

# Epson ePOS SDK for JavaScript User's Manual

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Functionality

How to Use

API Reference

Device Control Scripts

Device Specifications

Sample Programs

Application Guide

Appendix

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# Safety Precautions

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	Describes additional explanation or other useful information.

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## About this Manual

### Purpose of this Manual

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

### 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 Control Scripts</a>
Chapter 5	<a href="#">Device Specifications</a>
Chapter 6	<a href="#">Sample Programs</a>
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# Functionality

Epson ePOS SDK for JavaScript is the SDK for developing Web applications. Using Epson ePOS SDK for JavaScript enables simple coding to be used to control printers. With TM intelligent printers, TM printers connected to the network, customer displays, and POS peripheral devices such as barcode scanners connected to the main unit can be controlled. You can also develop applications that take advantage of unique TM intelligent printer functions such as the spooler function and communication box.



In this manual, TM printers refer to the standard and mobile models of receipt printers. TM intelligent printers refer to the TM-DT series and TM-i series of printers.

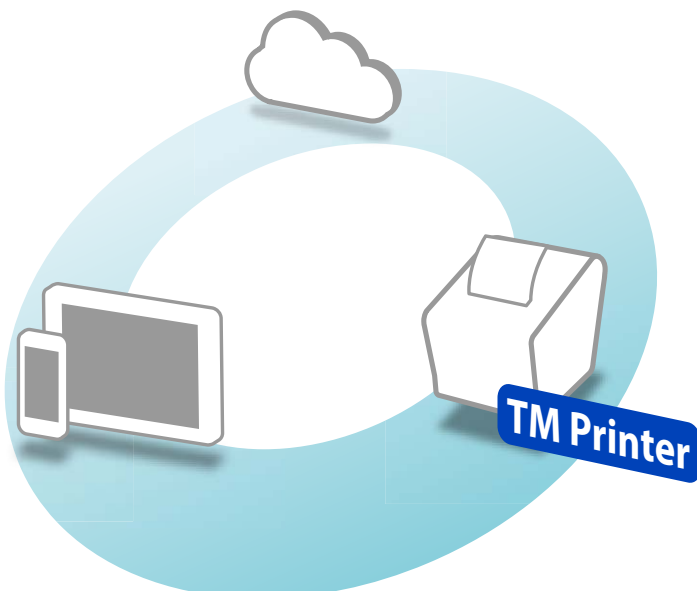
## Application Development in Epson ePOS SDK for JavaScript

The following section describes the system configurations of applications developed in Epson ePOS SDK for JavaScript.

Refer to the detailed manual for each printer for information on system configuration methods and usage limitations.

### TM Printer Models

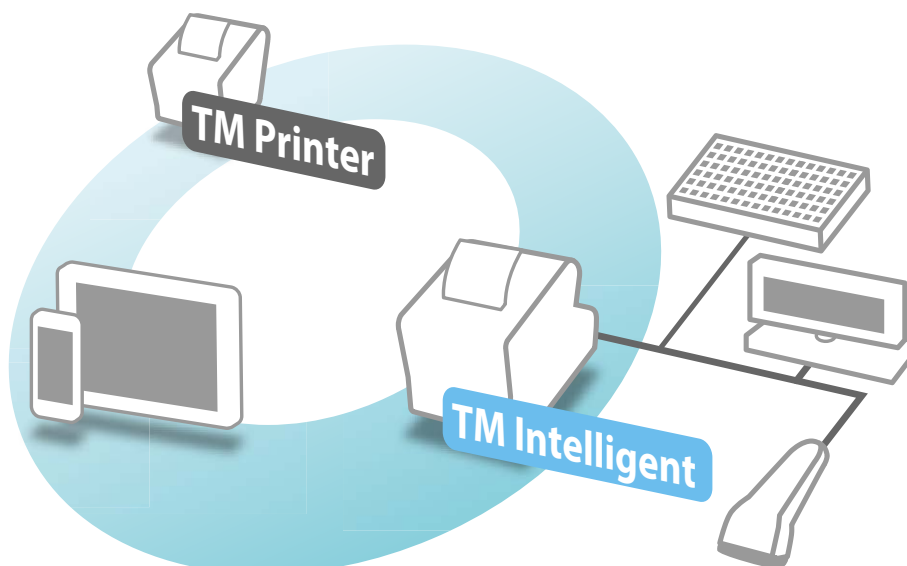
With this system, smart devices and TM printers connect over the network (wired and wireless LAN). TM printers can be controlled from smartphone Web browsers compatible with HTML5.



You must use EpsonNet Config to enable the ePOS-Print menu. Refer to the detailed manual for your TM printer interface for more information.

## TM intelligent printer model

With this system, smart devices and TM intelligent printers connect over the network (wired and wireless LAN). POS peripheral devices connected to TM intelligent printers as well as multiple TM printers can also be controlled.



The POS peripheral devices and TM printers that can be controlled by TM intelligent printers varies depending on the TM-DT software and TM-i firmware. The POS peripheral devices and TM printers you want to use must be registered to the TM intelligent printer using the EPSON TMNet WebConfig.

To use applications created with Epson ePOS SDK for JavaScript on TM intelligent printer models, the ePOS-Device Service must be enabled on the TM intelligent printer.



The ePOS-Device Service on the TM intelligent printer is enabled by default.

# Application Operating Environment

This section describes the operating environment for applications developed using the Epson ePOS SDK for JavaScript.

Refer to the README.jp.txt file in the Epson ePOS SDK for JavaScript package for the most recent information on applicable Web browsers.

## Supported printers

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

---

### ***TM Printers***

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

- ☐ TM-m10
- ☐ TM-m30
- ☐ TM-P20
- ☐ TM-P60
- ☐ TM-P60II
- ☐ TM-P80
- ☐ TM-T20
- ☐ TM-T20II
- ☐ TM-T70
- ☐ TM-T70II
- ☐ TM-T81II
- ☐ TM-T82
- ☐ TM-T82II
- ☐ TM-T88V
- ☐ TM-U220
- ☐ TM-U330

---

### ***TM Intelligent Printers***

- ☐ TM-T70II-DT
- ☐ TM-T88V-DT
- ☐ TM-H6000IV-DT
- ☐ TM-T20II-i (TM-i firmware Ver. 4.0 or later)
- ☐ TM-T70-i (TM-i firmware Ver. 4.0 or later)
- ☐ TM-T82II-i (TM-i firmware Ver. 4.0 or later)
- ☐ TM-T83II-i (TM-i firmware Ver. 4.0 or later)
- ☐ TM-T88V-i (TM-i firmware Ver. 4.0 or later)
- ☐ TM-U220-i (TM-i firmware Ver. 4.0 or later)

## Network Printers

These printers are TM printers and can be controlled only via TM intelligent printers.

- ❑ TM-L90
- ❑ TM-T88IV
- ❑ TM-T90
- ❑ TM-H6000IV

## Downloadable Content

### Packages

Epson ePOS SDK for JavaScript packages include the following files.

Filename	Description
epos-x.x.x.js	Libraries used for execution of functions.
ePOS_SDK_Sample_JavaScript.zip	These files are sample programs.
DeviceControlScript_Sample.zip	These files are sample device control script 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_for_JavaScript_um_ja_revx.pdf	This is the Japanese user manual.
ePOS_SDK_for_JavaScript_um_en_revx.pdf	This is the English user manual.
ePOS_SDK_JavaScript_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_JavaScript_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

- ❑ When using 2D barcode readers, Japanese and other multi-byte characters cannot be read correctly.
- ❑ Control codes cannot be read from 2D barcode data if it contains ASCII control codes (0x00 through 0x1F).
- ❑ Printing from security-protected Web pages (HTTPS) cannot be performed.
- ❑ The prototype.js JavaScript library conflicts with the Epson ePOS SDK for JavaScript library (epos-x.x.x.js), and so these libraries cannot be used together.

# How to Use

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

## 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 JavaScript Project

- 1 Place the epos-x.x.x.js on the Web server.
- 2 Scripts are embedded into Web pages using HTML `<script>` tags.

Embedding Example

```
<script type="text/javascript" src="epos-2.0.0.js"></script>
```

## Programming Guide

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

### Programming Flow

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

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

## Controlling Printers

This section describes how to create a program that enables printing receipts from a TM printer, a TM intelligent printer, or a TM printer connected to a TM intelligent printer via a network.

