✓
TM-P60II (Receipt)		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓ <sup>*7</sup>	✓	✓
TM-P60II (Peeler)		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓ <sup>*8</sup>	✓	✓
TM-P80		✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓ <sup>*9</sup>	✓	✓
TM-H6000V		✓	✓ <sup>*5</sup>	✓	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
TM-T20II-i		✓	-	✓	✓	-	✓ <sup>*6</sup>	✓ <sup>*6</sup>	✓	-	✓	✓	✓	✓	-	-	-
TM-T70-i		✓	-	✓	✓	-	✓ <sup>*6</sup>	✓ <sup>*6</sup>	✓	-	✓	✓	✓	✓	-	-	-
TM-T82II-i		✓	-	✓	✓	-	✓ <sup>*6</sup>	✓ <sup>*6</sup>	✓	-	✓	✓	✓	✓	-	-	-
TM-T83II-i		✓	-	✓	✓	-	✓ <sup>*6</sup>	✓ <sup>*6</sup>	✓	-	✓	✓	✓	✓	-	-	-
TM-T88V-i		✓	-	✓	✓	-	✓ <sup>*6</sup>	✓ <sup>*6</sup>	✓	-	✓	✓	✓	✓	-	-	-
TM-T88VI-iHUB		✓	-	✓	✓	-	✓ <sup>*6</sup>	✓ <sup>*6</sup>	✓	-	✓	✓	✓	✓	-	-	-
TM-U220-i		✓	-	✓	✓	-	✓ <sup>*6</sup>	✓ <sup>*6</sup>	✓	-	✓	✓	✓	✓	-	-	-
TM-T70II-DT		✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
TM-T70II-DT2		✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
TM-T88V-DT		✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
TM-T88VI-DT2		✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
TM-H6000IV-DT		✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
TM-T88IV <sup>*2</sup>		✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TM-T90 <sup>*2</sup>		✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TM-L90 <sup>*2</sup>		✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TM-H6000IV <sup>*2</sup>		✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*1: The availability and restriction on the use of APIs varies for each printer. Refer to [List of Supported APIs](#).

\*2: Supports control as a slave printer only.

\*3: Supported by TM-m30 firmware Ver. 1.40 ESC/POS or later.

\*4: Supported by TM-T88VI firmware Ver. 40.50 ESC/POS or later.

\*5: The availability and restriction on the use of APIs varies for each model. Refer to [Epos2HybridPrinter class](#).

\*6: Does not support control by the device control program.

\*7: Supported by firmware Ver. 5.14 ESC/POS or later.

\*8: Supported by firmware Ver. 6.14 ESC/POS or later.

\*9: TM-P80: Supported by firmware Ver. 1.02 ESC/POS or later.

TM-P80AC: Supported by firmware Ver. 2.01 ESC/POS or later.

## List of Supported APIs

Provides list of supported APIs for each printer.

The following is an explanation of the symbol indicated in table:

- ✓: Supported.
- ✓\*: Supported but has a restriction on specifying the parameter setting value.
- -: Not supported.

For information on the "✓\*" restrictions, refer to Printer-specific Support Information.

### Epos2Printer Class

#### ***Single-function models/Mobile models (1)***

API	TM-m10	TM-m30	TM-T20	TM-T20II	TM-T20III	TM-T20IIIIL	TM-T20X	TM-T60	TM-T70	TM-T70II	TM-T81II	TM-T81III	TM-T82	TM-T82II	TM-T82III
initWithPrinterSeries	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
connect	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
disconnect	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
startMonitor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
stopMonitor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getStatus	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
sendData	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
beginTransaction	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-
endTransaction	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-
requestPrintJobStatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
clearCommandBuffer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextAlign	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addLineSpace	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextRotate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addText	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextLang	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextFont	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addTextSmooth	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextSize	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextStyle	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addHPosition	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addFeedUnit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

API	TM-m10	TM-m30	TM-T20	TM-T20II	TM-T20III	TM-T20IIL	TM-T20X	TM-T60	TM-T70	TM-T70II	TM-T81II	TM-T82	TM-T82II	TM-T82III
addFeedLine	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addImage	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addLogo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addBarcode	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addSymbol	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addHLine	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addVLineBegin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addVLineEnd	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addPageBegin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addPageEnd	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addPageArea	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addPageDirection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addPagePosition	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addPageLine	✓*	✓*	-	-	-	-	-	-	-	-	-	-	-	-
addPageRectangle	✓*	✓*	-	-	-	-	-	-	-	-	-	-	-	-
addCut	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addPulse	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addSound	✓*	✓*	✓*	✓*	✓*	✓*	✓*	-	-	✓*	-	✓*	✓*	✓*
addFeedPosition	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addLayout	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addCommand	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getMaintenanceCounter	-	✓	-	✓	-	-	-	-	-	-	-	-	-	-
resetMaintenanceCounter	-	✓	-	✓	-	-	-	-	-	-	-	-	-	-
getPrinterSetting	-	✓*	-	✓*	-	-	-	-	-	-	-	-	-	-
setPrinterSetting	-	✓*	-	✓*	-	-	-	-	-	-	-	-	-	-
forceRecover	-	-	-	-	-	-	-	-	-	-	-	-	-	-
forcePulse	-	-	-	-	-	-	-	-	-	-	-	-	-	-
forceStopSound	-	-	-	-	-	-	-	-	-	-	-	-	-	-
forceCommand	-	-	-	-	-	-	-	-	-	-	-	-	-	-
forceReset	-	-	-	-	-	-	-	-	-	-	-	-	-	-
setStatusChangeEventDelegate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
setReceiveEventDelegate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
interval	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**Single-function models/Mobile models (2)**

API	TM-T82IIL	TM-T82X	TM-T83III	TM-T88V	TM-T88VI	TM-T100	TM-U220	TM-U330	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)	TM-P80
initWithPrinterSeries	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
connect	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
disconnect	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
startMonitor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
stopMonitor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getStatus	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
sendData	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
beginTransaction	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
endTransaction	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
requestPrintJobStatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-
clearCommandBuffer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextAlign	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addLineSpace	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextRotate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addText	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextLang	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextFont	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓	✓*	✓*	✓*	✓*
addTextSmooth	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextSize	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextStyle	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addHPosition	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
addFeedUnit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addFeedLine	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addImage	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addLogo	✓	✓	✓	✓	✓	✓	✓	✓*	✓*	✓	✓	✓	✓	✓
addBarcode	✓*	✓*	✓*	✓*	✓*	✓*	-	✓*	✓	✓*	✓*	✓*	✓*	✓*
addSymbol	✓*	✓*	✓*	✓*	✓*	✓*	-	✓*	✓*	-	✓*	✓*	✓*	✓*
addHLine	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addVLineBegin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addVLineEnd	-	-	-	-	-	-	-	-	-	-	-	-	-	-

API	TM-T82IIL	TM-T82X	TM-T83III	TM-T88V	TM-T88VI	TM-T100	TM-U220	TM-U330	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)	TM-P80
addPageBegin	✓	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓
addPageEnd	✓	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓
addPageArea	✓	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓
addPageDirection	✓	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓
addPagePosition	✓	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓
addPageLine	-	-	-	-	✓*	-	-	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addPageRectangle	-	-	-	-	✓*	-	-	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addCut	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addPulse	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
addSound	✓*	✓*	✓*	✓*	✓*	✓*	-	-	✓*	-	-	✓*	✓*	✓*
addFeedPosition	-	-	-	-	-	-	-	✓*	✓*	-	✓	-	✓	✓*
addLayout	-	-	-	-	-	-	-	-	✓*	-	✓	-	✓	✓*
addCommand	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getMaintenanceCounter	-	-	-	-	✓	-	-	✓*	-	-	-	-	-	-
resetMaintenanceCounter	-	-	-	-	✓	-	-	✓*	-	-	-	-	-	-
getPrinterSetting	-	-	-	-	✓*	-	-	✓*	-	-	-	-	-	-
setPrinterSetting	-	-	-	-	✓*	-	-	✓*	-	-	-	-	-	-
forceRecover	-	-	-	-	-	-	-	-	-	-	-	-	-	-
forcePulse	-	-	-	-	-	-	-	-	-	-	-	-	-	-
forceStopSound	-	-	-	-	-	-	-	-	-	-	-	-	-	-
forceCommand	-	-	-	-	-	-	-	-	-	-	-	-	-	-
forceReset	-	-	-	-	-	-	-	-	-	-	-	-	-	-
setStatusChangeEventDelegate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
setReceiveEventDelegate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
interval	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**Hybrid models/TM-i Series/TM-DT Series**

API	TM-H6000V	TM-T20II-I	TM-T70-I	TM-T82II-I	TM-T83II-I	TM-T88VI-I	TM-T88VI-IHUB	TM-U220-I	TM-T70II-DT	TM-T70II-DT2	TM-T88V-DT	TM-T88VI-DT2	TM-H6000IV-DT
initWithPrinterSeries	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
connect	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
disconnect	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
startMonitor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
stopMonitor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getStatus	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
sendData	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
beginTransaction	✓	-	-	-	-	-	-	-	-	-	-	-	-
endTransaction	✓	-	-	-	-	-	-	-	-	-	-	-	-
requestPrintJobStatus	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
clearCommandBuffer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextAlign	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addLineSpace	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextRotate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addText	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextLang	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextFont	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addTextSmooth	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addTextSize	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
addTextStyle	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addHPosition	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
addFeedUnit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addFeedLine	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addImage	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addLogo	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
addBarcode	✓*	✓*	✓*	✓*	✓*	✓*	✓*	-	✓*	✓*	✓*	✓*	✓*
addSymbol	✓*	✓*	✓*	✓*	✓*	✓*	✓*	-	✓*	✓*	✓*	✓*	✓*
addHLine	-	-	-	-	-	-	-	-	-	-	-	-	-
addVLineBegin	-	-	-	-	-	-	-	-	-	-	-	-	-
addVLineEnd	-	-	-	-	-	-	-	-	-	-	-	-	-
addPageBegin	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓

API	TM-H6000V	TM-T20II-i	TM-T70-i	TM-T82II-i	TM-T83II-i	TM-T88V-i	TM-T88VI-iHUB	TM-U220-i	TM-T70II-DT	TM-T70II-DT2	TM-T88V-DT	TM-T88VI-DT2	TM-H6000IV-DT
addPageEnd	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
addPageArea	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
addPageDirection	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
addPagePosition	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
addPageLine	✓*	-	-	-	-	-	✓*	-	-	-	-	-	-
addPageRectangle	✓*	-	-	-	-	-	✓*	-	-	-	-	-	-
addCut	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
addPulse	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addSound	-	✓*	-	✓*	✓*	✓*	✓*	-	✓*	✓*	✓*	✓*	-
addFeedPosition	-	-	-	-	-	-	-	-	-	-	-	-	-
addLayout	-	-	-	-	-	-	-	-	-	-	-	-	-
addCommand	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getMaintenanceCounter	-	-	-	-	-	-	✓	-	-	-	-	-	-
resetMaintenanceCounter	-	-	-	-	-	-	✓	-	-	-	-	-	-
getPrinterSetting	-	-	-	-	-	-	✓*	-	-	-	-	-	-
setPrinterSetting	-	-	-	-	-	-	✓*	-	-	-	-	-	-
forceRecover	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓
forcePulse	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
forceStopSound	-	✓	-	✓	✓	✓	✓	✓	-	✓	✓	✓	-
forceCommand	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
forceReset	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
setStatusChangeEventDelegate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
setReceiveEventDelegate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
interval	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**Slave Printers**

API	TM-T88IV	TM-T90	TM-L90	TM-H6000IV
initWithPrinterSeries	✓*	✓*	✓*	✓*
connect	✓	✓	✓	✓
disconnect	✓	✓	✓	✓

API	TM-T88IV	TM-T90	TM-L90	TM-H600IV
startMonitor	✓	✓	✓	✓
stopMonitor	✓	✓	✓	✓
getStatus	✓	✓	✓	✓
sendData	✓	✓	✓	✓
beginTransaction	-	-	-	-
endTransaction	-	-	-	-
requestPrintJobStatus	-	-	-	-
clearCommandBuffer	✓	✓	✓	✓
addTextAlign	✓	✓	✓	✓
addLineSpace	✓	✓	✓	✓
addTextRotate	✓	✓	✓	✓
addText	✓	✓	✓	✓
addTextLang	✓	✓	✓	✓
addTextFont	✓*	✓*	✓*	✓*
addTextSmooth	✓	✓	✓	✓
addTextSize	✓	✓	✓	✓
addTextStyle	✓*	✓*	✓*	✓*
addHPosition	✓	✓	✓	✓
addFeedUnit	✓	✓	✓	✓
addFeedLine	✓	✓	✓	✓
addImage	✓*	✓*	✓*	✓*
addLogo	✓	✓	✓	✓
addBarcode	✓*	✓*	✓*	✓*
addSymbol	✓*	✓*	✓*	✓*
addHLine	-	-	-	-
addVLineBegin	-	-	-	-
addVLineEnd	-	-	-	-
addPageBegin	✓	✓	✓	✓
addPageEnd	✓	✓	✓	✓
addPageArea	✓	✓	✓	✓
addPageDirection	✓	✓	✓	✓
addPagePosition	✓	✓	✓	✓
addPageLine	-	-	-	-

API	TM-T88IV	TM-T90	TM-L90	TM-H600IV
addPageRectangle	-	-	-	-
addCut	✓*	✓*	✓*	✓*
addPulse	✓	✓	✓	✓
addSound	-	-	-	-
addFeedPosition	-	-	✓	-
addLayout	-	-	-	-
addCommand	✓	✓	✓	✓
getMaintenanceCounter	-	-	-	-
resetMaintenanceCounter	-	-	-	-
getPrinterSetting	-	-	-	-
setPrinterSetting	-	-	-	-
forceRecover	-	-	-	-
forcePulse	-	-	-	-
forceStopSound	-	-	-	-
forceCommand	-	-	-	-
forceReset	-	-	-	-
setStatusChangeEventDelegate	✓	✓	✓	✓
setReceiveEventDelegate	✓	✓	✓	✓
interval	✓	✓	✓	✓