### 1. Creating ePOSDevice objects (device connection and communication)



### 2. Retrieving Printer objects (printer selection)



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



### 4. Sending print data (printing and disconnection)

#### *Creating ePOSDevice objects (device connection and communication)*

Create and initialize the ePOSDevice object.

```
var ePosDev = new Epson.ePOSDevice();

function connect() {
    var ipAddress = '192.168.192.168';
    var port = '8008';

    ePosDev.connect(ipAddress, port, callback_connect);
}
```

#### *Retrieving Printer objects (printer selection)*

Retrieve the Printer object and select the printer to control.

```
function callback_connect(resultConnect){
    var deviceId = 'local_printer';
    var options = {'crypto' : false, 'buffer' : false};

    if ((resultConnect == 'OK') || (resultConnect == 'SSL_CONNECT_OK')) {
        //Retrieves the Printer object
        ePosDev.createDevice(deviceID, ePosDev.DEVICE_TYPE_PRINTER, options,
        callback_createDevice);
    }
    else {
        //Displays error messages
    }
}
```

```

var printer = null;

function callback_createDevice(deviceObj, errorCode){
    if (deviceObj === null) {
        //Displays an error message if the system fails to retrieve the Printer object
        return;
    }
    printer = deviceObj;

    //Registers the print complete event
    printer.onreceive = function(response){
        if (response.success) {
            //Displays the successful print message
        }
        else {
            //Displays error messages
        }
    };
}

```

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

Use the Printer object addxx-system API to create print data.

In the following example, data is created to print "Hello World" aligned in the center.

```

function createData(){
    printer.addTextAlign(printer.ALIGN_CENTER);
    printer.addText('Hello World\n');
}

```

### *Sending print data (printing and disconnection)*

Run the print process and retrieve the print result.

```

function send(){
    if (ePosDev.isConnected) {
        printer.send();
    }
}

```

Discard the Printer object and terminate the connection with the printer.

```

//Discards the Printer object
ePosDev.deleteDevice(printer, callback_deleteDevice);

function callback_deleteDevice(errorCode){
    //Terminates connection with device
    ePosDev.disconnect();
}

```

## Controlling Customer Displays

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

### 1. Creating ePOSDevice objects (device connection and communication)



### 2. Retrieving Display object (device selection)



### 3. Creating display data (data buffering)



### 4. Sending display data (printing and disconnection)

#### *Creating ePOSDevice objects (device connection and communication)*

Create and initialize the ePOSDevice object.

```
var ePosDev = new epson.ePOSDevice();

function connect() {
    var ipAddress = '192.168.192.168';
    var port = '8008';

    ePosDev.connect(ipAddress, port, callback_connect);
}
```

#### *Retrieving Display object (device selection)*

Retrieve the Display object and select the customer display to control.

```
function callback_connect(resultConnect){
    var deviceId = 'local_display';
    var options = {'crypto' : false, 'buffer' : false};

    if ((resultConnect == 'OK') || (resultConnect == 'SSL_CONNECT_OK')) {
        //Retrieves the Display object
        ePosDev.createDevice(deviceID, ePosDev.DEVICE_TYPE_DISPLAY, options,
        callback_createDevice);
    }
    else {
        //Displays error messages
    }
}
```

```

var display = null;

function callback_createDevice(deviceObj, errorCode){
    if (deviceObj === null) {
        //Displays an error message if the system fails to retrieve the Display object
        return;
    }
    display = deviceObj;

    //Registers the display complete event
    display.onreceive = function(response){
        if (response.success) {
            //Displays the successful display message
        }
        else {
            //Displays error messages
        }
    };
}

```

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

Use the Display object addxx-system API to create display data.

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

```

function createData(){
    diaplay.addText('Hello World\n');
}

```

### *Sending display data (printing and disconnection)*

Run the display process and retrieve the display result.

```

function send(){
    if (ePosDev.isConnected) {
        display.send();
    }
}

```

Discard the Display object and terminate the connection with the customer display.

```

//Discards the Display object
ePosDev.deleteDevice(display, callback_deleteDevice);

function callback_deleteDevice(errorCode){
    //Terminates connection with device
    ePosDev.disconnect();
}

```

## 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. Creating ePOSDevice objects (device connection and communication)



### 2. Retrieving Keyboard objects (device selection)



### 3. Disconnecting from the device

#### *Creating ePOSDevice objects (device connection and communication)*

Create and initialize the ePOSDevice object.

```
var ePosDev = new epos.ePOSDevice();

function connect() {
    var ipAddress = '192.168.192.168';
    var port = '8008';

    ePosDev.connect(ipAddress, port, callback_connect);
}
```

#### *Retrieving Keyboard objects (device selection)*

Retrieve the Keyboard object, connect the keyboard, and then register the event that will receive input data.

```
function callback_connect(resultConnect){
    var deviceId = 'local_keyboard';
    var options = {'crypto' : false, 'buffer' : false};

    if ((resultConnect == 'OK') || (resultConnect == 'SSL_CONNECT_OK')) {
        //Retrieves the Keyboard object
        ePosDev.createDevice(deviceID, ePosDev.DEVICE_TYPE_KEYBOARD, options,
        callback_createDevice);
    }
    else {
        //Displays error messages
    }
}

var keyboard = null;

function callback_createDevice(deviceObj, errorCode){
    if (deviceObj === null) {
        //Displays an error message if the system fails to retrieve the Keyboard object
        return;
    }
    keyboard = deviceObj;
```

```
//Registers the key press event
keyboard.onkeypress = function(response){
  if (response.keycode !== 0) {
    //Displays received messages
  }
};
}
```

### *Disconnecting from the device*

Discard the Keyboard object, terminate the connection, and stop receiving data input from the keyboard.

```
//Discards the Keyboard object
ePosDev.deleteDevice(keyboard, callback_deleteDevice);

function callback_deleteDevice(errorCode){
  //Terminates connection with device
  ePosDev.disconnect();
}
```

## Effective range of command buffers for setting

The addXXX of the Printer object used for settings is valid until [send method](#) is executed after addXXX settings have been configured. The configured values are initialized every time [send method](#) is executed. Refer to the following example code.

```
printer.addText('Hello World\n');  
printer.addTextFont(Printer.FONT_B);  
printer.addText('Hello World\n');  
printer.addText('Hello World\n');  
printer.send();  
printer.addText('Hello World\n');  
printer.send();
```

Red letters:Font A

Green letters:Font B

## Error Codes

Epson ePOS SDK for JavaScript uses error codes retrieved by callback parameters and error codes retrieved by onreceive events. Refer to the following sections for more information on causes of each error code and the corresponding troubleshooting procedures.

- ❑ [Error Codes acquired in the Callback Parameter and Counteractions](#)
- ❑ [Error Codes acquired in the Onreceive Event and Countermeasure](#)

# API Reference

This chapter describes the APIs provided by ePOS SDK for JavaScript.

## List of ePOS SDK API

ePOS SDK for JavaScript provides the following objects:

Available APIs and parameters vary by printer model and peripheral device. Refer to [Device Specifications](#).

- ❑ [ePOSDevice object](#) (window.epson.ePOSDevice)
- ❑ [Common to device objects](#)
- ❑ [CashChanger object](#)
- ❑ [Display object](#)
- ❑ [Keyboard object](#)
- ❑ [MSR object](#)
- ❑ [Printer object](#)
- ❑ [HybridPrinter object](#)
- ❑ [Scanner object](#)
- ❑ [SimpleSerial object](#)
- ❑ [DeviceHubTerminal object](#)
- ❑ [CommBoxManager object](#)
- ❑ [CommBox object](#)
- ❑ [ePosDeviceConfiguration object](#)

### ePOSDevice object

Connects the application and printer.

API		Description
Initialization	<a href="#">Constructor</a>	Initializes the ePOSDevice object.
Communication path	<a href="#">connect method</a>	Establishes the communication path.
	<a href="#">disconnect method</a>	Disconnects the communication path.
	<a href="#">isConnected method</a>	Acquires the establishment state of the communication path.
Device	<a href="#">createDevice method</a>	Acquires a device objects.
	<a href="#">deleteDevice method</a>	Discards a device objects.
Administration information	<a href="#">getAdmin method</a>	Acquires the administration information.
	<a href="#">getLocation method</a>	Acquires the installation location information.
OFSC	<a href="#">sendOfscXml method</a>	Sends XML data for OFSC-Print.

API		Description
Inter-application communication	<a href="#">getCommBoxManager method</a>	Acquires the CommBoxManager object.
Starts reconnection.	<a href="#">onreconnecting event</a>	Reconnection process start event
Completes reconnection.	<a href="#">onreconnect event</a>	Reconnection completion event
Disconnection	<a href="#">ondisconnect event</a>	Network disconnection event

## Common to device objects

Calls an event from the device control script.

API		Description
Event call	<a href="#">callEvent method</a>	Calls an event from the corresponding device control script (the SimpleSerial object is not supported).

## CashChanger object

Controls the cashing process using the automatic cash changer.

API		Description
Device setting	<a href="#">setConfig method</a>	Changes the device setting.
Counting	<a href="#">readCashCount method</a>	Acquires the amount of cash in the device.
Deposit	<a href="#">beginDeposit method</a>	Starts the deposit process.
	<a href="#">pauseDeposit method</a>	Suspends the deposit process.
	<a href="#">restartDeposit method</a>	Resumes the deposit process.
	<a href="#">endDeposit method</a>	Finishes the deposit process.
Dispensation	<a href="#">dispenseCash method</a>	Dispense cash by specifying the monetary type.
	<a href="#">dispenseChange method</a>	Dispense cash by specifying the monetary amount.
Collection	<a href="#">collectCash method</a>	Collects cash from the device.
Drawer	<a href="#">openDrawer method</a>	Opens the cash drawer.
Command transfer	<a href="#">sendCommand method</a>	Transfers a command.
Device setting	<a href="#">onconfigchange event</a>	Device setting change result notification event

API		Description
Counting	<a href="#">oncashcount event</a>	Counting result notification event
Deposit	<a href="#">ondeposit event</a>	Deposit amount notification event
Dispensation	<a href="#">ondispense event</a>	Dispensation operation notification event
Collection	<a href="#">oncollect event</a>	Collection operation notification event
Command result	<a href="#">oncommandreply event</a>	Optional command result notification event
Status change	<a href="#">onstatuschange event</a>	Status change event

## Display object

Controls character display on the customer display.

API		Description
Window	<a href="#">createWindow method</a>	Defines the display area.
	<a href="#">destroyWindow method</a>	Deletes the display area setting.
	<a href="#">setCurrentWindow method</a>	Switches between display areas.
	<a href="#">clearWindow method</a>	Deletes the current display area.
Cursor	<a href="#">setCursorPosition method</a>	Moves the cursor.
	<a href="#">moveCursorPosition method</a>	Moves the cursor within the display area.
	<a href="#">setCursorType method</a>	Changes the cursor display.
Text display	<a href="#">addText method</a>	Displays text.
	<a href="#">addReverseText method</a>	Displays inverted text.
	<a href="#">addMarquee method</a>	Displays a marquee.
Display attributes	<a href="#">setBlink method</a>	Blinks display.
	<a href="#">setBrightness method</a>	Changes the display brightness.
Clock	<a href="#">showClock method</a>	Displays the clock.
Command transfer	<a href="#">addCommand method</a>	Runs an optional command.
Transmission	<a href="#">send method</a>	Sends a control command.
Initialization	<a href="#">reset method</a>	Reset
Reception of result	<a href="#">onreceive event</a>	Control result reception event


## Keyboard object

Controls character entry from the keyboard.

API		Description
String setting	<a href="#">setPrefix method</a>	Sets the condition to handle as a continuous string.
Key detection	<a href="#">onkeypress event</a>	Key press detection event
String detection	<a href="#">onstring event</a>	String detection event
Key code setting	<a href="#">setMSRPrefix method</a>	Sets the condition to control such as MSR data.
Data detection	<a href="#">ondata event</a>	Card information reception event

## MSR object

Controls card reading by MSR.

	You can customize the operation by creating a device control script. Refer to "Chapter 4 Device Control Script" for details.
--	--

API		Description
Data detection	<a href="#">ondata event</a>	Card data detection event

## Printer object

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

API		Description	Standard mode	Page mode
Text	<a href="#">addTextAlign method</a>	Adds text alignment setting to the command buffer.	○	×
	<a href="#">addTextLineSpace method</a>	Adds line spacing setting to the command buffer.	○	○
	<a href="#">addTextRotate method</a>	Adds text rotation setting to the command buffer.	○	×
	<a href="#">addText method</a>	Adds text to print to the command buffer.	○	○
	<a href="#">addTextLang method</a>	Adds language setting to the command buffer.	○	○
	<a href="#">addTextFont method</a>	Adds character font setting to the command buffer.	○	○
	<a href="#">addTextSmooth method</a>	Adds character smoothing setting to the command buffer.	○	○
	<a href="#">addTextDouble method</a>	Adds character doubling setting to the command buffer.	○	○
	<a href="#">addTextSize method</a>	Adds character scaling factor setting to the command buffer.	○	○
	<a href="#">addTextStyle method</a>	Adds character style setting to the command buffer.	○	○
	<a href="#">addTextPosition method</a>	Adds character print position setting to the command buffer.	○	○
	<a href="#">addTextVPosition method</a>	Adds vertical character print start position setting to the command buffer.	×	○
Paper feed	<a href="#">addFeedUnit method</a>	Adds paper-feed setting in dots to the command buffer.	○	○
	<a href="#">addFeedLine method</a>	Adds paper-feed setting in lines to the command buffer.	○	○
	<a href="#">addFeedPosition method</a>	Adds receipt and label sheet control setting to the command buffer.	○	×
	<a href="#">addFeed method</a>	Adds line spacing to the command buffer.	○	○
Graphics	<a href="#">addImage method</a>	Adds a raster image print command to the command buffer.	○	○
	<a href="#">addLogo method</a>	Adds a NV logo print command to the command buffer.	○	○

API		Description	Standard mode	Page mode
Barcode	<a href="#">addBarcode method</a>	Adds a barcode print command to the command buffer.	○	○
	<a href="#">addSymbol method</a>	Adds a 2D symbol print command to the command buffer.	○	○
Ruled line	<a href="#">addHLine method</a>	Adds a horizontal ruled line print command to the command buffer.	○	×
	<a href="#">addVLineBegin method</a>	Adds a vertical ruled line start command to the command buffer.	○	×
	<a href="#">addVLineEnd method</a>	Adds a vertical ruled line end command to the command buffer.	○	×
Page mode	<a href="#">addPageBegin method</a>	Adds a page mode start command to the command buffer.	○	×
	<a href="#">addPageEnd method</a>	Adds a page mode end command to the command buffer.	×	○
	<a href="#">addPageArea method</a>	Adds page mode print area setting to the command buffer.	×	○
	<a href="#">addPageDirection method</a>	Adds page mode print direction setting to the command buffer.	×	○
	<a href="#">addPagePosition method</a>	Adds page mode print position setting to the command buffer.	×	○
	<a href="#">addPageLine method</a>	Adds a page mode line draw command to the command buffer.	×	○
	<a href="#">addPageRectangle method</a>	Adds a page mode rectangle draw command to the command buffer.	×	○
Cut	<a href="#">addCut method</a>	Adds a sheet cut command to the command buffer.	○	×
Drawer	<a href="#">addPulse method</a>	Adds a drawer kick command to the command buffer.	○	×
Buzzer	<a href="#">addSound method</a>	Adds a buzzer sound command to the command buffer.	○	×
Layout	<a href="#">addLayout method</a>	Adds sheet layout setting to the command buffer.	○	×
Recovery	<a href="#">recover method</a>	Recovers from a recoverable error.	○	×
	<a href="#">addRecovery method</a>	Adds an error recovery tag.	○	×
Reset	<a href="#">reset method</a>	Resets the printer.	○	×
	<a href="#">addReset method</a>	Adds a printer reset tag.	○	×

API		Description	Standard mode	Page mode
Command transfer	<a href="#">addCommand method</a>	Adds a command to the command buffer.	<input type="radio"/>	<input type="radio"/>
Transmission	<a href="#">send method</a>	<ul style="list-style-type: none"> <li>Sends a print document.</li> <li>Send data by specifying the job ID.</li> </ul>	<input type="radio"/>	<input type="radio"/>
	<a href="#">print method</a>	<ul style="list-style-type: none"> <li>Prints the HTML5 Canvas.</li> <li>Prints data by specifying the job ID.</li> </ul>	<input type="radio"/>	<input type="radio"/>
Print job	<a href="#">getPrintJobStatus method</a>	Acquires the print job status.	<input type="radio"/>	<input type="radio"/>
Status monitor	<a href="#">startMonitor method</a>	Enables the status event.	<input type="radio"/>	<input type="radio"/>
	<a href="#">stopMonitor method</a>	Disables the status event.	<input type="radio"/>	<input type="radio"/>

API		Description
Image	<a href="#">halftone property</a>	Halftone processing method for raster images.
	<a href="#">brightness property</a>	Brightness compensation value for raster images.
Forced transmission	<a href="#">force property</a>	Forced transmission mode
Timeout	<a href="#">timeout property</a>	Transmission timeout period
Monitor interval	<a href="#">interval property</a>	Printer status update interval
Drawer open	<a href="#">drawerOpenLevel property</a>	Drawer signal line status
Command buffer	<a href="#">message property</a>	Direct manipulation of command buffer

API		Description
Reception of result	<a href="#">onreceive event</a>	<ul style="list-style-type: none"> <li>Response document reception event</li> <li>Job ID specification reception event</li> </ul>
	<a href="#">onstatuschange event</a>	Status change event
	<a href="#">onbatterystatuschange event</a>	Battery status change event
	<a href="#">ononline event</a>	Online event
	<a href="#">onoffline event</a>	Offline event
	<a href="#">onpoweroff event</a>	No response event
	<a href="#">oncoverok event</a>	Cover close event
	<a href="#">oncoveropen event</a>	Cover open event
	<a href="#">onpaperok event</a>	Paper remaining event
	<a href="#">onpaperend event</a>	Paper end event
	<a href="#">Onpapernearend event</a>	Paper almost running out event
	<a href="#">ondrawerclosed event</a>	Drawer close event
	<a href="#">ondraweropen event</a>	Drawer open event
	<a href="#">onbatteryok event</a>	Battery remaining event
	<a href="#">onbatterylow event</a>	Battery running out event

## HybridPrinter object

Controls printing by the hybrid printer.