## Epos2LineDisplay Class

### **Single-function models/Mobile models (1)**

API	TM-rm10	TM-rm30	TM-T20	TM-T20II	TM-T20III	TM-T20III	TM-T20X	TM-T60	TM-T70	TM-T70II	TM-T81II	TM-T82	TM-T82II	TM-T82III
initWithDisplayModel	-	✓*	-	-	-	-	-	-	-	-	-	-	-	-
connect	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
disconnect	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
getStatus	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
sendData	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
clearCommandBuffer	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addInitialize	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addCreateWindow	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addDestroyWindow	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addSetCurrentWindow	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addClearCurrentWindow	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addSetCursorPosition	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addMoveCursorPosition	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addSetCursorType	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addText	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addReverseText	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addMarqueeText	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addSetBlink	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addSetBrightness	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
addShowClock	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addCommand	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
setReceiveEventDelegate	-	✓	-	-	-	-	-	-	-	-	-	-	-	-

### **Single-function models/Mobile models (2)**

API	TM-T82III	TM-T82X	TM-T83II	TM-T88V	TM-T88VI	TM-T100	TM-U220	TM-U330	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)	TM-P80
initWithDisplayModel	-	-	-	-	✓*	-	-	-	-	-	-	-	-	-
connect	-	-	-	-	✓	-	-	-	-	-	-	-	-	-

API	TM-T82II-L	TM-T82X	TM-T83III	TM-T88V	TM-T88VI	TM-T100	TM-U220	TM-U330	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)	TM-P80
disconnect	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
getStatus	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
sendData	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
clearCommandBuffer	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addInitialize	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addCreateWindow	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addDestroyWindow	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addSetCurrentWindow	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addClearCurrentWindow	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addSetCursorPosition	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addMoveCursorPosition	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addSetCursorType	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addText	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addReverseText	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addMarqueeText	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addSetBlink	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addSetBrightness	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addShowClock	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
addCommand	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
setReceiveEventDelegate	-	-	-	-	✓	-	-	-	-	-	-	-	-	-

**Hybrid models/TM-i Series/TM-DT Series**

API	TM-H6000V	TM-T20II-i	TM-T70-i	TM-T82II-i	TM-T83II-i	TM-T88V-i	TM-T88VI-iHUB	TM-U220-i	TM-T70II-DT	TM-T88V-DT	TM-T88VI-DT2	TM-T88VI-DT	TM-H6000IV-DT
initWithDisplayModel	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
connect	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
disconnect	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getStatus	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
sendData	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
clearCommandBuffer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

API	TM-H6000V	TM-T20II-i	TM-T70-i	TM-T82II-i	TM-T83II-i	TM-T88V-i	TM-T88VI-iHUB	TM-U220-i	TM-T70II-DT	TM-T70II-DT2	TM-T88V-DT	TM-T88VI-DT2	TM-H6000IV-DT
addInitialize	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addCreateWindow	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addDestroyWindow	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addSetCurrentWindow	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addClearCurrentWindow	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addSetCursorPosition	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addMoveCursorPosition	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addSetCursorType	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addText	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addReverseText	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addMarqueeText	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addSetBlink	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addSetBrightness	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addShowClock	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
addCommand	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
setReceiveEventDelegate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**Slave Printers**

API	TM-T88IV	TM-T90	TM-L90	TM-H6000IV
initWithDisplayModel	-	-	-	-
connect	-	-	-	-
disconnect	-	-	-	-
getStatus	-	-	-	-
sendData	-	-	-	-
clearCommandBuffer	-	-	-	-
addInitialize	-	-	-	-
addCreateWindow	-	-	-	-
addDestroyWindow	-	-	-	-
addSetCurrentWindow	-	-	-	-
addClearCurrentWindow	-	-	-	-

API	TM-T88IV	TM-T90	TM-L90	TM-H600IV
addSetCursorPosition	-	-	-	-
addMoveCursorPosition	-	-	-	-
addSetCursorType	-	-	-	-
addText	-	-	-	-
addReverseText	-	-	-	-
addMarqueeText	-	-	-	-
addSetBlink	-	-	-	-
addSetBrightness	-	-	-	-
addShowClock	-	-	-	-
addCommand	-	-	-	-
setReceiveEventDelegate	-	-	-	-

## Common to all classes

### **Single-function models/Mobile models (1)**

API	TM-r10	TM-r30	TM-T20	TM-T20II	TM-T20III	TM-T20III	TM-T20X	TM-T60	TM-T70	TM-T70II	TM-T81II	TM-T82II	TM-T82III
getAdmin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getLocation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
setConnectionEventDelegate	-	-	-	-	-	-	-	-	-	-	-	-	-

### **Single-function models/Mobile models (2)**

API	TM-T82IIIL	TM-T82X	TM-T83III	TM-T88V	TM-T88VI	TM-T100	TM-U220	TM-U330	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)
getAdmin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getLocation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
setConnectionEventDelegate	-	-	-	-	-	-	-	-	-	-	-	-	-

### **Hybrid models/TM-i Series/TM-DT Series**

API	TM-H6000V	TM-T20II-i	TM-T70I	TM-T82II-i	TM-T83II-i	TM-T88VI-i	TM-T88VI-iHUB	TM-U220-i	TM-T70II-DT	TM-T70II-DT2	TM-T88V-DT	TM-T88V-DT2	TM-H6000IV-DT
getAdmin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
getLocation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
setConnectionEventDelegate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

### **Slave Printers**

API	TM-T88IV	TM-T90	TM-L90	TM-H6000IV
getAdmin	-	-	-	-
getLocation	-	-	-	-

API	TM-T88IV	TM-T90	TM-L90	TM-H600IV
setConnectionEventDelegate	-	-	-	-

## EasySelect Class

### **Single-function models/Mobile models (1)**

API	TM-r10	TM-r30	TM-T20	TM-T20II	TM-T20III	TM-T20III-L	TM-T20X	TM-T60	TM-T70	TM-T70II	TM-T81II	TM-T82II	TM-T82III
parseNFC	✓	✓	-	-	-	-	-	-	-	-	-	-	-
parseQR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
createQR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
parseBeacon	-	-	-	-	-	-	-	-	-	-	-	-	-

### **Single-function models/Mobile models (2)**

API	TM-T82III-L	TM-T82X	TM-T83III	TM-T88V	TM-T88VI	TM-T100	TM-U220	TM-U330	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)	TM-P80
parseNFC	-	-	-	-	✓	-	-	-	✓	✓	✓	-	-	✓
parseQR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
createQR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
parseBeacon	-	-	-	-	✓	-	-	-	-	-	-	-	-	-

### **Hybrid models/TM-i Series/TM-DT Series**

API	TM-H6000IV	TM-T20II-i	TM-T70-i	TM-T82II-i	TM-T83II-i	TM-T88V-i	TM-T88VI-iHUB	TM-U220-i	TM-T70II-DT	TM-T70II-DT2	TM-T88V-DT	TM-T88VI-DT2	TM-H6000IV-DT
parseNFC	✓	-	-	-	-	-	✓	-	-	-	-	-	-
parseQR	✓	-	-	-	-	-	-	-	-	-	-	-	-
createQR	✓	-	-	-	-	-	-	-	-	-	-	-	-
parseBeacon	-	-	-	-	-	-	✓	-	-	-	-	-	-

### **Slave Printers**

API	TM-T88IV	TM-T90	TM-L90	TM-H6000IV
parseNFC	-	-	-	-
parseQR	-	-	-	-

API	TM-T88IV	TM-T90	TM-L90	TM-H600IV
createQR	-	-	-	-
parseBeacon	-	-	-	-

# Printer-specific Support Information

## TM-m10

### **Printer Specifications**

Item	Specification
Amount of initial feed	30 dots
Initial page mode area	420 x 2400 dots
Maximum page mode area	420 x 2400 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	21 dots from the top of the character
Baseline of Font C	16 dots from the top of the character

### **Parameter Restrictions**

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_M10</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-m30*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	420 x 2400 dots	576 x 2400 dots
Maximum page mode area	420 x 2400 dots	576 x 2400 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	ANK	21 dots from the top of the character
	Chinese characters	21 dots from the top of the character
	Hangul character	15 dots from the top of the character
Baseline of Font C	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_M30</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
setPrinterSetting	value	<ul style="list-style-type: none"> <li>• EPOS2_PRINTER_SETTING_PAPERWIDTH58_0</li> <li>• EPOS2_PRINTER_SETTING_PAPERWIDTH80_0</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY70</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY75</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY80</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY85</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY90</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY95</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY100</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY105</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY110</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY115</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY120</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY125</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY130</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED1</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED2</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED3</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED4</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED5</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED6</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED7</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED8</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED9</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED10</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D30</li> </ul>

**TM-T20*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	420 x 831 dots	576 x 831 dots
Maximum page mode area	420 x 1662 dots	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	• EPOS2_TM_T20
	lang	• EPOS2_MODEL_ANK
addTextFont	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT
addTextStyle	color	• EPOS2_COLOR_1 (default) • EPOS2_PARAM_UNSPECIFIED • EPOS2_PARAM_DEFAULT
addImage	color	• EPOS2_COLOR_1 • EPOS2_PARAM_DEFAULT
	mode	• EPOS2_MODE_MONO • EPOS2_MODE_MONO_HIGH_DENSITY • EPOS2_PARAM_DEFAULT
addBarcode	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT • EPOS2_PARAM_UNSPECIFIED

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T20II*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	420 x 831 dots	576 x 831 dots
Maximum page mode area	420 x 1662 dots	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	• EPOS2_TM_T20
	lang	• EPOS2_MODEL_ANK
addTextFont	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT
addTextStyle	color	• EPOS2_COLOR_1 (default) • EPOS2_PARAM_UNSPECIFIED • EPOS2_PARAM_DEFAULT
addImage	color	• EPOS2_COLOR_1 • EPOS2_PARAM_DEFAULT
	mode	• EPOS2_MODE_MONO • EPOS2_MODE_MONO_HIGH_DENSITY • EPOS2_PARAM_DEFAULT
addBarcode	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT • EPOS2_PARAM_UNSPECIFIED

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
setPrinterSetting	type	<ul style="list-style-type: none"> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED</li> </ul>
	value	<ul style="list-style-type: none"> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY85</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY90</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY95</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY100</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY105</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY110</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY115</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED1</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED2</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED3</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED4</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED5</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED6</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED7</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED8</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED9</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED10</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED11</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED12</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED13</li> </ul>

**TM-T20III*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	Standard mode	420 x 1662 dots
	42 column mode	378 x 1662 dots
Maximum page mode area	Standard mode	464 x 3324 dots
	42 column mode	639 x 3324 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T20</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T20IIIL*****Printer Specifications***

Item	80mm Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	• EPOS2_TM_T20
	lang	• EPOS2_MODEL_ANK
addTextFont	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT
addTextStyle	color	• EPOS2_COLOR_1 (default) • EPOS2_PARAM_UNSPECIFIED • EPOS2_PARAM_DEFAULT
addImage	color	• EPOS2_COLOR_1 • EPOS2_PARAM_DEFAULT
	mode	• EPOS2_MODE_MONO • EPOS2_MODE_MONO_HIGH_DENSITY • EPOS2_PARAM_DEFAULT
addBarcode	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT • EPOS2_PARAM_UNSPECIFIED

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T20X*****Printer Specifications***

Item	80mm Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	• EPOS2_TM_T20
	lang	• EPOS2_MODEL_ANK
addTextFont	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT
addTextStyle	color	• EPOS2_COLOR_1 (default) • EPOS2_PARAM_UNSPECIFIED • EPOS2_PARAM_DEFAULT
addImage	color	• EPOS2_COLOR_1 • EPOS2_PARAM_DEFAULT
	mode	• EPOS2_MODE_MONO • EPOS2_MODE_MONO_HIGH_DENSITY • EPOS2_PARAM_DEFAULT
addBarcode	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT • EPOS2_PARAM_UNSPECIFIED

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T60*****Printer Specifications***

Item	58mm Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T60</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_CHINESE</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_UPC_A</li> <li>• EPOS2_BARCODE_UPC_E</li> <li>• EPOS2_BARCODE_EAN13</li> <li>• EPOS2_BARCODE_JAN13</li> <li>• EPOS2_BARCODE_EAN8</li> <li>• EPOS2_BARCODE_JAN8</li> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_ITF</li> <li>• EPOS2_BARCODE_CODABAR</li> <li>• EPOS2_BARCODE_CODE93</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T70*****Printer Specifications***

Item		58mm Specification	80mm Specification
Amount of initial feed		30 dots	
Initial page mode area	ANK model	416 x 1662 dots	512 x 831 dots
	Multiple languages model	416 x 1662 dots	576 x 1662 dots
Maximum page mode area	ANK model	416 x 1662 dots	512 x 1662 dots
	Multiple languages model	576 x 1662 dots	
Baseline of Font A		21 dots from the top of the character	
Baseline of Font B		16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T70</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_UPC_A</li> <li>• EPOS2_BARCODE_UPC_E</li> <li>• EPOS2_BARCODE_EAN13</li> <li>• EPOS2_BARCODE_JAN13</li> <li>• EPOS2_BARCODE_EAN8</li> <li>• EPOS2_BARCODE_JAN8</li> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_ITF</li> <li>• EPOS2_BARCODE_CODABAR</li> <li>• EPOS2_BARCODE_CODE93</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T70II*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	ANK model	416 x 1662 dots 512 x 1662 dots
	Multiple languages model	416 x 1662 dots 576 x 1662 dots
Maximum page mode area	ANK model	416 x 1662 dots 512 x 1662 dots
	Multiple languages model	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T70</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T81II*****Printer Specifications***