API		Description	Standard mode	Page mode
Device lock	<a href="#">lock method</a>	Locks the device port.	○	×
	<a href="#">Unlock method</a>	Unlocks the device port.	○	×
Paper eject	<a href="#">eject method</a>	Ejects the check sheet.	○	×
Prints on receipt.	<a href="#">ReceiptPrinter.send method</a>	Sends a print document.	○	○
	<a href="#">ReceiptPrinter.print method</a>	Prints the HTML5 Canvas.	○	○
Front side slip printing	<a href="#">SlipPrinter.send method</a>	Sends a print document.	○	○
	<a href="#">SlipPrinter.cancel method</a>	Cancels the check sheet insertion wait status.	○	○

API		Description	Standard mode	Page mode
Back side slip printing	<a href="#">EndorsePrinter.enable40cplMode method</a>	Enables the 40cpl mode.	○	×
	<a href="#">EndorsePrinter.send method</a>	Sends a print document.	○	×
	<a href="#">EndorsePrinter.cancel method</a>	Cancels the check sheet insertion wait status.	○	×
MICR	<a href="#">MICRReader.read method</a>	Reads by MICR.	○	×
	<a href="#">MICRReader.cleaning method</a>	Cleans the MICR mechanism.	○	×
	<a href="#">MICRReader.cancel method</a>	Cancels the cleaning sheet insertion wait status.	○	×
Recovery	<a href="#">recover method</a>	Recovers from a recoverable error.	○	×
Reset	<a href="#">reset method</a>	Resets the printer.	○	×
Status monitor	<a href="#">startMonitor method</a>	Enables the status event.	○	○
	<a href="#">stopMonitor method</a>	Disables the status event.	○	○

API		Description
Image	<a href="#">halfTone property</a>	Halftone processing method for raster images.
	<a href="#">brightness property</a>	Brightness compensation value for raster images.
Forced transmission	<a href="#">force property</a>	Forced transmission mode
Timeout	<a href="#">SlipPrinter.timeout property</a>	Check sheet insertion wait timeout period
	<a href="#">EndorsePrinter.timeout property</a>	Check sheet insertion wait timeout period
	<a href="#">MICRReader.timeout property</a>	Check/cleaning sheet insertion wait timeout period
Monitor interval	<a href="#">interval property</a>	Printer status update interval
Drawer open	<a href="#">drawerOpenLevel property</a> *	Drawer open level

API		Description
Reception of result	<a href="#">onreceive event</a>	Response document reception event
	<a href="#">onstatuschange event</a> *	Status change event
	<a href="#">ononline event</a> *	Online event
	<a href="#">onoffline event</a> *	Offline event
	<a href="#">onpoweroff event</a> *	No response event
	<a href="#">oncoverok event</a> *	Cover close event
	<a href="#">oncoveropen event</a> *	Cover open event
	<a href="#">onpaperok event</a> *	Paper remaining event
	<a href="#">onpaperend event</a> *	Paper end event
	<a href="#">Onpapernearend event</a> *	Paper almost running out event
	<a href="#">ondrawerclosed event</a> *	Drawer close event
	<a href="#">ondraweropen event</a> *	Drawer open event

\* Event common to [Printer object](#).

---

### ***Creating print document by the HybridPrinter object***

The HybridPrinter object creates a print document using the same method as [Printer object](#).  
The methods and corresponding print methods are listed below.

API		Print method			
		Receipt	Slip sheet		
			Front side	Back side	Back side 40cpl
Text	<a href="#">addTextAlign method</a>	○	○	○	×
	<a href="#">addTextLineSpace method</a>	○	○	○	×
	<a href="#">addTextRotate method</a>	○	○	○	○
	<a href="#">addText method</a>	○	○	○	○
	<a href="#">addTextLang method</a>	○	○	×	×
	<a href="#">addTextFont method</a>	○	○	○	×
	<a href="#">addTextSmooth method</a>	○	×	×	×
	<a href="#">addTextDouble method</a>	○	○	○	×
	<a href="#">addTextSize method</a>	○	○	○	×
	<a href="#">addTextStyle method</a>	○	○	○	×
	<a href="#">addTextPosition method</a>	○	○	○	○
	<a href="#">addTextVPosition method</a>	○	○	×	×
Paper feed	<a href="#">addFeedUnit method</a>	○	○	○	○
	<a href="#">addFeedLine method</a>	○	○	○	×
	<a href="#">addFeedPosition method</a>	×	×	×	×
	<a href="#">addFeed method</a>	○	○	○	○
Graphics	<a href="#">addImage method</a>	○	×	×	×
	<a href="#">addLogo method</a>	○	○	×	×
Barcode	<a href="#">addBarcode method</a>	○	○	×	×
	<a href="#">addSymbol method</a>	○	×	×	×
Ruled line	<a href="#">addHLine method</a>	×	×	×	×
	<a href="#">addVLineBegin method</a>	×	×	×	×
	<a href="#">addVLineEnd method</a>	×	×	×	×

API		Print method			
		Receipt	Slip sheet		
			Front side	Back side	Back side 40cpl
Page mode	<a href="#">addPageBegin method</a>	○	○	×	×
	<a href="#">addPageEnd method</a>	○	○	×	×
	<a href="#">addPageArea method</a>	○	○	×	×
	<a href="#">addPageDirection method</a>	○	○	×	×
	<a href="#">addPagePosition method</a>	○	○	×	×
	<a href="#">addPageLine method</a>	×	×	×	×
	<a href="#">addPageRectangle method</a>	×	×	×	×
Cut	<a href="#">addCut method</a>	○	×	×	×
Drawer	<a href="#">addPulse method</a>	○	○	○	○
Buzzer	<a href="#">addSound method</a>	×	×	×	×
Layout	<a href="#">addLayout method</a>	×	×	×	×
Command transfer	<a href="#">addCommand method</a>	○	○	○	○


## Scanner object

Controls barcode reading by barcode scanner.

API		Description
Data detection	<a href="#">ondata event</a>	Barcode data detection event

## SimpleSerial object

Controls printer and serial communication of the device.

	You can customize the operation by creating a device control script. Refer to "Chapter 4 Device Control Script" for details.
---	--

API		Description
String setting	<a href="#">sendCommand</a>	Transfers a optional command.
Detects acknowledgment.	<a href="#">oncommandreply event</a>	Optional command transfer result notification event

## DeviceHubTerminal object

Controls the TM-DT series.

API		Description
Shutdown	<a href="#">shutdown method</a>	Shuts down the printer.
Restart	<a href="#">restart method</a>	Restarts the printer.

## CommBoxManager object

Controls opening/closing of the communication box.

API		Description
Inter-application communication	<a href="#">openCommBox method</a>	Opens the communication box.
	<a href="#">closeCommBox method</a>	Closes the communication box.

## CommBox object

Controls data transmission and reception between the communication box and an application.

API		Description
Transmission history	<a href="#">getCommHistory method</a>	Acquires the data transmission history.
Transmission	<a href="#">send method</a>	Sends data to the communication box.
Reception	<a href="#">onreceive event</a>	Notifies of data reception in the communication box.

## ePosDeviceConfiguration object

Acquires the device information registered to the printer.

API		Description
Constructor	<a href="#">Constructor</a>	Creates an ePosDeviceConfiguration object.
Status acquisition	<a href="#">getRegisteredDevices method</a>	Acquires device availability status.

# ePOSDevice object

## Constructor

Creates and initializes the ePOSDevice object.

**Syntax**

```
ePOSDevice() ;
```

**Return value**

Return value	Object type
ePOSDevice object	ePOSDevice

## connect method

Starts communication with the printer.

### Syntax

- ❑ `connect(ipAddress, port, callback);`
- ❑ `connect(ipAddress, port, callback, options);`

### Parameter

*ipAddress*

Value	Description
ipAddress	Specifies the IP address of the printer.

*port*

Specifies the communication method.

Value	Description
8008	HTTP communication
8043	SSL communication

*callback*

Specifies a callback function to receive the execution result.

One of the following strings is passed to the first parameter to indicate the result.

String	Description
"OK"	Connection succeeded.
"SSL_CONNECT_OK"	Connection succeeded (SSL communication).
"ERROR_TIMEOUT"	Timeout occurred.
"ERROR_PARAMETER"	A parameter error occurred.

*options*

Specifies properties using an associative array.

Property	Description	true/false
eposprint	Specifies whether or not to enable the ePOS-Print option.	true: Enables the option. false: Disables the option.

### Supplementary explanation

For the syntax to specify the options, refer to "Chapter 7 Practical Use Guide".

## disconnect method

Ends communication with the printer.

---

### **Syntax**

```
disconnect ( ) ;
```

---

### **Supplementary explanation**

When [ondisconnect event](#) occurs, it is not necessary to call this API.

## isConnected method

Acquires communication status by [connect method](#).

---

### Syntax

```
isConnected();
```

---

### Return value

Return value	Description
true	Connected
false	Not connected

---

### Supplementary explanation

When the device is in the sleep mode, the returned value may be incorrect.