Item	58mm Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T81</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_UPC_A</li> <li>• EPOS2_BARCODE_UPC_E</li> <li>• EPOS2_BARCODE_EAN13</li> <li>• EPOS2_BARCODE_JAN13</li> <li>• EPOS2_BARCODE_EAN8</li> <li>• EPOS2_BARCODE_JAN8</li> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_ITF</li> <li>• EPOS2_BARCODE_CODABAR</li> <li>• EPOS2_BARCODE_CODE93</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T81III*****Printer Specifications***

Item	80mm Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T81</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T82*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	420 x 831 dots	576 x 831 dots
Maximum page mode area	420 x 1662 dots	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T82</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T82II*****Printer Specifications***

Item	Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T82</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T82III*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	Standard mode	420 x 1662 dots
	42 column mode	378 x 1662 dots
Maximum page mode area	Standard mode	464 x 3324 dots
	42 column mode	639 x 3324 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T82</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T82IIIL*****Printer Specifications***

Item	80mm Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	• EPOS2_TM_T82
	lang	• EPOS2_MODEL_ANK
addTextFont	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT
addTextStyle	color	• EPOS2_COLOR_1 (default) • EPOS2_PARAM_UNSPECIFIED • EPOS2_PARAM_DEFAULT
addImage	color	• EPOS2_COLOR_1 • EPOS2_PARAM_DEFAULT
	mode	• EPOS2_MODE_MONO • EPOS2_MODE_MONO_HIGH_DENSITY • EPOS2_PARAM_DEFAULT
addBarcode	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT • EPOS2_PARAM_UNSPECIFIED

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T82X*****Printer Specifications***

Item	80mm Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T82</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T83III*****Printer Specifications***

Item		80mm Specification
Amount of initial feed		30 dots
Initial page mode area	for Korea	546 x 831 dots
	Other	576 x 831 dots
Maximum page mode area	for Korea	546 x 1662 dots
	Other	576 x 1662 dots
Baseline of Font A		21 dots from the top of the character
Baseline of Font B		16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T83III</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T88V*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	360 x 831 dots	512 x 831 dots
Maximum page mode area	360 x 1662 dots	512 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	ANK	16 dots from the top of the character
	Chinese characters	15 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T88</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T88VI*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	360 x 831 dots	512 x 831 dots
Maximum page mode area	360 x 1662 dots	512 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	ANK	16 dots from the top of the character
	Chinese characters	15 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T88</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
setPrinterSetting	value	<ul style="list-style-type: none"> <li>• EPOS2_PRINTER_SETTING_PAPERWIDTH58_0</li> <li>• EPOS2_PRINTER_SETTING_PAPERWIDTH80_0</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITYDIP</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY70</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY75</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY80</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY85</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY90</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY95</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY100</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY105</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY110</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY115</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY120</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY125</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY130</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED1</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED2</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED3</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED4</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED5</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED6</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED7</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED8</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED9</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED10</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED11</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED12</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED13</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED14</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> <li>• EPOS2_DM_D30</li> </ul>

**TM-T100*****Printer Specifications***

Item	80mm Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T100</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-U220*****Printer Specifications***

Item	76mm Specification	69.5mm Specification	57.5mm Specification
Amount of initial feed	12 dots		

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_U220</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_THAI</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addLogo	key2	<ul style="list-style-type: none"> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-U330*****Printer Specifications***

Item	76mm Specification	69.5mm Specification	57.5mm Specification
Amount of initial feed	12 dots		

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_U330</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_CHINESE</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addLogo	key2	<ul style="list-style-type: none"> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addCut	type	<ul style="list-style-type: none"><li>• EPOS2_CUT_FEED</li><li>• EPOS2_CUT_NO_FEED</li><li>• EPOS2_PARAM_DEFAULT</li></ul>
addFeedPosition	position	<ul style="list-style-type: none"><li>• EPOS2_FEED_CUTTING</li></ul>

**TM-P20*****Printer Specifications***

Item	Specification
Amount of initial feed	30 dots
Initial page mode area	384 x 2400 dots
Maximum page mode area	384 x 2400 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	21 dots from the top of the character
Baseline of Font C	16 dots from the top of the character
Baseline of Font D	21 dots from the top of the character
Baseline of Font E	15 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_P20</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_1</li> <li>• EPOS2_PATTERN_2</li> <li>• EPOS2_PATTERN_3</li> <li>• EPOS2_PATTERN_4</li> <li>• EPOS2_PATTERN_5</li> <li>• EPOS2_PATTERN_6</li> <li>• EPOS2_PATTERN_7</li> <li>• EPOS2_PATTERN_8</li> <li>• EPOS2_PATTERN_9</li> <li>• EPOS2_PATTERN_10</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addFeedPosition	position	<ul style="list-style-type: none"> <li>• EPOS2_FEED_CUTTING</li> <li>• EPOS2_FEED_CURRENT_TOF</li> <li>• EPOS2_FEED_NEXT_TOF</li> </ul>
addLayout	type	<ul style="list-style-type: none"> <li>• EPOS2_LAYOUT_RECEIPT</li> <li>• EPOS2_LAYOUT_RECEIPT_BM</li> </ul>
	height	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>
	marginTop	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>
	marginBottom	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>
	offsetCut	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>
	offsetLabel	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>
getMaintenanceCounter	type	<ul style="list-style-type: none"> <li>• EPOS2_MAINTENANCE_COUNTER_PAPER_FEED</li> </ul>
resetMaintenanceCounter	type	<ul style="list-style-type: none"> <li>• EPOS2_MAINTENANCE_COUNTER_PAPER_FEED</li> </ul>
getPrinterSetting	type	<ul style="list-style-type: none"> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED</li> </ul>

API	Parameter	Specifiable Setting Value
setPrinterSetting	type	<ul style="list-style-type: none"> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED</li> </ul>
	value	<ul style="list-style-type: none"> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY70</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY75</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY80</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY85</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY90</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY95</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY100</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY105</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY110</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY115</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY120</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY125</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY130</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED1</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED2</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED3</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED4</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED5</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED6</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED7</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED8</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED9</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED10</li> </ul>

## TM-P60 (Receipt)

### **Printer Specifications**

Item	58mm Specification	60mm Specification
Amount of initial feed	30 dots	
Initial page mode area	420 x 1200 dots	432 x 1200 dots
Maximum page mode area	420 x 1200 dots	432 x 1200 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	21 dots from the top of the character	
Baseline of Font C	15 dots from the top of the character	

### **Parameter Restrictions**

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_P60</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_UPC_A</li> <li>• EPOS2_BARCODE_UPC_E</li> <li>• EPOS2_BARCODE_EAN13</li> <li>• EPOS2_BARCODE_JAN13</li> <li>• EPOS2_BARCODE_EAN8</li> <li>• EPOS2_BARCODE_JAN8</li> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_ITF</li> <li>• EPOS2_BARCODE_CODABAR</li> <li>• EPOS2_BARCODE_CODE93</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-P60 (Peeler)*****Printer Specifications***

Item	58mm Specification	60mm Specification
Amount of initial feed	30 dots	
Initial page mode area	420 x 1200 dots	432 x 1200 dots
Maximum page mode area	420 x 1200 dots	432 x 1200 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	21 dots from the top of the character	
Baseline of Font C	15 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_P60</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_UPC_A</li> <li>• EPOS2_BARCODE_UPC_E</li> <li>• EPOS2_BARCODE_EAN13</li> <li>• EPOS2_BARCODE_JAN13</li> <li>• EPOS2_BARCODE_EAN8</li> <li>• EPOS2_BARCODE_JAN8</li> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_ITF</li> <li>• EPOS2_BARCODE_CODABAR</li> <li>• EPOS2_BARCODE_CODE93</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addCut	type	<ul style="list-style-type: none"><li>• EPOS2_CUT_FEED</li><li>• EPOS2_CUT_NO_FEED</li><li>• EPOS2_PARAM_DEFAULT</li></ul>

## TM-P60II (Receipt)

### **Printer Specifications**

Item	Receipt Specification	Die-cut Label Specification
Amount of initial feed	30 dots	
Initial page mode area	432 x 1624 dots	400 x 1624 dots
Maximum page mode area	432 x 1624 dots	400 x 1624 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	
Baseline of Font C	15 dots from the top of the character	

### **Parameter Restrictions**

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_P60II</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addSound	pattern	<ul style="list-style-type: none"><li>• EPOS2_PATTERN_NONE</li><li>• EPOS2_PATTERN_1</li><li>• EPOS2_PATTERN_2</li><li>• EPOS2_PATTERN_3</li><li>• EPOS2_PATTERN_4</li><li>• EPOS2_PATTERN_5</li><li>• EPOS2_PATTERN_6</li><li>• EPOS2_PATTERN_7</li><li>• EPOS2_PATTERN_8</li><li>• EPOS2_PATTERN_9</li><li>• EPOS2_PATTERN_10</li><li>• EPOS2_PARAM_DEFAULT</li></ul>
	repeat	<ul style="list-style-type: none"><li>• 1 to 255</li><li>• EPOS2_PARAM_DEFAULT</li></ul>

## TM-P60II (Peeler)

### **Printer Specifications**

Item	Receipt Specification	Die-cut Label Specification
Amount of initial feed	30 dots	
Initial page mode area	432 x 1624 dots	400 x 1624 dots
Maximum page mode area	432 x 1624 dots	400 x 1624 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	
Baseline of Font C	15 dots from the top of the character	

### **Parameter Restrictions**

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_P60II</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addSound	pattern	<ul style="list-style-type: none"><li>• EPOS2_PATTERN_NONE</li><li>• EPOS2_PATTERN_1</li><li>• EPOS2_PATTERN_2</li><li>• EPOS2_PATTERN_3</li><li>• EPOS2_PATTERN_4</li><li>• EPOS2_PATTERN_5</li><li>• EPOS2_PATTERN_6</li><li>• EPOS2_PATTERN_7</li><li>• EPOS2_PATTERN_8</li><li>• EPOS2_PATTERN_9</li><li>• EPOS2_PATTERN_10</li><li>• EPOS2_PARAM_DEFAULT</li></ul>
	repeat	<ul style="list-style-type: none"><li>• 1 to 255</li><li>• EPOS2_PARAM_DEFAULT</li></ul>

**TM-P80*****Printer Specifications***

Item	Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 1662 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	21 dots from the top of the character
Baseline of Font C	15 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_P80</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_1</li> <li>• EPOS2_PATTERN_2</li> <li>• EPOS2_PATTERN_3</li> <li>• EPOS2_PATTERN_4</li> <li>• EPOS2_PATTERN_5</li> <li>• EPOS2_PATTERN_6</li> <li>• EPOS2_PATTERN_7</li> <li>• EPOS2_PATTERN_8</li> <li>• EPOS2_PATTERN_9</li> <li>• EPOS2_PATTERN_10</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addFeedPosition	position	<ul style="list-style-type: none"> <li>• EPOS2_FEED_CUTTING</li> <li>• EPOS2_FEED_CURRENT_TOF</li> <li>• EPOS2_FEED_NEXT_TOF</li> </ul>
addLayout	type	<ul style="list-style-type: none"> <li>• EPOS2_LAYOUT_RECEIPT</li> <li>• EPOS2_LAYOUT_RECEIPT_BM</li> </ul>
	height	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>
	marginTop	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>
	marginBottom	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>
	offsetCut	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>
	offsetLabel	<ul style="list-style-type: none"> <li>• Receipt (without black mark)</li> <li>• Receipt (with black mark)</li> </ul>

**TM-H6000V*****Printer Specifications***

Item	Receipt	Slip	Validation	Endorsement	Endorsement (40cpl)
Amount of initial feed	30 dots	24 dots			18 dots
Initial page mode area	512 x 1662 dots	540 x 1408 dots	-		
Maximum page mode area	512 x 2400 dots	540 x 1408 dots	-		
Baseline of Font A	21 dots from the top of the character	9 dots from the top of the character		7 dots from the top of the character	
Baseline of Font B	21 dots from the top of the character	9 dots from the top of the character	-		
Baseline of Font C	18 dots from the top of the character	-			

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_H6000</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> <li>• EPOS2_DM_D210</li> </ul>

**TM-T20II-i*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	420 x 831 dots	576 x 831 dots
Maximum page mode area	420 x 1662 dots	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	• EPOS2_TM_T20
	lang	• EPOS2_MODEL_ANK
addTextFont	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT
addTextStyle	color	• EPOS2_COLOR_1 (default) • EPOS2_PARAM_UNSPECIFIED • EPOS2_PARAM_DEFAULT
addImage	color	• EPOS2_COLOR_1 • EPOS2_PARAM_DEFAULT
	mode	• EPOS2_MODE_MONO • EPOS2_MODE_MONO_HIGH_DENSITY • EPOS2_PARAM_DEFAULT
addBarcode	font	• EPOS2_FONT_A (default) • EPOS2_FONT_B • EPOS2_PARAM_DEFAULT • EPOS2_PARAM_UNSPECIFIED

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> </ul>

**TM-T70-i*****Printer Specifications***

Item		58mm Specification	80mm Specification
Amount of initial feed		30 dots	
Initial page mode area	ANK model	416 x 1662 dots	512 x 831 dots
	Multiple languages model	416 x 1662 dots	576 x 1662 dots
Maximum page mode area	ANK model	416 x 1662 dots	512 x 1662 dots
	Multiple languages model	416 x 1662 dots	576 x 1662 dots
Baseline of Font A		21 dots from the top of the character	
Baseline of Font B		16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T70</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_UPC_A</li> <li>• EPOS2_BARCODE_UPC_E</li> <li>• EPOS2_BARCODE_EAN13</li> <li>• EPOS2_BARCODE_JAN13</li> <li>• EPOS2_BARCODE_EAN8</li> <li>• EPOS2_BARCODE_JAN8</li> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_ITF</li> <li>• EPOS2_BARCODE_CODABAR</li> <li>• EPOS2_BARCODE_CODE93</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> </ul>