## createDevice method

Acquires the device object acting as the device interface. The device object is passed to the callback function.

### Syntax

- ```
❑ createDevice(deviceId, deviceType, options, callback);
```
- ```
❑ createDevice(deviceId, deviceType, crypto, callback);
```

### Parameter

*deviceId*

Value	Description
deviceId	Specifies the device ID as a string.

*deviceType*

Value	Device type
DEVICE_TYPE_CASH_CHANGER	Automatic cash changer
DEVICE_TYPE_DISPLAY	Customer display
DEVICE_TYPE_KEYBOARD	Keyboard
DEVICE_TYPE_MSR	MSR
DEVICE_TYPE_PRINTER	Printer
DEVICE_TYPE_SCANNER	Barcode scanner
DEVICE_TYPE_SIMPLE_SERIAL	Serial communication device
DEVICE_TYPE_DT	TM-DT series

*options*

Specifies properties using an associative array.

Property	Description	true/false
crypto (Boolean)	Specifies whether or not to encrypt the communication data.	true: Encrypts data. false: Does not encrypt data.
buffer (Boolean)	Specifies whether or not to send data which occurs while reconnection with the device is in progress after reconnection.	true: Sends data. false: Does not send data.

*crypto*

Property	Description	true/false
crypto (Boolean)	Specifies whether or not to encrypt the communication data.	true: Encrypts data. false: Does not encrypt data.

*callback*

Specifies a callback function to receive the execution result.

The device object is passed to the first parameter and one of the following strings is returned in the second parameter to indicate the result.

String	Description
"OK"	Acquisition of the device object succeeded.
"DEVICE_NOT_FOUND"	The device was not found.
"DEVICE_IN_USE"	The device was in use.
"DEVICE_OPEN_ERROR"	Failed to open the device.
"DEVICE_TYPE_INVALID"	The device type is different.
"PARAM_ERROR"	A parameter error occurred.
"SYSTEM_ERROR"	An unknown error occurred.

**Supplementary explanation**

- ❑ When the createDevice method is successfully run, devices except for the printer will be exclusively locked.
- ❑ When DEVICE\_TYPE\_DISPLAY is specified in deviceType, specify local\_display in deviceId.
- ❑ When DEVICE\_TYPE\_DT is specified in deviceType, specify local\_dt in deviceId.
- ❑ When the device object cannot be acquired, null instead of the device object will be passed to the first parameter.
- ❑ When the createDevice method is called by specifying an exclusively locked device, DEVICE\_IN\_USE will be returned.
- ❑ While returning from occurrence of [ondisconnect event](#), calling the createDevice method may return DEVICE\_IN\_USE depending on the call timing. In this case, call the createDevice method repeatedly until a string other than DEVICE\_IN\_USE is returned.

## deleteDevice method

Discards the device object acquired by [createDevice method](#). The device controlled by the discarded device object will be released and made available for other applications.

---

### Syntax

```
deleteDevice(deviceObject, callback);
```

---

### Parameter

*deviceObject*

Value	Description
deviceObject	Specifies the device object to discard.

*callback*

Specifies a callback function to receive the execution result.

One of the following strings is passed to the first parameter to indicate the result.

String	Description
"OK"	Closed the device successfully.
"DEVICE_NOT_OPEN"	Device is not open.
"DEVICE_CLOSE_ERROR"	Failed to close the device.
"SYSTEM_ERROR"	An unknown error occurred.

## getAdmin method

Acquires the administrator name set with TM-DT software or TM-i firmware.

---

### Syntax

```
getAdmin();
```

---

### Return value

Return value	Object type
A string for the administrator name.	String

---

### Supplementary explanation

The administrator name is set by EPSON TMNet WebConfig.

## getLocation method

Acquires the installation location information set with TM-DT software or TM-i firmware.

---

### Syntax

```
getLocation();
```

---

### Return value

Return value	Object type
A string for the installation location information.	String

---

### Supplementary explanation

The installation location information is set by EPSON TMNet WebConfig.

## sendOfscXml method

Sends print data (XML data) to the OFSC-Print service.

### Syntax

```
sendOfscXml(xml, timeout, crypto, callback);
```

### Parameter

*xml*

Value	Description
xml	Specifies XML data for OFSC-Print.

*timeout*

Value	Description
timeout	Specifies the timeout period for printing in milliseconds.

*crypto*

Value	Description
true	Encrypts communication data.
false	Does not encrypt communication data.

*callback*

Specifies a callback function to receive the execution result.

Value	Description
callback	Execution result XML data

### Supplementary explanation

Refer to the OFSC-Print User's Manual for the details of print data (XML data).

## getCommBoxManager method

Acquires [CommBoxManager object](#) for inter-application communication.

---

### Syntax

```
getCommBoxManager ( ) ;
```

---

### Return value

Return value	Object type
CommBoxManager object	CommBoxManager

## onreconnecting event

Receives an event to notify that a reconnection process to the network started. Be sure to perform a process (e.g., display a message to indicate that reconnection has been started) when the onreconnecting event occurs.

---

### ***Syntax***

```
Function()
```

## onreconnect event

Receives an event to notify that the reconnection process succeeded. Be sure to perform a process (e.g., erase the message displayed during the reconnection process) when the onreconnect event occurs.

---

### ***Syntax***

```
Function()
```

## ondisconnect event

Receives an event to notify that the reconnection process failed. The `ondisconnect` event occurs in the following cases:

- ❑ When [disconnect method](#) is run
- ❑ When the reconnection process after occurrence of [onreconnecting event](#) fails

Be sure to take an action against network disconnection (e.g., try reconnection again) when the `ondisconnect` event occurs.

---

### Syntax

```
Function()
```

## Common to device objects

### callEvent method

Specifies an event in the device control script and passes JSON data which is a combination of a property name and its value.

Refer to "Chapter 4 Device Control Script" for details.

---

#### Syntax

```
callEvent(eventName, data);
```

---

#### Parameter

*eventName*

Value	Description
String	Specifies an event name in the device control script.

*data*

Value	Description
Object	Specifies data to pass to the event.

# CashChanger object

## setConfig method

Changes setting of the automatic cash changer. The execution result of the setConfig method is passed to the callback function of [onconfigchange event](#).

### Syntax

```
setConfig(config, data);
```

### Parameter

#### config

Specifies the item to change setting.

Value	Description
CONFIG_COUNT_MODE	Count mode
CONFIG_LEFT_CASH	Left amount specification

#### data

Specifies the property of the item specified in config.

Item to set	Property	Description	Value
Count mode	mode	Sets the count mode.	MODE_MANUAL_INPUT: Manual input mode MODE_AUTO_COUNT: Automatic count mode
Left amount specification	coins	Specifies the monetary amount to leave as a string which represents the number of 10-yen coins.	<Example: To leave 10,000 yen> "1000"
	bills	Specifies the monetary amount to leave as a string which represents the number of 1000-yen bills.	<Example: To leave 50,000 yen> "50"

## readCashCount method

Acquires the type and amount information of cash in the device. The execution result of the readCashCount method is passed to the callback functions of [oncashcount event](#) and [onstatuschange event](#).

---

### ***Syntax***

```
readCashCount ( ) ;
```

## beginDeposit method

Starts the deposit process. The execution result of the beginDeposit method is passed to the callback functions of [ondeposit event](#) and [onstatuschange event](#).

---

### ***Syntax***

```
beginDeposit();
```

## pauseDeposit method

Suspends the deposit process. The execution result of the pauseDeposit method is passed to the callback functions of [ondeposit event](#) and [onstatuschange event](#).

---

### **Syntax**

```
pauseDeposit();
```

## restartDeposit method

Resumes the deposit process. The execution result of the restartDeposit method is passed to the callback functions of [ondeposit event](#) and [onstatuschange event](#).

---

### **Syntax**

```
restartDeposit();
```

## endDeposit method

Finishes the deposit process. The execution result of the endDeposit method is passed to the callback functions of [ondeposit event](#) and [onstatuschange event](#).

---

### Syntax

```
endDeposit (config) ;
```

---

### Parameter

#### *config*

Specifies the final operation.

Value	Description
DEPOSIT_CHANGE	Leaves change (does not collect change into the collector).
DEPOSIT_NOCHANGE	Does not leave change (collects change into the collector).
DEPOSIT_REPAY	Returns the deposit.

## dispenseChange method

Dispenses cash by specifying the number of bills/coins. The execution result of the dispenseChange method is passed to the callback functions of [ondispense event](#) and [onstatuschange event](#).

### Syntax

```
dispenseChange (data) ;
```

### Parameter

*data*

Property	Type of bill/coin	Value
jpy1	1-yen coin	Specifies the type as a string.
jpy5	5-yen coin	
jpy10	10-yen coin	
jpy50	50-yen coin	
jpy100	100-yen coin	
jpy500	500-yen coin	
jpy1000	1,000-yen bill	
jpy2000	2,000-yen bill	
jpy5000	5,000-yen bill	
jpy10000	10,000-yen bill	

## dispenseCash method

Dispenses cash by specifying the monetary amount. The execution result of the dispenseCash method is passed to the callback functions of [ondispense event](#) and [onstatuschange event](#).