**TM-T82II-i*****Printer Specifications***

Item	Specification
Amount of initial feed	30 dots
Initial page mode area	576 x 831 dots
Maximum page mode area	576 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	16 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T82</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> </ul>

**TM-T83II-i*****Printer Specifications***

Item	Specification
Amount of initial feed	30 dots
Initial page mode area	512 x 1662 dots
Maximum page mode area	512 x 1662 dots
Baseline of Font A	21 dots from the top of the character
Baseline of Font B	ANK 16 dots from the top of the character
	Chinese characters 15 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T83</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_KOREAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> </ul>

**TM-T88V-i*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	360 x 831 dots	512 x 831 dots
Maximum page mode area	360 x 1662 dots	512 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	ANK	16 dots from the top of the character
	Chinese characters	15 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T88</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> </ul>

**TM-T88VI-iHUB*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	360 x 831 dots	512 x 831 dots
Maximum page mode area	360 x 1662 dots	512 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	ANK	16 dots from the top of the character
	Chinese characters	15 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T88</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine	lineStyle	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addPageRectangle	Style	<ul style="list-style-type: none"> <li>• EPOS2_LINE_THIN</li> <li>• EPOS2_LINE_MEDIUM</li> <li>• EPOS2_LINE_THICK</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
setPrinterSetting	value	<ul style="list-style-type: none"> <li>• EPOS2_PRINTER_SETTING_PAPERWIDTH58_0</li> <li>• EPOS2_PRINTER_SETTING_PAPERWIDTH80_0</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITYDIP</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY70</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY75</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY80</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY85</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY90</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY95</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY100</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY105</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY110</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY115</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY120</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY125</li> <li>• EPOS2_PRINTER_SETTING_PRINTDENSITY130</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED1</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED2</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED3</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED4</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED5</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED6</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED7</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED8</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED9</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED10</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED11</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED12</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED13</li> <li>• EPOS2_PRINTER_SETTING_PRINTSPEED14</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> <li>• EPOS2_DM_D30</li> </ul>

**TM-U220-i*****Printer Specifications***

Item	76mm Specification	69.5mm Specification	57.5mm Specification
Amount of initial feed	12 dots		

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_U220</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_THAI</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• EPOS2_MODE_MONO</li> <li>• EPOS2_MODE_MONO_HIGH_DENSITY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> </ul>

**TM-T70II-DT*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	ANK model	416 x 1662 dots
	Multiple languages model	416 x 1662 dots
Maximum page mode area	ANK model	416 x 1662 dots
	Multiple languages model	416 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T70</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> <li>• EPOS2_DM_D30</li> </ul>

**TM-T70II-DT2*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	ANK model	416 x 1662 dots
	Multiple languages model	416 x 1662 dots
Maximum page mode area	ANK model	416 x 1662 dots
	Multiple languages model	416 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T70</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> <li>• EPOS2_DM_D30</li> </ul>

**TM-T88V-DT*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	360 x 831 dots	512 x 831 dots
Maximum page mode area	360 x 1662 dots	512 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	ANK	16 dots from the top of the character
	Chinese characters	15 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T88</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> <li>• EPOS2_DM_D30</li> </ul>

**TM-T88VI-DT2*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	360 x 831 dots	512 x 831 dots
Maximum page mode area	360 x 1662 dots	512 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	ANK	16 dots from the top of the character
	Chinese characters	15 dots from the top of the character

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T88</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_SOUTHASIA</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• EPOS2_SYMBOL_AZTECCODE_FULLRANGE</li> <li>• EPOS2_SYMBOL_AZTECCODE_COMPACT</li> <li>• EPOS2_SYMBOL_DATAMATRIX_SQUARE</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• EPOS2_SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addSound	pattern	<ul style="list-style-type: none"> <li>• EPOS2_PATTERN_NONE</li> <li>• EPOS2_PATTERN_A</li> <li>• EPOS2_PATTERN_B</li> <li>• EPOS2_PATTERN_C</li> <li>• EPOS2_PATTERN_D</li> <li>• EPOS2_PATTERN_E</li> <li>• EPOS2_PATTERN_ERROR</li> <li>• EPOS2_PATTERN_PAPER_EMPTY</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> <li>• EPOS2_DM_D30</li> </ul>

**TM-H6000IV-DT*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	360 x 831 dots	512 x 831 dots
Maximum page mode area	360 x 1662 dots	512 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_H6000</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
initWithDisplayModel	displaySeries	<ul style="list-style-type: none"> <li>• EPOS2_DM_D110</li> <li>• EPOS2_DM_D30</li> </ul>

**TM-T88IV*****Printer Specifications***

Item		58mm Specification	80mm Specification
Amount of initial feed		30 dots	
Initial page mode area	Monochrome printing	360 x 831 dots	512 x 831 dots
	Two-color printing	360 x 415 dots	512 x 415 dots
Maximum page mode area	Monochrome printing	360 x 1662 dots	512 x 1662 dots
	Two-color printing	360 x 831 dots	512 x 831 dots
Baseline of Font A		21 dots from the top of the character	
Baseline of Font B		16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T88</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_UPC_A</li> <li>• EPOS2_BARCODE_UPC_E</li> <li>• EPOS2_BARCODE_EAN13</li> <li>• EPOS2_BARCODE_JAN13</li> <li>• EPOS2_BARCODE_EAN8</li> <li>• EPOS2_BARCODE_JAN8</li> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_ITF</li> <li>• EPOS2_BARCODE_CODABAR</li> <li>• EPOS2_BARCODE_CODE93</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-T90*****Printer Specifications***

Item	58mm Specification	60mm Specification	80mm Specification	
Amount of initial feed	30 dots			
Initial page mode area	Monochrome printing	420 x 738 dots	384 x 831 dots	576 x 738 dots
	Two-color printing	420 x 369 dots	384 x 415 dots	576 x 369 dots
Maximum page mode area	Monochrome printing	420 x 1476 dots	384 x 1662 dots	576 x 1476 dots
	Two-color printing	420 x 738 dots	384 x 831 dots	576 x 738 dots
Baseline of Font A	21 dots from the top of the character			
Baseline of Font B	16 dots from the top of the character			

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_T90</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_THAI</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_UPC_A</li> <li>• EPOS2_BARCODE_UPC_E</li> <li>• EPOS2_BARCODE_EAN13</li> <li>• EPOS2_BARCODE_JAN13</li> <li>• EPOS2_BARCODE_EAN8</li> <li>• EPOS2_BARCODE_JAN8</li> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_ITF</li> <li>• EPOS2_BARCODE_CODABAR</li> <li>• EPOS2_BARCODE_CODE93</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_FONT_C</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-L90*****Printer Specifications***

Item	Receipt Specification	Die-cut Label Specification
Amount of initial feed	30 dots	
Initial page mode area	Monochrome printing	576 x 738 dots 560 x 738 dots
	Two-color printing	576 x 369 dots 560 x 369 dots
Maximum page mode area	Monochrome printing	576 x 1476 dots 560 x 1476 dots
	Two-color printing	576x 738 dots 560 x 738 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	ANK: 16 Chinese characters: 15 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_L90</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_ANK</li> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> <li>• EPOS2_MODEL_KOREAN</li> <li>• EPOS2_MODEL_THAI</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_COLOR_2</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode	type	<ul style="list-style-type: none"> <li>• EPOS2_BARCODE_UPC_A</li> <li>• EPOS2_BARCODE_UPC_E</li> <li>• EPOS2_BARCODE_EAN13</li> <li>• EPOS2_BARCODE_JAN13</li> <li>• EPOS2_BARCODE_EAN8</li> <li>• EPOS2_BARCODE_JAN8</li> <li>• EPOS2_BARCODE_CODE39</li> <li>• EPOS2_BARCODE_ITF</li> <li>• EPOS2_BARCODE_CODABAR</li> <li>• EPOS2_BARCODE_CODE93</li> <li>• EPOS2_BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

**TM-H6000IV*****Printer Specifications***

Item	58mm Specification	80mm Specification
Amount of initial feed	30 dots	
Initial page mode area	360 x 831 dots	512 x 831 dots
Maximum page mode area	360 x 1662 dots	512 x 1662 dots
Baseline of Font A	21 dots from the top of the character	
Baseline of Font B	16 dots from the top of the character	

***Parameter Restrictions***

API	Parameter	Specifiable Setting Value
initWithPrinterSeries	printerSeries	<ul style="list-style-type: none"> <li>• EPOS2_TM_H6000</li> </ul>
	lang	<ul style="list-style-type: none"> <li>• EPOS2_MODEL_CHINESE</li> <li>• EPOS2_MODEL_TAIWAN</li> </ul>
addTextFont	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addTextStyle	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1 (default)</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addImage	color	<ul style="list-style-type: none"> <li>• EPOS2_COLOR_1</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>
addBarcode	font	<ul style="list-style-type: none"> <li>• EPOS2_FONT_A (default)</li> <li>• EPOS2_FONT_B</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol	type	<ul style="list-style-type: none"> <li>• EPOS2_SYMBOL_PDF417_STANDARD</li> <li>• EPOS2_SYMBOL_PDF417_TRUNCATED</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_1</li> <li>• EPOS2_SYMBOL_QRCODE_MODEL_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_2</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_3</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_4</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_5</li> <li>• EPOS2_SYMBOL_MAXICODE_MODE_6</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIO NAL</li> <li>• EPOS2_SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• EPOS2_LEVEL_0</li> <li>• EPOS2_LEVEL_1</li> <li>• EPOS2_LEVEL_2</li> <li>• EPOS2_LEVEL_3</li> <li>• EPOS2_LEVEL_4</li> <li>• EPOS2_LEVEL_5</li> <li>• EPOS2_LEVEL_6</li> <li>• EPOS2_LEVEL_7</li> <li>• EPOS2_LEVEL_8</li> <li>• EPOS2_LEVEL_L</li> <li>• EPOS2_LEVEL_M</li> <li>• EPOS2_LEVEL_Q</li> <li>• EPOS2_LEVEL_H</li> <li>• EPOS2_PARAM_DEFAULT</li> <li>• EPOS2_PARAM_UNSPECIFIED</li> </ul>
addCut	type	<ul style="list-style-type: none"> <li>• EPOS2_CUT_FEED</li> <li>• EPOS2_CUT_NO_FEED</li> <li>• EPOS2_PARAM_DEFAULT</li> </ul>

## Usage restriction by firmware version

Availability and restriction on the use of APIs and parameters depends on the versions of the firmware and software installed on the printer. For how to check the versions and/or update the firmware and software, refer to the Technical Reference Guide of the printer.

### TM-i Series/TM-DT Series

- Supported by TM-DT software Ver. 2.5 and TM-i firmware 4.0 or later.

Class	API	Parameter	Value
Epos2CommBox class	-	-	-

- Supported by TM-DT software Ver. 2.5 and TM-i firmware 4.1 or later.

Class	API	Parameter	Value
Epos2Printer class	requestPrintJobStatus	-	-
Epos2Printer class	addSymbol	data	QR Code Micro
Epos2Printer class	addSymbol	type	Printer.SymbolType.QRCodeMicro
Epos2Printer class	setReceiveEventDelegate	args	printJobId

- Supported by TM-DT software Ver. 3.02 and TM-i firmware 4.4 or later.

Class	API	Parameter	Value
Epos2Discovery class	-	-	-

- Supported by TM-DT software Ver. 4.0 or later.

Class	API	Parameter	Value
Epos2POSKeyboard class	-	-	-
Epos2MSR class	-	-	-
Epos2OtherPeripheral class	-	-	-
Epos2Discovery class	start	deviceType	EPOS2_TYPE_CCHANGER
			EPOS2_TYPE_POS_KEYBOARD
			EPOS2_TYPE_CAT
			EPOS2_TYPE_MSR
			EPOS2_TYPE_OTHER_PERIPHERAL

## TM-m30

- Supported by TM-m30 firmware Ver. 1.40 ESC/POS or later.

Class	API	Parameter	Value
Epos2BarcodeScanner class	-	-	-

## TM-T88VI

- Supported by TM-T88VI firmware Ver. 40.50 ESC/POS or later.

Class	API	Parameter	Value
Epos2BarcodeScanner class	-	-	-

# Sample Programs

The sample programs provided with Epson ePOS SDK for iOS are implementation samples of iOS applications. Xcode iOS application projects that include the Objective-C source files are provided.



- Xcode iOS application projects that include Swift source files are also provided with [ePOS2Printer](#).
- parseNFC of [ePOS2EasySelection](#) is developed with Swift 4.0.

## Functionality

The sample programs provide the following functionality.

### ePOS2Printer

#### Printer search and specification

- Specifies the connection type.
- Displays a list of search results.
- Retrieves target information required for the connection selected from the search results.
- *Bluetooth* pairing function

#### Sample receipt printing

#### Sample coupon printing

#### Printer status confirmation

- Confirms the status of printers before printing.
- When the printer is not capable of printing, the program generates a notification message of the possible causes and corresponding action of the error.

#### Display of print results and printer status

- Sends notification of the print result after printing.
- Notifies the users of an API error that occurred while searching for printers, or during printing sample receipts or coupons.

#### Log Output Settings

- Enables log output to terminal storage when displaying the main screen.

## ePOS2 Hybrid Printer

- Printer search and specification
  - Displays a list of search results.
  - Retrieves target information required for the connection selected from the search results.
  - *Bluetooth* pairing function
- Controls operations continuously from endorsement printing after MICR reading to slip and receipt printings.
- Validation printing
- Printer status confirmation
  - Confirms the status of printers before printing.
  - When the printer is not capable of printing, the program generates a notification message of the possible causes and corresponding action of the error.
- Display of print results and printer status
  - Sends notification of the print result after printing.
  - The program generates a message corresponding to the printer status at the time that the printer result notification was made.
  - Notifies the users of an API error that occurred while searching for printers or printing samples.
- Sets the log output function.
  - Enables log output to terminal storage when displaying the main screen.