---

**Syntax**

```
dispenseCash (cash) ;
```

---

**Parameter**

*cash*

Value	Description
cash	Specifies the amount to dispense as a string.

## collectCash method

Collects cash from the device. The execution result of the dispenseCash method is passed to the callback functions of [oncollect event](#), [oncommandreply event](#), and [onstatuschange event](#).

---

### Syntax

```
collectCash(type) ;
```

---

### Parameter

*type*

Value	Description
COLLECT_ALL_CASH	Collects all cash.
COLLECT_PART_OF_CASH	Collects left cash.

## openDrawer method

When the cash drawer is connected, opens it. The execution result of the openDrawer method is passed to the callback function of [onstatuschange event](#).

---

### **Syntax**

```
openDrawer ( ) ;
```

## sendCommand method

Transfers a command. The execution result of the sendCommand method is passed to the callback function of [onstatuschange event](#).

---

### Syntax

```
sendCommand (data) ;
```

---

### Parameter

*data*

Value	Description
data	Specifies a command as a string.

## onconfigchange event

Receives the result of setting change by [setConfig method](#).

### Syntax

```
Function(data) ;
```

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
status	Execution result of setting change	String

#### status

Status	Description
"SUCCESS"	Successfully acquired.
"BUSY"	Could not acquire the result due to the busy status.
"DISCREPANCY"	There may be discrepancy in the monetary amount.
"DEVICE_ERROR"	Device error
"SYSTEM_ERROR"	System error

## oncashcount event

Receives information acquired by [readCashCount method](#).

### Syntax

```
Function(data) ;
```

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
status	Acquisition execution result	String
jpy1	Number of 1-yen coins	String
jpy5	Number of 5-yen coins	String
jpy10	Number of 10-yen coins	String
jpy50	Number of 50-yen coins	String
jpy100	Number of 100-yen coins	String
jpy500	Number of 500-yen coins	String
jpy1000	Number of 1,000-yen bills	String
jpy2000	Number of 2,000-yen bills	String
jpy5000	Number of 5,000-yen bills	String
jpy10000	Number of 10,000-yen bills	String

### status

Status	Description
"SUCCESS"	Successfully acquired.
"BUSY"	Could not acquire the result due to the busy status.
"DISCREPANCY"	There may be discrepancy in the monetary amount.
"DEVICE_ERROR"	Device error
"SYSTEM_ERROR"	System error

## ondeposit event

Receives the execution results of the following methods:

- ❑ [beginDeposit method](#)
- ❑ [pauseDeposit method](#)
- ❑ [restartDeposit method](#)
- ❑ [endDeposit method](#)

### Syntax

```
Function(data) ;
```

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
status	Deposit process execution result	String
amount	Deposited amount	String
jpy1	Number of 1-yen coins	String
jpy5	Number of 5-yen coins	String
jpy10	Number of 10-yen coins	String
jpy50	Number of 50-yen coins	String
jpy100	Number of 100-yen coins	String
jpy500	Number of 500-yen coins	String
jpy1000	Number of 1,000-yen bills	String
jpy2000	Number of 2,000-yen bills	String
jpy5000	Number of 5,000-yen bills	String
jpy10000	Number of 10,000-yen bills	String

### status

Status	Description
"SUCCESS"	Deposited successfully
"BUSY"	Counting in process
"PAUSE"	Counting suspended
"END"	Counting stopped
"CASH_IN_TRAY_ERROR"	Cash waiting for collection

Status	Description
"DEVICE_ERROR"	Device error
"SYSTEM_ERROR"	System error

## ondispense event

Receives the execution results of the following methods:

- ❑ [dispenseChange method](#)
- ❑ [dispenseCash method](#)

### Syntax

```
Function(data) ;
```

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
status	Dispensing process execution result	String

*status*

Status	Description
"SUCCESS"	Dispensation was successful.
"BUSY"	Dispensation was unavailable due to the busy status.
"END"	Dispensation failed due to shortage of cash.
"CASH_IN_TRAY_ERROR"	Cash waiting for collection
"DEVICE_ERROR"	Device error
"SYSTEM_ERROR"	System error

## oncollect event

Receives the execution results of [collectCash method](#).

### Syntax

```
Function(data) ;
```

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
status	collectCash method execution result	String

### status

Status	Description
"SUCCESS"	Dispensation was successful.
"BUSY"	Dispensation was unavailable due to the busy status.
"END"	Dispensation was successful but the device is empty or almost empty.
"CASH_IN_TRAY_ERROR"	Cash waiting for collection
"DEVICE_ERROR"	Device error
"SYSTEM_ERROR"	System error

## oncommandreply event

Receives the execution results of [collectCash method](#).

---

### Syntax

```
Function(data) ;
```

---

### Parameters of callback function

Parameter: data

Object type: Object

---

### Properties of data object

Property	Description	Object type
data	Response data string	String

## onstatuschange event

Receives changes in the depot status when one of the following methods have been run:

- ❑ [readCashCount method](#)
- ❑ [beginDeposit method](#)
- ❑ [pauseDeposit method](#)
- ❑ [restartDeposit method](#)
- ❑ [endDeposit method](#)
- ❑ [dispenseChange method](#)
- ❑ [dispenseCash method](#)
- ❑ [collectCash method](#)
- ❑ [openDrawer method](#)
- ❑ [sendCommand method](#)

### Syntax

```
Function(data) ;
```

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
status	Deposit process execution result	String
st1	1-yen depot status	String
st5	5-yen depot status	String
st10	10-yen depot status	String
st50	50-yen depot status	String
st100	100-yen depot status	String
st500	500-yen depot status	String
st1000	1,000-yen depot status	String
st2000	2,000-yen depot status	String
st5000	5,000-yen depot status	String
st10000	10,000-yen depot status	String

*status*

Status	Description
"OK"	Normal

Status	Description
"DISCREPANCY"	There may be discrepancy in the monetary amount.

*st1 to st10000*

Status	Description
"EMPTY"	Empty
"NEAREMPTY"	Nearly empty
"OK"	Appropriate
"NEARFULL"	Nearly full
"FULL"	Full

# Display object

## createWindow method

Adds window configuration to the command buffer.  
Up to four windows can be configured.

### Syntax

```
createWindow(number, x, y, width, height, scrollMode);
```

### Parameter

*number*

Value	Description
1 to 4	Specifies the window number.

*x*

Value	Description
1 to 20	Specifies the origin of the X coordinate.

*y*

Value	Description
1 to 2	Specifies the origin of the Y coordinate.

*width*

Value	Description
1 to 20	Specifies the window width.

*height*

Value	Description
1 to 2	Specifies the window height.

*scrollMode*

Value	Description
SCROLL_OVERWRITE	<ul style="list-style-type: none"> <li>When the current display position is at the rightmost position of the upper line, move the display position to the leftmost position of the lower line.</li> <li>When the current display position is at the rightmost position of the lower line, move the display position to the leftmost position of the upper line.</li> <li>The character currently displayed at the target position will be overwritten.</li> </ul>

Value	Description
SCROLL_VERTICAL	<ul style="list-style-type: none"> <li>When the current display position is at the rightmost position of the upper line, move the display position to the leftmost position of the lower line.</li> <li>When the current display position is at the rightmost position of the lower line, moves the characters currently on the lower line to the upper line, erases the contents of the lower line, and then moves the display position to the leftmost position of the upper line.</li> </ul>
SCROLL_HORIZONTAL	<ul style="list-style-type: none"> <li>When a new character is displayed while the current display position is at the rightmost position, shifts the entire line by one character to the left and displays the new character at the rightmost position.</li> <li>Does not feed the line.</li> </ul>

**Return value**

Return value	Object type
Display object	Display

**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.

## destroyWindow method

Specifies a window number set by [createWindow method](#) and adds a command to destroy the specified window to the command buffer.

**Syntax**

```
destroyWindow (number) ;
```

**Parameter**

*number*

Value	Description
1 to 4	Specifies the window number.

**Return value**

Return value	Object type
Display object	Display

## setCurrentWindow method

Adds a command to move to another window to the command buffer.

Makes the specified window current and moves the cursor to the origin of the new current window.

---

### Syntax

```
setCurrentWindow(number) ;
```

---

### Parameter

*number*

Value	Description
1 to 4	Specifies the window number.

---

### Return value

Return value	Object type
Display object	Display

## clearWindow method

Adds a window clear command for the current window to the command buffer.

**Syntax**

```
clearWindow();
```

**Return value**

Return value	Object type
Display object	Display

## setCursorPosition method

Specifies the coordinates and adds cursor position setting to the command buffer.

**Syntax**

```
setCursorPosition(x, y);
```

**Parameter**

x

Value	Description
1 to 20	Specifies the X coordinate.

y

Value	Description
1 to 2	Specifies the Y coordinate.

**Return value**

Return value	Object type
Display object	Display

## moveCursorPosition method

Specifies a new cursor position within the current window and adds cursor position setting to the command buffer.