## ePOS2Discovery

- Filter Option settings
- Search of printers and peripheral devices
- Search initiation
- Display of search results
- Search completion
- Error notification
  - Notifies the users of an API error that occurred when starting a search, during searching, or in the process of completing a search.

## ePOS2LineDisplay

- Display of the specified text on the customer display
- Turns on or off the blinking display
- Error notification
  - When failed to connect to the customer display, notifies the user of the connection error.
  - Notifies the users of an API error that occurred while sending display data to the customer display.

## ePOS2Keyboard

- Starts and ends connection with the printer
  - Starts connection with the keyboard specified in the Target text boxes.
  - Ends connection with the connected keyboard.
- Display of text input with the keyboard in text boxes in the application
- Error notification
  - Notifies the users of an API error that occurred while entering text with the keyboard.

## ePOS2POSKeyboard

- Starts and ends connection with TM-DT
  - Connects to the specified keyboard.
  - When failed to connect to the keyboard, notifies the user of the connection error.
- Display of keycode input with the keyboard in text boxes in the application
- Error notification
  - Notifies the users of an API error that occurred while entering keycode with the keyboard.

## ePOS2BarcodeScanner

- Starts and ends connection with the printer
  - Starts connection with the barcode scanner specified in the Target text boxes.
  - Ends connection with the connected barcode scanner.
- Display of data read by the barcode scanner in text boxes in the application
- Error notification
  - Notifies the users of an API error that occurred while reading data with the barcode scanner.

## ePOS2MSR

- Starts and ends connection with TM-DT
  - Starts connection with the MSR specified in the Target text boxes.
  - Ends connection with the connected MSR.
- Display of data read by the MSR in text boxes in the application
- Error notification
  - Notifies the users of an API error that occurred while reading data with the MSR.

## ePOS2SimpleSerial

- Starts and ends connection with the printer
  - Starts connection with the serial communication device specified in the Target text boxes.
  - Ends connection with the connected serial communication device.
- Transmission of data specified by the application to the serial communication device.
- Display of response commands from the serial communication device in the application
- Error notification
  - Notifies the users of an API error that occurred while sending data to the serial communication device.

## ePOS2OtherPeripheral

- Starts and ends connection with TM-DT
  - Starts connection with the device specified in the Target text boxes.
  - Ends connection with connected device.
- Transmission of data specified by the application to the device
- Display of response commands from the device in the application
- Error notification
  - Notifies the users of an API error that occurred at the timing when the process was run by the device.

## ePOS2CommBox

- Starts and ends connection with the printer
  - Starts connection with the communication box specified in the Target text boxes.
  - Ends connection with the connected communication box.
- Transmission of messages to the member ID specified by the application
- Error notification
  - Notifies the users of an API error that occurred when sending a message.

## ePOS2EasySelection

- Easy connection with a printer by using its NFC tag or QR code.
  - Acquires printer information from the NFC tag.
  - Acquires printer information from the QR code.
  - Opens the port by using the acquired printer information.
- Printing of a QR code that enables easy printer selection.
  - Creates a QR code that contains the printer information from the printer search result.
- Easy connection with a printer by using iBeacon data
  - Acquires printer information from iBeacon data
  - Opens the port by using the acquired printer information

## ePOS2\_POSAppForTerminalModel

### Peripheral device settings

- Searches for the printer, and displays the search results in a list.
- Specifies the printer to be used.
- Specifies the customer display to be used.
- Specifies the barcode scanner to be used.

### Purchase of a product

- A product is selected by pushing a button.
- The barcode is read by the barcode scanner, and the product is selected.
- Displays the price of the selected product on the customer display.
- Displays the total price of the selected products on the application software.

### Payment for a product

- Displays the total price of the products on the customer display.
- Displays the amount paid on the application software.
- Displays the amount paid on the customer display.
- Displays the amount of change on the application software.
- Displays the amount of change on the customer display.
- Prints the receipt.

### Error notification

- Notifies the user of an error that occurred in the connected peripheral device.

# Use Environment

Refer to [Epson ePOS SDK for iOS Development Environment](#) and [Application Operating Environment](#).



Change the Xcode project settings according to your development environment.

## Installation Procedure

- 1** Extract the sample programs from the zip file and store the extracted files at any desired location.
- 2** Double-click ePOS2\_\*.xcodeproj within the extracted files.
- 3** After starting Xcode, select **Scheme** as the target device.
- 4** Click **Run** in the upper-left.
- 5** The sample program is installed to the target device and the sample program starts up.



Enable "Near Field Communication Tag Reading" of Xcode project for using the parseNFC of ePOS2EasySelection.

# Application Guide

## To search printers

### Starts searching

```
Epos2FilterOption *filterOption = nil;  
filterOption = [[Epos2FilterOption alloc] init];  
  
filterOption.porttype = EPOS2_PORTTYPE_ALL;  
filterOption.broadcast = @"255.255.255.255"  
filterOption.deviceModel = EPOS2_MODEL_ALL;  
filterOption.deviceType = EPOS2_TYPE_ALL;
```

### Starts searching

```
result = [Epos2Discovery start:filterOption Delegate:self];  
if (result != EPOS2_CODE_SUCCESS) {  
    //Displays error messages  
}
```

### Notifies the detected devices

```
- (void) onDiscovery:(Epos2DeviceInfo *)deviceInfo  
{  
    //Display the detected device in the application software  
}
```

### Stops searching

```
- (void)stopDiscovery  
{  
    int result = EPOS2_SUCCESS;  
    result = [Epos2Discovery stop];  
    if (result != EPOS2_CODE_SUCCESS) {  
        //Displays error messages  
    }  
}
```

## To monitor continuously

```
When application starts
int result = EPOS2_SUCCESS;
Epos2Printer printer_ = nil
printer_ = [[Epos2Printer alloc] initWithPrinterModel:EPOS2_TM_T88
lang:EPOS2_MODEL_ANK];
[printer_ setStatusChangeEventDelegate:self]

result = [printer_ connect:@"TCP:192.168.192.168" timeout:EPOS2_PARAM_DEFAULT];

[printer_ setInterval:3000];

result = [printer_ startMonitor];
if (result != EPOS2_CODE_SUCCESS) {
    //Displays error messages
}

//Buffers the print data(addText..)
//Sends the print data (sendData)

//Buffers the print data(addText..)
//Sends the print data (sendData)

//Buffers the print data(addText..)
//Sends the print data (sendData)

When application closes
result = [printer_ stopMonitor];
if (result != EPOS2_CODE_SUCCESS) {
    //Displays error messages
}

result = [printer_ disconnect];
if (result != EPOS2_CODE_SUCCESS) {
    //Displays error messages
}
```

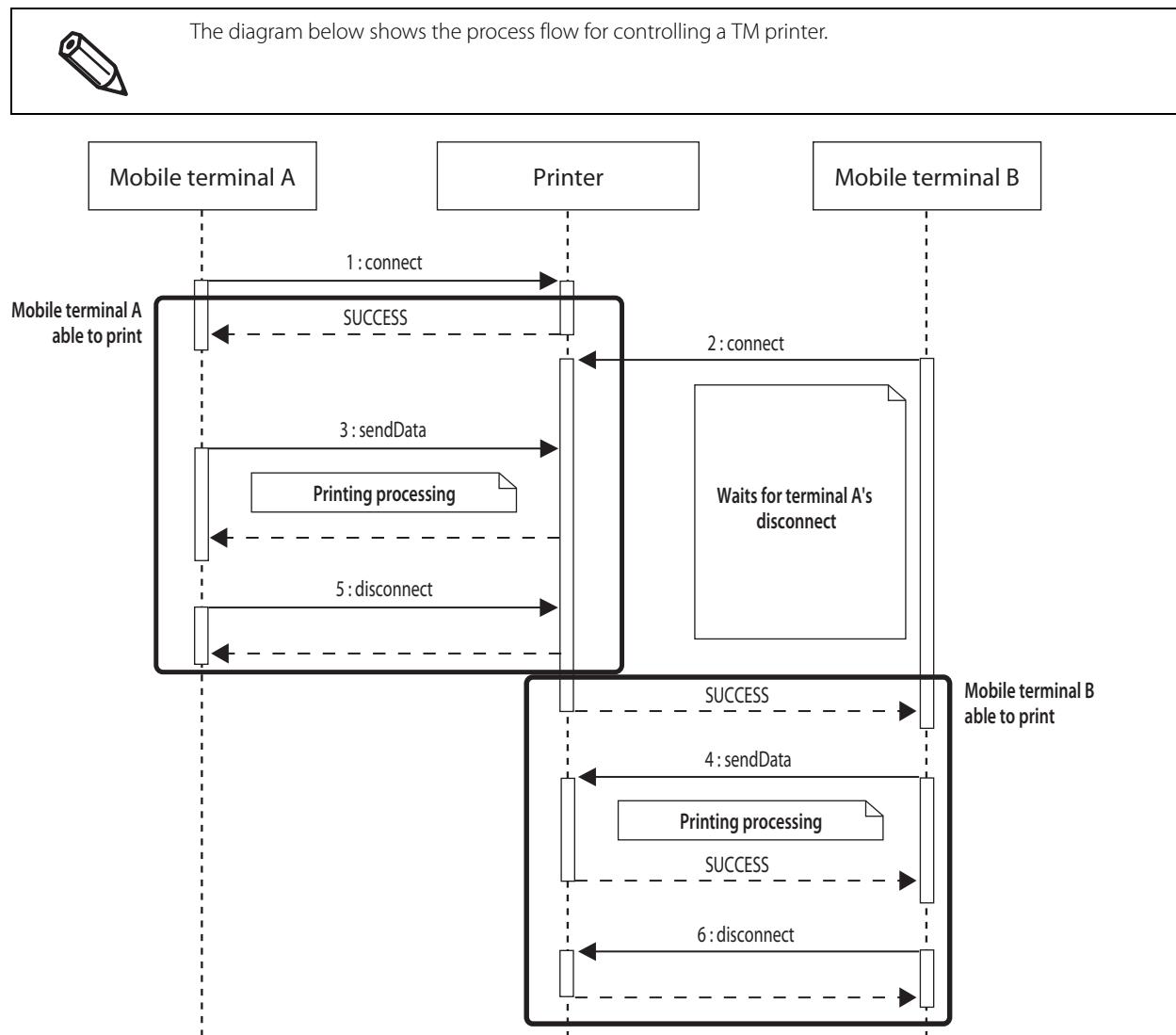
```
(void) onPtrStatusChange:(Epos2Printer *)printerObj EventType:(int)eventType
{
    switch (eventType) {
        case EPOS2_EVENT_ONLINE:
            break;
        case EPOS2_EVENT_OFFLINE:
            //Displays notification messages
            break;
        case EPOS2_EVENT_POWER_OFF:
            //Displays notification messages
            break;
        case EPOS2_EVENT_COVER_CLOSE:
            //Displays notification messages
            break;
        case EPOS2_EVENT_COVER_OPEN:
            //Displays notification messages
            break;
        case EPOS2_EVENT_PAPER_OK:
            //Displays notification messages
            break;
        case EPOS2_EVENT_PAPER_NEAR_END:
            //Displays notification messages
            break;
        case EPOS2_EVENT_PAPER_EMPTY:
            //Displays notification messages
            break;
        case EPOS2_EVENT_DRAWER_HIGH:
            //Displays notification messages
            break;
        case EPOS2_EVENT_DRAWER_LOW:
            //Displays notification messages
            break;
        case EPOS2_EVENT_BATTERY_ENOUGH:
            //Displays notification messages
            break;
        case EPOS2_EVENT_BATTERY_EMPTY:
            //Displays notification messages
            break;
        default:
            break;
    }
}
```



Refer to [Error Status and countermeasures](#) for the messages displayed on "Displays notification messages".

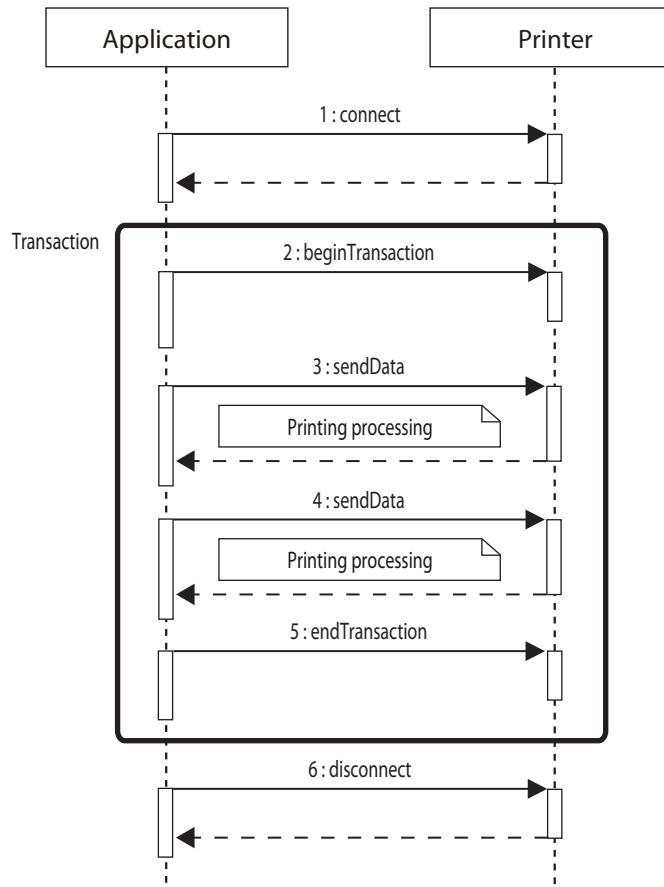
## To use the same printer from multiple mobile devices

The following shows a processing flow when using a single printer from the mobile terminal A and B.



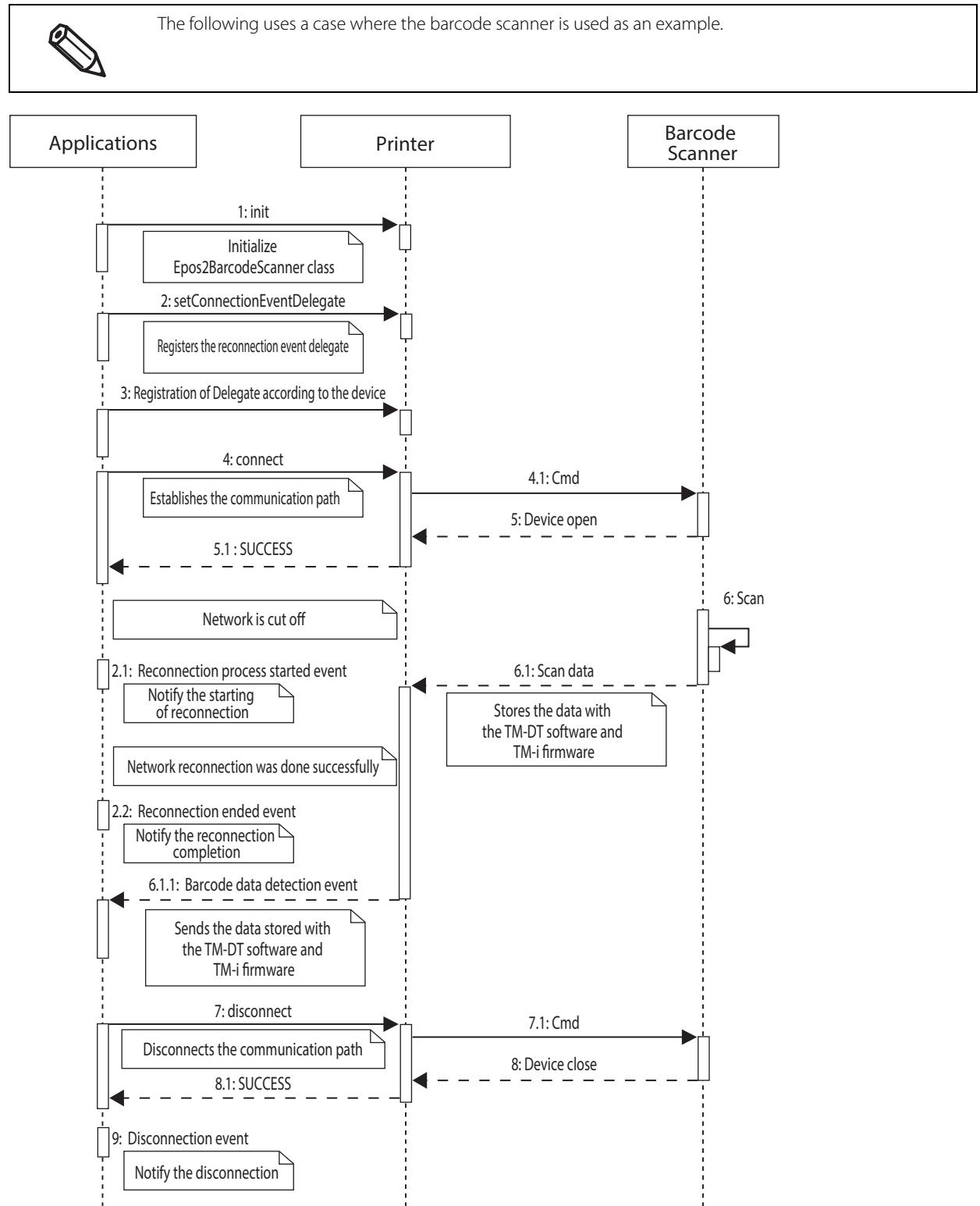
## To specify a transaction

Put the set of print processing to be carried out consecutively (such as a single receipt or a single coupon) between `beginTransaction` and `endTransaction`.



# To reconnect to the network automatically

The following is a sequence for automatically reconnecting if network communication is cut off with the printer.

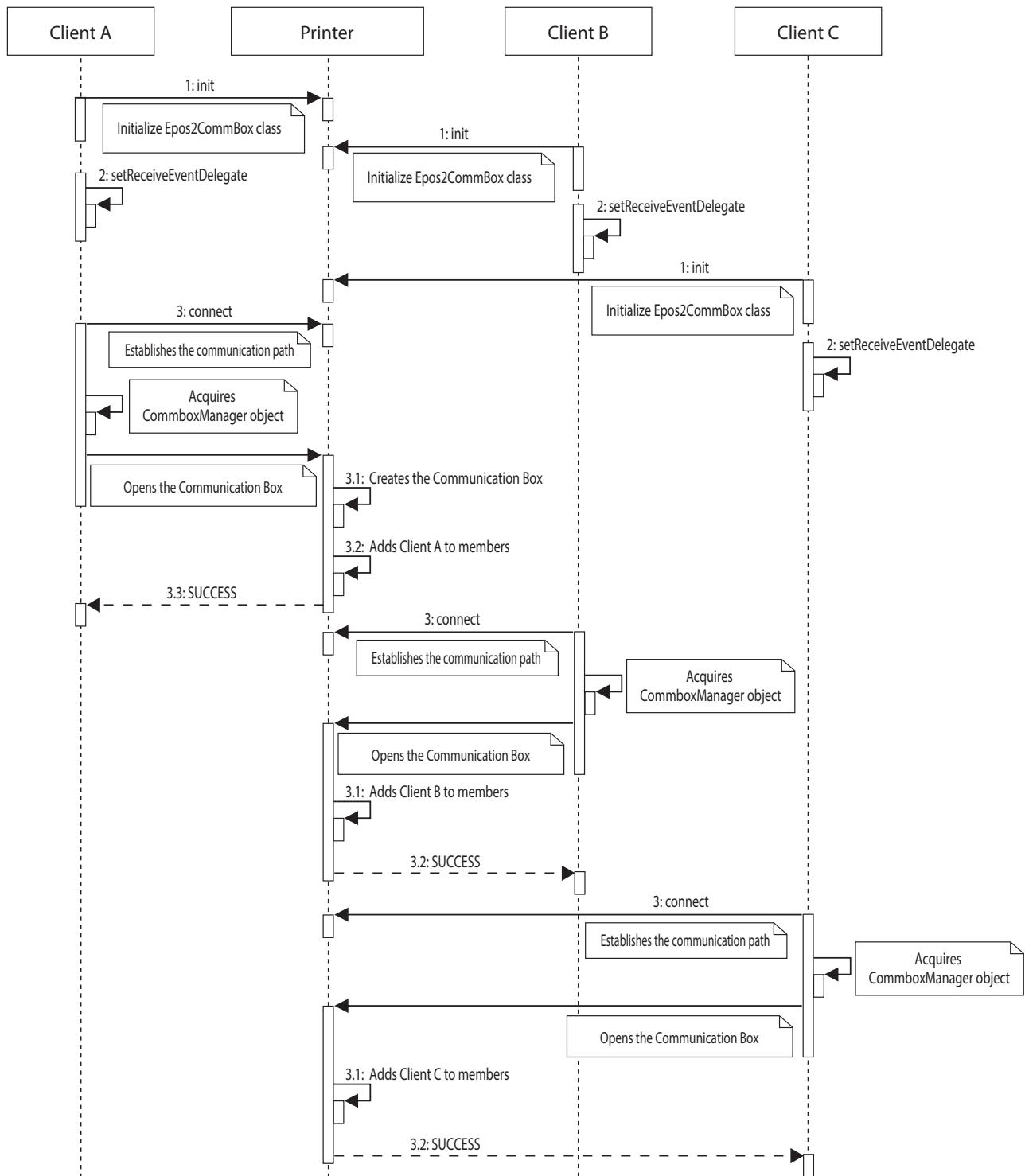


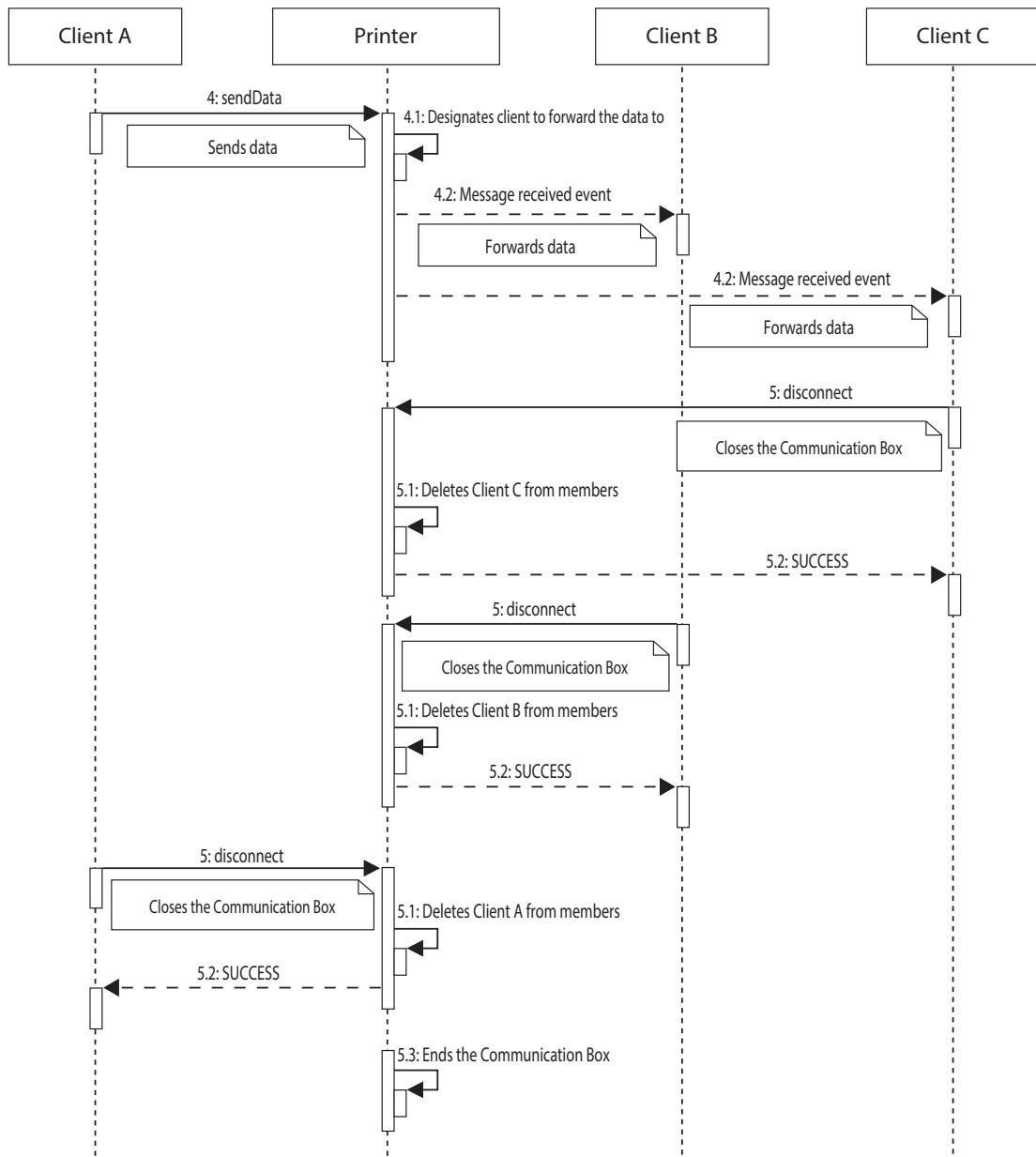
# To transmit and receive the data between applications

Use the Communication Box function of the printer.

For details on a printer equipped with the Communication Box function, refer to [Functions provided in each printer](#).

The following indicates the basic programming sequence using the Communication Box. A "Client" in the sequence figure refers to an application.