---

### Syntax

```
moveCursorPosition(position);
```

---

### Parameter

*position*

Value	Description
MOVE_TOP_LEFT	Moves to the leftmost position on the top line.
MOVE_TOP_RIGHT	Moves to the rightmost position on the top line.
MOVE_BOTTOM_LEFT	Moves to the leftmost position on the bottom line.
MOVE_BOTTOM_RIGHT	Moves to the rightmost position on the bottom line.

---

### Return value

Return value	Object type
Display object	Display

## setCursorType method

Adds cursor display setting to the command buffer.

---

### Syntax

```
setCursorType (type) ;
```

---

### Parameter

*type*

Value	Description
CURSOR_NONE	No cursor display
CURSOR_UNDERLINE	Underscore

---

### Return value

Return value	Object type
Display object	Display

## addText method

Adds display setting of a character in the customer display to the command buffer.

### Syntax

- ❑ `addText (data) ;`
- ❑ `addText (data, lang) ;`
- ❑ `addText (data, x, y) ;`
- ❑ `addText (data, x, y, lang) ;`

### Parameter

*data*

Value	Description
data	Specifies the character to display as a string.

*lang*

Value	Description
"en" (default)	English
"ja"	Japanese (Kana)

*x*

Value	Description
1 to 20	Specifies the X coordinate of the display position.

*y*

Value	Description
1 to 2	Specifies the Y coordinate of the display position.

### Return value

Return value	Object type
Display object	Display

### Supplementary explanation

If the coordinates of the display position are omitted, the coordinates of the cursor position upon execution of addText method are used.

addReverseText method

Adds reverse display setting of a character in the customer display to the command buffer.

Syntax

```
❑ addReverseText (data) ;  
❑ addReverseText (data, lang) ;  
❑ addReverseText (data, x, y) ;  
❑ addReverseText (data, x, y, lang) ;
```

Parameter

data

Value	Description
data	Specifies the character to display as a string.

lang

Value	Description
"en" (default)	English
"ja"	Japanese (Kana)

x

Value	Description
1 to 20	Specifies the X coordinate of the display position.

y

Value	Description
1 to 2	Specifies the Y coordinate of the display position.

Return value

Return value	Object type
Display object	Display

Supplementary explanation

If the coordinates of the display position are omitted, the coordinates of the cursor position upon execution of the addReverseText method are used.

## addMarquee method

Adds marquee display setting to the command buffer.

Marquee display setting is not influenced by the window scroll mode specified by [createWindow method](#), and one line of text string is displayed in the scroll mode.

### Syntax

```
addMarquee(data, format, unitWait, repeatWait,
            repeatCount, lang);
```

### Parameter

*data*

Value	Description
data	Specifies the character to display as a string.

*format*

Value	Description
MARQUEE_WALK	Displays the text from the rightmost position of the window.
MARQUEE_PLACE	Displays the text from the leftmost position of the window.

*unitWait*

Value	Description
0 to 2000	Specifies the display interval per character (in milliseconds).

*repeatWait*

Value	Description
100 to 2000	Specifies the display repeat interval (in milliseconds).

*repeatCount*

Value	Description
0 to 127	Specifies the display repeat count.

*lang*

Value	Description
"en" (default)	English

Value	Description
"ja"	Japanese (Kana)

---

**Return value**

Return value	Object type
Display object	Display

---

**Supplementary explanation**

Setting 0 in repeatCount repeats display unlimitedly.

## setBlink method

Adds blink setting of the customer display to the command buffer.

### Syntax

```
setBlink(interval);
```

### Parameter

*interval*

Value	Description
0 to 12700	Specifies the blinking period in milliseconds.

### Return value

Return value	Object type
Display object	Display

### Supplementary explanation

- ❑ Specifies 0 does not blink the customer display.
- ❑ The setting value is rounded to the nearest 50 milliseconds.  
Example: 1 ⇒ 50, 51 ⇒ 100, 101 ⇒ 150

## setBrightness method

Adds brightness setting of the customer display to the command buffer.

**Syntax**

```
setBrightness (brightness) ;
```

**Parameter**

*brightness*

Value	Description
BRIGHTNESS_20	Sets the brightness to 20%.
BRIGHTNESS_40	Sets the brightness to 40%.
BRIGHTNESS_60	Sets the brightness to 60%.
BRIGHTNESS_100	Sets the brightness to 100%.

**Return value**

Return value	Object type
Display object	Display

## showClock method

Adds time display setting to the command buffer.

Executing this method erases the entire contents of the window. When another command is sent while the time is displayed, the time disappears.

---

### **Syntax**

```
showClock() ;
```

---

### **Return value**

Return value	Object type
Display object	Display

## addCommand method

Adds the ESC/POS command to the command buffer.

**Syntax**

```
addCommand (data) ;
```

**Parameter**

*data*

Value	Description
data	Specifies an ESC/POS command as a string.

**Return value**

Return value	Object type
Display object	Display

**Supplementary explanation**

For details on ESC/POS, see the specifications for this product. You need a contract separately to acquire the specifications. For details, contact the store of your purchase.

## send method

Sends data in the command buffer to the printer. The execution result of the send method is passed to the callback function of [onreceive event](#).

---

### ***Syntax***

```
send ( ) ;
```

## reset method

Adds initialization setting of the customer display to the command buffer.

Executing the reset method:

- Erases displayed text and registered windows,
- Initializes the cursor setting and moves the cursor to the origin of the customer display.
- Initializes the display blinking and brightness setting.

---

### Syntax

```
reset ( ) ;
```

---

### Return value

Return value	Object type
Display object	Display

## onreceive event

Receives the execution results of a command sent by [send method](#).

### Syntax

```
Function(response) ;
```

### Parameters of callback function

Parameter: response

Object type: Object

### response object properties

Property	Description	Object type
success	Execution result of a command	Boolean
code	Error code	String

#### success

Value	Description
true	Process succeeded.
false	Process failed.

#### code

Value	Description
'EDSP_NOT_FOUND'	The device was not found.
'EDSP_NOT_OPEN'	Failed to open the device.
EDSP_INVALID_WINDOW	An unregistered window was specified.
'EX_BADPORT'	An internal communication error with the device occurred.
'EX_TIMEOUT'	A timeout error occurred during communication with the device.
EX_INVALID_VALUE	Invalid parameter was detected.

# Keyboard object

## setPrefix method

Sets a key code which is recognized as the start of a string to accept keyboard input as a sequence of strings.

---

### Syntax

```
setPrefix(data) ;
```

---

### Parameter

*data*

Value	Description
data	Specifies the key code arrangement.

---

### Supplementary explanation

Refer to [Key code list](#) for the key code to specify.

## onkeypress event

Receives the key press event.

---

### Syntax

```
Function(data) ;
```

---

### Parameters of callback function

Parameter: data

Object type: Object

---

### Properties of data object

Property	Description	Object type
keyCode	Key code	number
ascii	The character corresponding to the key code	String

---

### Supplementary explanation

When no character corresponds to the specified key code, undefined is set in ascii.

## onstring event

Receives characters starting with one of the strings specified by [setPrefix method](#) and ending with the Enter key as a string.

---

### Syntax

```
Function(data) ;
```

---

### Parameters of callback function

Parameter: data

Object type: Object

---

### Properties of data object

Property	Description	Object type
input	Detected string	String
prefix	Key code recognized as the start of a string	number

**setMSRPrefix method**

Specifies a key code to start using the programmable keyboard with MSR. Use a callback event to call setMSRPrefix which is an extended method.

**Syntax**

```
callEvent('setPrefix', data);
```

**Parameter**

'setPrefix'

Value	Description
'setPrefix'	Fixed

data

Value	Description
keycode	Specifies a key code to detect the start of receiving card information.

**Return value**

Return value	Description	Object type
sq	Process sequence number	String

**Supplementary explanation**

Refer to [Key code list](#) for the key code to specify.

## ondata event

Receives card read information from the programmable keyboard with MSR.

### Syntax

```
Function(data) ;
```

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
track1	Entire data for track 1	String
track2	Entire data for track 2	String
track4	Entire data for track 4 (JIS2 track)	String
account_number	Account number	String
expiration_date	Expiration date (YYMM format)	String
surname	Surname	String
first_name	First name	String
middle_initial	Middle name/initial	String
title	Title	String
service_code	Service code	String
track1_dd	Optional data for track 1	String
track2_dd	Optional data for track 2	String

# MSR object

## ondata event

Receives card read information from the MSR device.

### Syntax

```
Function(data) ;
```

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
track1	Entire data for track 1	String
track2	Entire data for track 2	String
track4	Entire data for track 4 (JIS2 track)	String
account_number	Account number	String
expiration_date	Expiration date (YYMM format)	String
surname	Surname	String
first_name	First name	String
middle_initial	Middle name/initial	String
title	Title	String
service_code	Service code	String
track1_dd	Optional data for track 1	String
track2_dd	Optional data for track 2	String

# Printer object

## addTextAlign method

Adds print position setting to the command buffer.