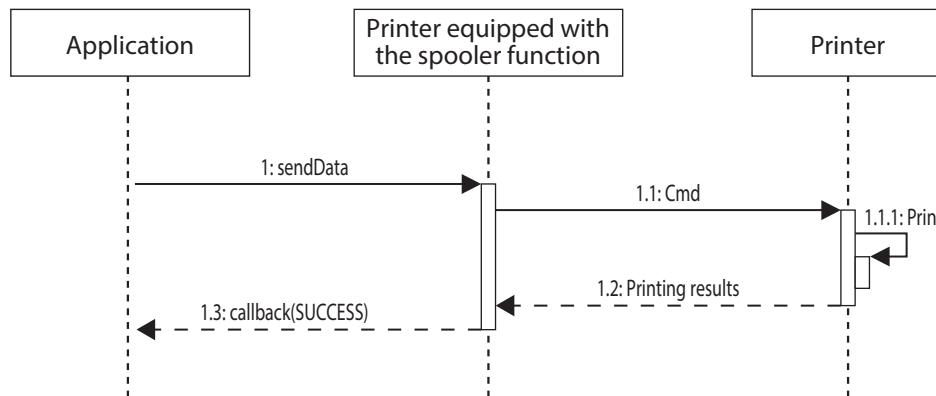


# To perform forward printing

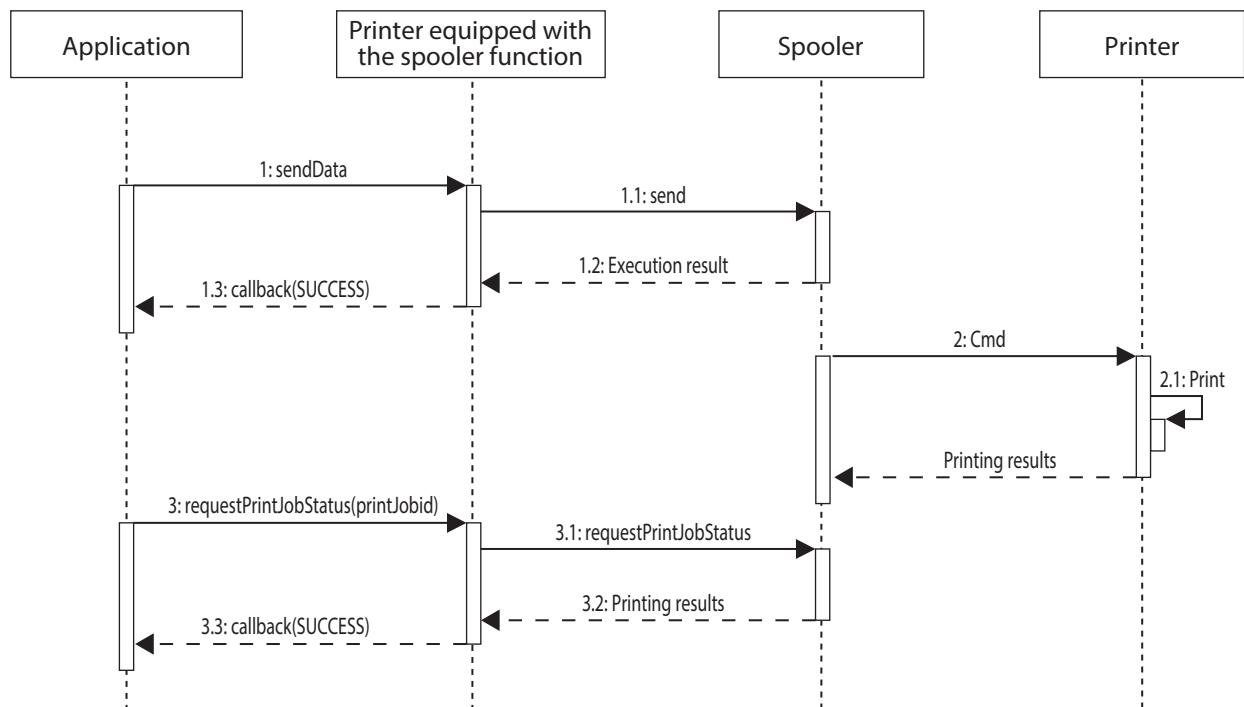
Use the spooler function of printers.

For details on a printer equipped with the spooler function, refer to [Functions provided in each printer](#).

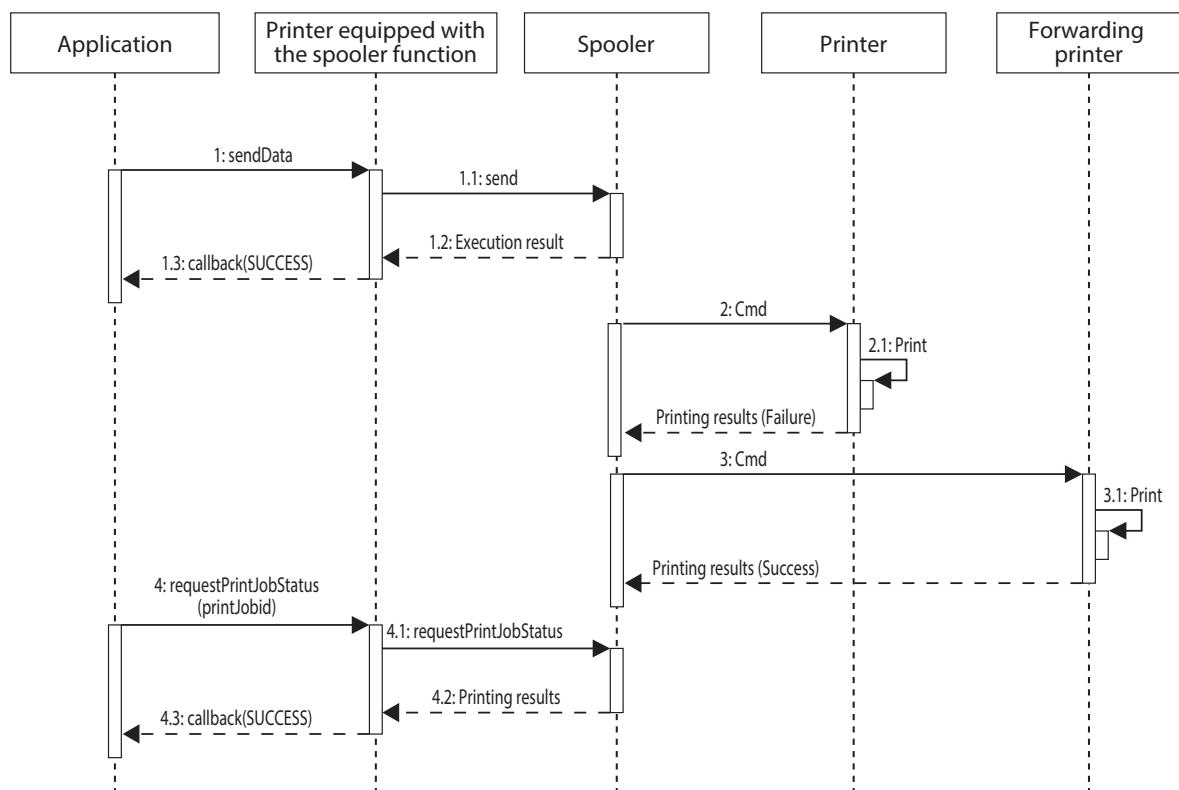
If a request is sent to the printer equipped with the spooler function from the application when the spooler function is disabled, printing is immediately executed and a response is returned to the application after printing completes.



If a request is sent to the printer equipped with the spooler function from the application when the spooler function is enabled, the print job is stored in the print queue and a response is returned to the application before printing completes.



If the destination printer cannot print, the printer equipped with the spooler function does not return the error to the application. Enabling forward printing will allow for the printing task to be completed on a substitute printer, with the application acquiring the printing results afterward. Refer to the sequence diagram below.



## To select a printer using its QR code

Analyze the QR code by using parseQR in the EasySelect class. Then, specify the analyzed information in the connect API to connect to the printer.

```

@interface Sample()
{
    Epos2Printer *printer_;
}

(BOOL) ConnectPrinterByQRCode
{
    // Analyzes QR code
    EposEasySelect* easySelect = [[EposEasySelect alloc] init];
    EposEasySelectInfo *easySelectInfo = [easySelect parseQR:result];

    if(!easySelectInfo){
        // If the QR code is not the one for easy printer selection.
        return NO;
    }

    // Converts printer name into PrinterSeries
    int printerSeries = [self convertPrinterNameToPrinterSeries:easySelectInfo.printerName];

    // Initializes Epos2Printer
    printer_ = [[Epos2Printer alloc] initWithPrinterSeries:printerSeries
lang:EPOS2_MODEL_ANK];
    if(!printer_){
        return NO;
    }

    // Generates connect parameters
    NSString *targetText = [self convertEasySelectInfoToTargetString:easySelectInfo];
    if([targetText isEqualToString:@""]){
        return NO;
    }

    // Connects to the printer
    int result = [printer_ connect:targetText timeout:EPOS2_PARAM_DEFAULT];
    if(result != EPOS2_SUCCESS){
        return NO;
    }

    return YES;
}

```

```

- (int) convertPrinterNameToPrinterSeries:(NSString*)printerName
{
    int printerSeries = EPOS2_TM_T88;

    if([printerName isEqualToString:@"TM-T88V"]){
        printerSeries = EPOS2_TM_T88;
    }else if([printerName isEqualToString:@"TM-m10"]){
        printerSeries = EPOS2_TM_M10;
    }else if([printerName isEqualToString:@"TM-m30"]){
        printerSeries = EPOS2_TM_M30;
    }else if([printerName isEqualToString:@"TM-P20"]){
        printerSeries = EPOS2_TM_P20;
    }else if([printerName isEqualToString:@"TM-P60II"]){
        printerSeries = EPOS2_TM_P60II;
    }else if([printerName isEqualToString:@"TM-P80"]){
        printerSeries = EPOS2_TM_P80;
    }else{
        // Depending on the printer, add conversion processes.
    }

    return printerSeries;
}

- (NSString*) convertEasySelectInfoToTargetString:(EposEasySelectInfo*)easySelectInfo
{
    NSString *connectionTypeString = @"";
    switch(easySelectInfo.deviceType){
        case EPOS_EASY_SELECT_DEVTYPE_TCP:
            connectionTypeString = @"TCP:";
            break;
        case EPOS_EASY_SELECT_DEVTYPE_BLUETOOTH:
            connectionTypeString = @"BT:";
            break;
    }

    return [NSString stringWithFormat:@"%@%@", connectionTypeString,easySelectInfo.macAddress];
}

```

## **How to print a QR code to be used for printer selection**

### **For the printers that can print the QR code on a status sheet**

Some printers can print the QR code on a status sheet. For more details, refer to the Technical Reference Guide of the printer.

### **For the printers that cannot print the QR code on a status sheet**

Create the QR code by using [createQR](#). Specify the created data by [addSymbol](#) to print the QR code.

Refer to “Printing of a QR code that enables easy printer selection” of the sample program.

## To select a printer using its NFC tag

Analyze the NFC tag using `parseNFC` in the `EasySelect` class. Then, specify the analyzed information in the `connect` API to connect to the printer.



The following sample code is created with Swift.

```
// Receives the NFC tag information with the following NFCNDEFReaderSessionDelegate method.
func readerSession(
    _ session: NFCNDEFReaderSession,
    didDetectNDEFs messages: [NFCNDEFMessage]) {

    //Analyzes the NFC tag.
    guard let targetList = EposEasySelect().parseNFC(
        messages,
        timeout: Int(PARSE_NFC_TIMEOUT_DEFAULT.rawValue)),
        !targetList.isEmpty else {
        //If the NFC tag is not the one for easy printer selection
        return
    }

    //Acquires the first NFC data.
    let easySelectInfo: EposEasySelectInfo = targetList[0]

    guard let printerName = easySelectInfo.printerName, !printerName.isEmpty else {
        //If the printerName cannot be acquired
        return
    }

    //Converts printer name into PrinterSeries.
    let printerSeries: CInt = convertPrinterNameToPrinterSeries(printerName: printerName)

    guard let macAddress = easySelectInfo.macAddress, !macAddress.isEmpty else {
        //If the macAddress cannot be acquired
        return
    }

    //Initializes Epos2Printer.
    guard let printer = Epos2Printer(
        printerSeries: printerSeries,
        lang: EPOS2_MODEL_ANK.rawValue) else {
        return
    }

    //Generates connect parameters.
    let targetString = convertEasySelectInfoToTargetString(info: easySelectInfo)
    guard !targetString.isEmpty else {
        return
    }

    //Connects to the printer.
    var result = printer.connect(
        targetString,
        timeout: CLong(EPOS2_PARAM_DEFAULT))
    guard result == EPOS2_SUCCESS.rawValue else {
        //Writes error processing.
        return
    }
}
```

```

func convertPrinterNameToPrinterSeries(printerName: String) -> CInt {
    var printerSeries: CInt = EPOS2_TM_T88.rawValue

    if printerName == "TM-T88V" || printerName == "TM-T88VI" {
        printerSeries = EPOS2_TM_T88.rawValue
    } else if printerName == "TM-m10" {
        printerSeries = EPOS2_TM_M10.rawValue
    } else if printerName == "TM-m30" {
        printerSeries = EPOS2_TM_M30.rawValue
    } else if printerName == "TM-P20" {
        printerSeries = EPOS2_TM_P20.rawValue
    } else if printerName == "TM-P60II" {
        printerSeries = EPOS2_TM_P60II.rawValue
    } else if printerName == "TM-P80" {
        printerSeries = EPOS2_TM_P80.rawValue
    } else {
        //if you use other printer , add convert printerSeries
    }

    return printerSeries
}

func convertEasySelectInfoToTargetString(info: EposEasySelectInfo?) -> String {
    guard let deviceType = info?.deviceType, let macAddress = info?.macAddress else {
        return ""
    }

    var connectionTypeString = ""

    switch deviceType {
    case EPOS_EASY_SELECT_DEVTYPE_TCP.rawValue:
        connectionTypeString = "TCP"
    case EPOS_EASY_SELECT_DEVTYPE_BLUETOOTH.rawValue:
        connectionTypeString = "BT"
    default:
        break
    }

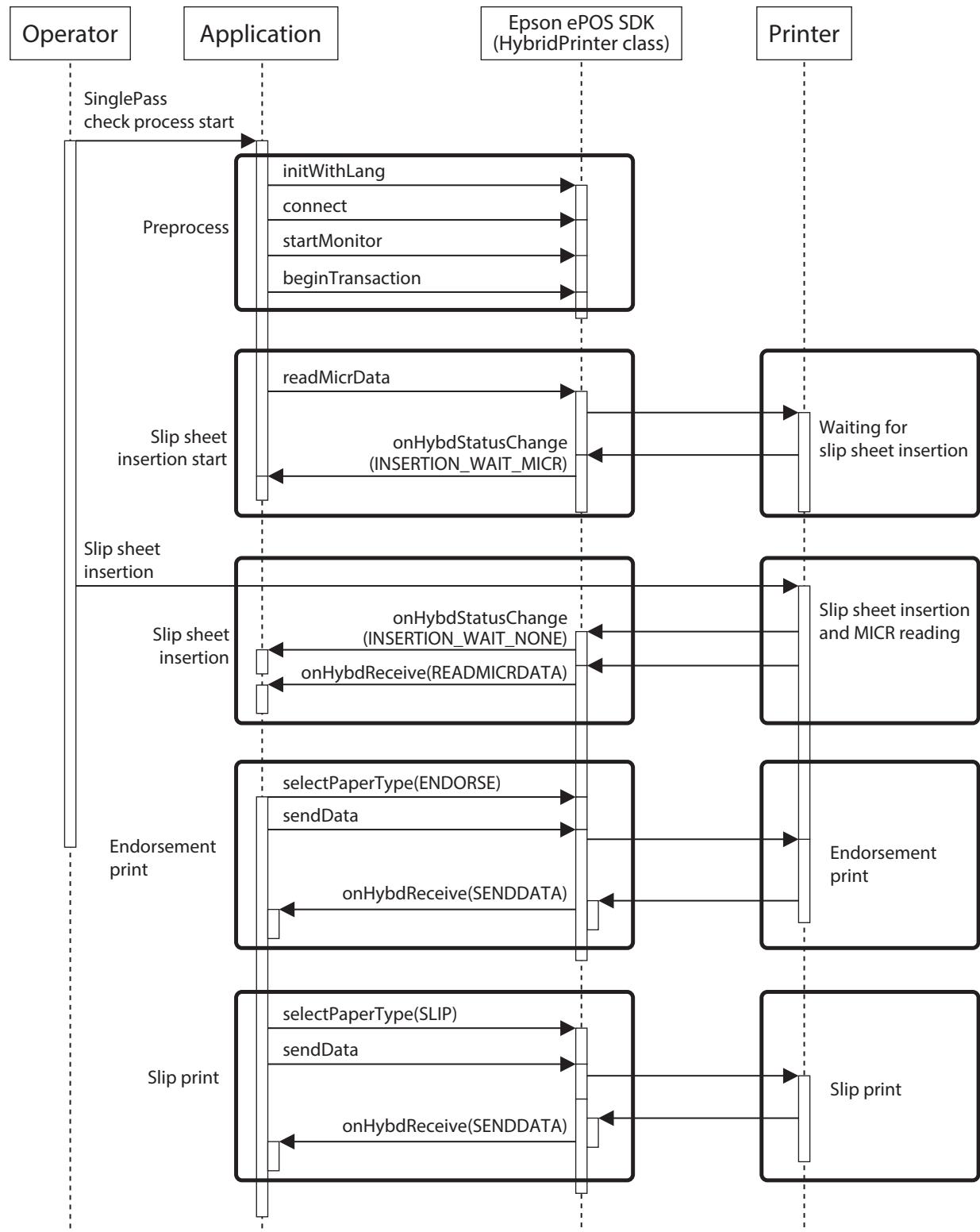
    return "\(connectionTypeString):\\"(macAddress)"
}

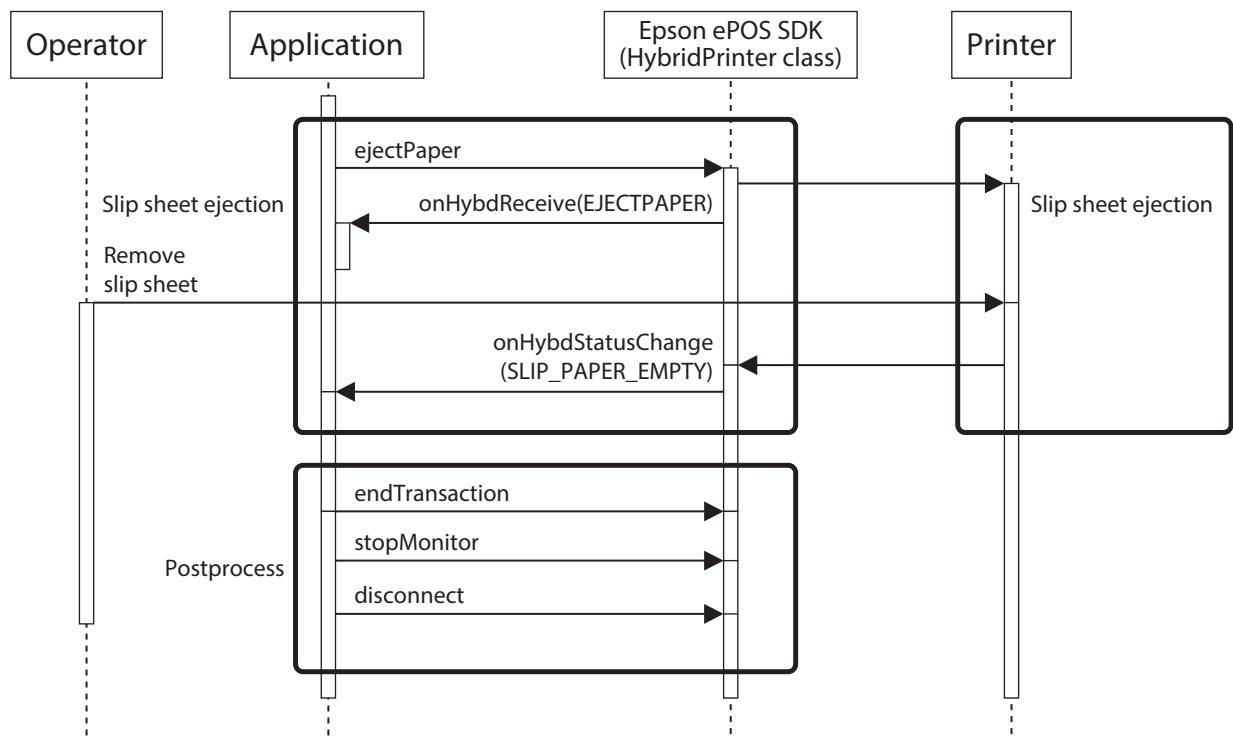
```

# To perform check process

Epos2HybridPrinter class is used to control the hybrid model printers.

The following sequence diagram shows the flow from endorsement printing after MICR reading to slip printing.



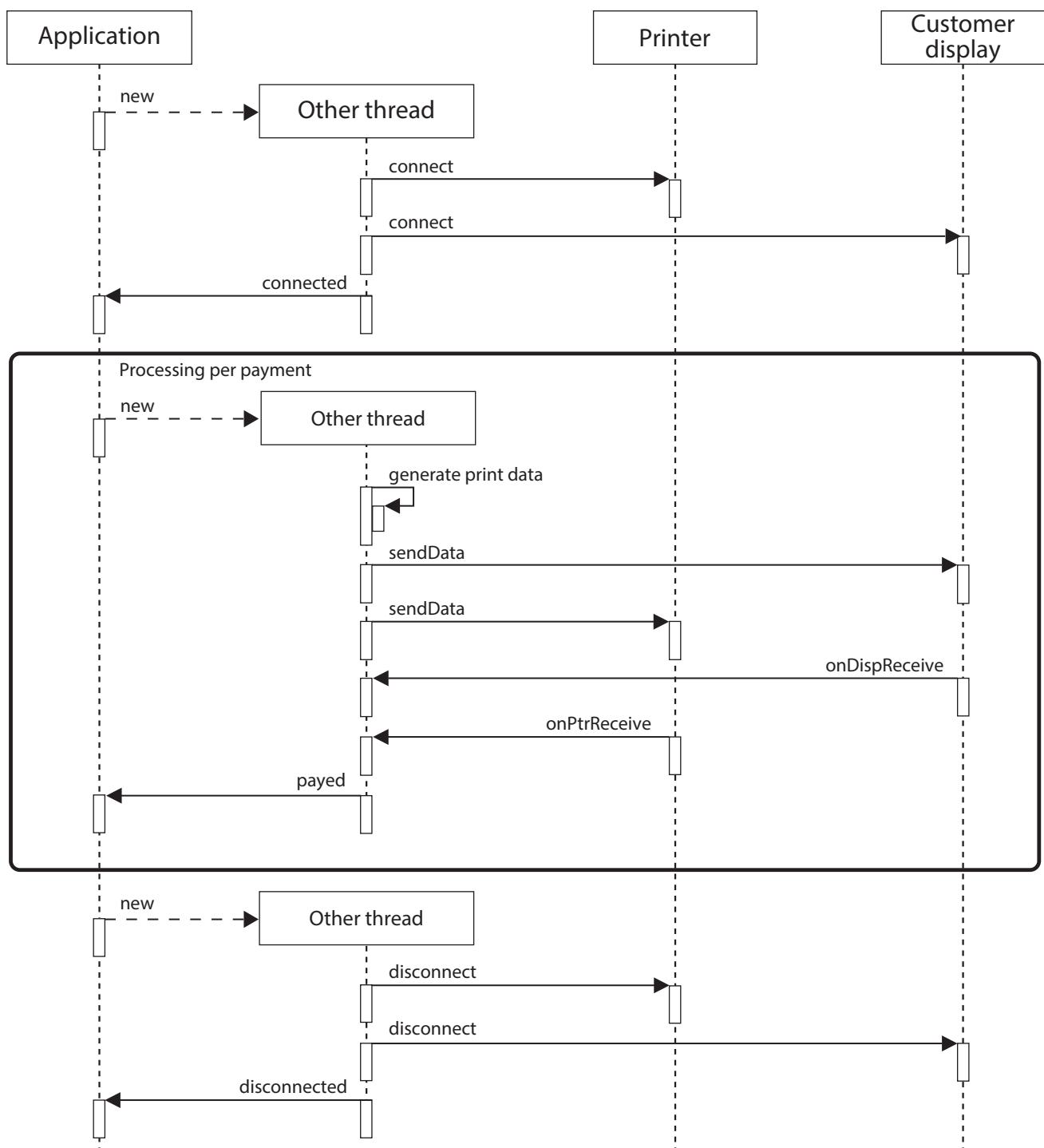


# To control multiple peripheral devices

The sequence diagram that controls the printer and customer display is indicated below.



- To connect/disconnect communication with the printer or peripheral devices, call connect API/disconnect API from one thread to each peripheral device in order.
- The following process can be processed concurrently in one thread.
  - \* Displaying data on the customer display
  - \* Receipt printing



# Appendix

## Open Source Software Licensing

The following open-source software is used in the sample programs and libraries provided by the Epson ePOS SDK for iOS.

### Sample Programs

#### **ZXing(<https://github.com/zxing/zxing>)**

ZXing is licensed based on Apache 2.0 license (<http://www.apache.org/licenses/LICENSE-2.0.html>).

### Libraries

#### **zlib**

zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.8, April 28th, 2013

Copyright (C) 1995-2013 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly	Mark Adler
<a href="mailto:jloup@gzip.org">jloup@gzip.org</a>	<a href="mailto:madler@alumni.caltech.edu">madler@alumni.caltech.edu</a>

The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

## LICENSE ISSUES

---

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts.

### OpenSSL License

---

```
/*
 * Copyright (c) 1998-2016 The OpenSSL Project. All rights reserved.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 *
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 *
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in
 *    the documentation and/or other materials provided with the
 *    distribution.
 *
 * 3. All advertising materials mentioning features or use of this
 *    software must display the following acknowledgment:
 *    "This product includes software developed by the OpenSSL Project
 *    for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
 *
 * 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
 *    endorse or promote products derived from this software without
 *    prior written permission. For written permission, please contact
 *    openssl-core@openssl.org.
 *
 * 5. Products derived from this software may not be called "OpenSSL"
 *    nor may "OpenSSL" appear in their names without prior written
 *    permission of the OpenSSL Project.
 *
 * 6. Redistributions of any form whatsoever must retain the following
 *    acknowledgment:
 *    "This product includes software developed by the OpenSSL Project
 *    for use in the OpenSSL Toolkit (http://www.openssl.org/)"
 *
 * THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY
 * EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
```

\* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR  
 \* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,  
 \* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT  
 \* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;  
 \* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)  
 \* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,  
 \* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)  
 \* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED  
 \* OF THE POSSIBILITY OF SUCH DAMAGE.  
 \* ======  
 \*  
 \* This product includes cryptographic software written by Eric Young  
 \* (eay@cryptsoft.com). This product includes software written by Tim  
 \* Hudson (tjh@cryptsoft.com).  
 \*  
 \*/

#### Original SSLeay License

---

```

/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
 * All rights reserved.
 *
 * This package is an SSL implementation written
 * by Eric Young (eay@cryptsoft.com).
 * The implementation was written so as to conform with Netscapes SSL.
 *
 * This library is free for commercial and non-commercial use as long as
 * the following conditions are aheared to. The following conditions
 * apply to all code found in this distribution, be it the RC4, RSA,
 * Ihash, DES, etc., code; not just the SSL code. The SSL documentation
 * included with this distribution is covered by the same copyright terms
 * except that the holder is Tim Hudson (tjh@cryptsoft.com).
 *
 * Copyright remains Eric Young's, and as such any Copyright notices in
 * the code are not to be removed.
 * If this package is used in a product, Eric Young should be given attribution
 * as the author of the parts of the library used.
 * This can be in the form of a textual message at program startup or
 * in documentation (online or textual) provided with the package.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the copyright
 *    notice, this list of conditions and the following disclaimer.
  
```

\* 2. Redistributions in binary form must reproduce the above copyright  
\* notice, this list of conditions and the following disclaimer in the  
\* documentation and/or other materials provided with the distribution.  
\* 3. All advertising materials mentioning features or use of this software  
\* must display the following acknowledgement:  
\* "This product includes cryptographic software written by  
\* Eric Young (eay@cryptsoft.com)"  
\* The word 'cryptographic' can be left out if the routines from the library  
\* being used are not cryptographic related :-).  
\* 4. If you include any Windows specific code (or a derivative thereof) from  
\* the apps directory (application code) you must include an acknowledgement:  
\* "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"  
\*  
\* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND  
\* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE  
\* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE  
\* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE  
\* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL  
\* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
\* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)  
\* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT  
\* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY  
\* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF  
\* SUCH DAMAGE.  
\*  
\* The licence and distribution terms for any publically available version or  
\* derivative of this code cannot be changed. i.e. this code cannot simply be  
\* copied and put under another distribution licence  
\* [including the GNU Public Licence.]  
\*/