### Syntax

```
addTextAlign (align) ;
```

### Parameter

*align*

Constant	Description
ALIGN_LEFT (default)	Left alignment
ALIGN_CENTER	Center alignment
ALIGN_RIGHT	Right alignment

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

### Supplementary explanation

- ❑ Specify the addTextAlign method at the beginning of a line. If this API is used elsewhere, it will be ignored.
- ❑ This API does not work in the page mode.
- ❑ Setting of the addTextAlign method is also applied to the raster image, NV logo, barcode, and 2D symbol.
- ❑ Use [addTextPosition method](#) for horizontal print setting in the page mode.

## addTextLineSpace method

Adds line spacing setting to the command buffer.

**Syntax**

```
addTextLineSpace (linespc) ;
```

**Parameter**

*linespc*

Value	Description
Integer from 0 to 255	Specifies line spacing in dots.

**Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

**Exception**

Exception	Object type
Parameter " ... " is invalid	Error

## addTextRotate method

Adds text rotation setting to the command buffer.

### Syntax

```
addTextRotate (rotate) ;
```

### Parameter

*rotate*

Value	Description
true	Enables text rotation.
false (default)	Disables text rotation.

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ... " is invalid	Error

### Supplementary explanation

- ❑ Specify the addTextRotate method at the beginning of a line. If this API is used elsewhere, it will be ignored.
- ❑ This API does not work in the page mode.
- ❑ Setting of the addTextRotate method is also applied to the barcode and 2D symbol.
- ❑ Use [addPageDirection method](#) for text rotation setting in the page mode.

## addText method

Adds characters to print to the command buffer.

### Syntax

```
addText (data) ;
```

### Parameter

*data*

Value	Description
String	Specifies characters to print as a string.

Use the following escape sequences for a horizontal tab, line feed, and back slash:

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

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter "... " is invalid	Error

### Supplementary explanation

- ❑ To print data other than text after printing text using the addText method, feed a line or page.
- ❑ In the page mode, text is printed from the current print position with the base line dot ([Device Specifications](#)) of the characters as the standard.

## addTextLang method

Adds language setting to the command buffer.  
Sets the language of text specified by [addText method](#).

### Syntax

```
addTextLang (lang) ;
```

### Parameter

*lang*

Value	Description
"en" (default)	English (ANK specification)
de	German (ANK specification)
fr	French (ANK specification)
it	Italian (ANK specification)
es	Spanish (ANK specification)
ja	Japanese (International character set is also changed to Japanese.)
ja-jp	
ko	Korean (International character set is also changed to Korean.)
ko-kr	
zh-hans	Simplified Chinese (International character set is also changed to Chinese.)
zh-cn	
zh-hant	Traditional Chinese
zh-tw	
th	Thai (South Asian model only)
Language code other than above	English (ANK specification)

Depending on the specified language, some characters are printed as follows:

Language	Characters \$ (U+0024)	Characters \ (U+005C)
Japanese	\$	¥
Korean	\$	₩
Simplified Chinese	¥	\
Traditional Chinese	\$	\

---

**Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

---

**Exception**

Exception	Object type
Parameter "... " is invalid	Error

---

**Supplementary explanation**

- ❑ Any character not installed on the printer cannot be printed.
- ❑ For the character codes and international character set available for printing, refer to the Technical Reference Guide of the printer.

## addTextFont method

Adds character font setting to the command buffer.

### Syntax

```
addTextFont (font) ;
```

### Parameter

*font*

Constant	Description
FONT_A (default)	Font A
FONT_B	Font B
FONT_C	Font C
FONT_D	Font D
FONT_E	Font E
FONT_SPECIAL_A	Special font A
FONT_SPECIAL_B	Special font B

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

## addTextSmooth method

Adds smoothing setting to the command buffer.

### Syntax

```
addTextSmooth (smooth) ;
```

### Parameter

*smooth*

Value	Description
true	Enables smoothing.
false (default)	Disables smoothing.

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ... " is invalid	Error

## addTextDouble method

Adds character scaling factor setting to the command buffer.

### Syntax

```
addTextDouble(dw, dh);
```

### Parameter

*dw*

Value	Description
true	Enables horizontal doubling.
false (default)	Disables horizontal doubling.
undefined	Not specify.

*dh*

Value	Description
true	Enables vertical doubling.
false (default)	Disables vertical doubling.
undefined	Not specify.

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

### Supplementary explanation

To quadruple text, specify true in dw and dh.

## addTextSize method

Adds character scaling factor setting to the command buffer.

### Syntax

```
addTextSize(width, height);
```

### Parameter

*width*

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

*height*

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

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

## addTextStyle method

Adds character style setting to the command buffer.

### Syntax

```
addTextStyle(reverse, ul, em, color);
```

### Parameter

*reverse*

Value	Description
true	Enables the reverse style.
false (default)	Disables the reverse style.
undefined	Not specify.

*ul*

Value	Description
true	Enables the underscore style.
false (default)	Disables the underscore style.
undefined	Not specify.

*em*

Value	Description
true	Enables the bold style.
false (default)	Disables the bold style.
undefined	Not specify.

*color*

Value	Description
COLOR_NONE	No printing
COLOR_1 (default)	First color
COLOR_2	Second color
COLOR_3	Third color
COLOR_4	Fourth color
undefined	Not specify.

---

***Return value***

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

---

***Exception***

Exception	Object type
Parameter " ... " is invalid	Error

## addTextPosition method

Adds horizontal character print start position setting to the command buffer.

### Syntax

```
addTextPosition(x) ;
```

### Parameter

x

Default: 0

Value	Description
Integer from 0 to 65535	Specifies the horizontal print start position in dots.

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter "... " is invalid	Error

### 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."
- ❑ [addTextAlign method](#) and [addTextRotate method](#) cannot be used after running this API.

**addTextVPosition method**

Adds vertical print start position start setting to the command buffer.

**Syntax**

```
addTextVPosition(y) ;
```

**Parameter**

y

Default: 21

Value	Description
Integer from 0 to 65535	Specify the horizontal print start position in dots.

**Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

**Exception**

Exception	Object type
Parameter "... " is invalid	Error

**Supplementary explanation**

This API does not work in the standard mode.

## addFeedUnit method

Adds paper-feed-by-dot amount setting to the command buffer.

---

### Syntax

```
addFeedUnit (unit) ;
```

---

### Parameter

*unit*

Value	Description
Integer from 0 to 255	Specifies paper feed amount in dots.

---

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

---

### Exception

Exception	Object type
Parameter " ... " is invalid	Error

## addFeedLine method

Adds paper-feed-by-line amount setting to the command buffer.

---

### Syntax

```
addFeedLine(line);
```

---

### Parameter

*line*

Value	Description
Integer from 0 to 255	Specifies paper feed amount in lines.

---

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

---

### Exception

Exception	Object type
Parameter "... " is invalid	Error

## addFeedPosition method

Adds receipt and label sheet paper feed setting to the command buffer.

### Syntax

```
addFeedPosition(pos);
```

### Parameter

*pos*

Value	Description
FEED_PEELING	Feed the sheet to the peeling position.
FEED_CUTTING	Feed the sheet to the cut position.
FEED_CURRENT_TOF	Feed the sheet to the top of the current label.
FEED_NEXT_TOF	Feed the sheet to the top of the next label.

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

### Supplementary explanation

This API does not work in the page mode.

## addFeed method

Adds a line feed to the command buffer.

---

### Syntax

```
addFeed ( ) ;
```

---

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

## addImage method

Adds a print command for HTML5 Canvas image data to the command buffer.

Converts the specified area of an HTML5 Canvas RGBA full-color image into raster image data according to the color mode setting by the addImage method as well as [halftone property](#) and [brightness property](#) setting. One pixel of an image corresponds to one dot of the printer, and when a transparent color is contained in the image, the background of the image is assumed to be white.

### Syntax

```
addImage(context, x, y, width, height, color, mode);
```

### Parameter

*context*

Value	Description
context	Specifies 2D context of HTML5 Canvas.

*x*

Value	Description
Integer from 0 to 65535	Specifies the horizontal start position of the print area.

*y*

Value	Description
Integer from 0 to 65535	Specifies the vertical start position of the print area.

*width*

Value	Description
Integer from 0 to 65535	Specifies the width of the print area.

*height*

Value	Description
Integer from 0 to 65535	Specifies the height of the print area.

*color*

Value	Description
COLOR_NONE	No printing
COLOR_1 (default)	First color
COLOR_2	Second color

Value	Description
COLOR_3	Third color
COLOR_4	Fourth color
undefined	Not specify.

*mode*

Value	Description
MODE_MONO	Monochrome (2 scales)
MODE_GRAY16	Multi-gradation (16 scales)
undefined	Monochrome (2 scales)

**Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

**Exception**

Exception	Object type
Parameter " ..." is invalid	Error

**Supplementary explanation**

- ❑ HTML5 Canvas data containing image data downloaded from different domains cannot be printed.  
A security error occurs due to the Same-Origin policy of JavaScript.
- ❑ Multi-gradation printing can be used in the standard mode but not in the page mode.
- ❑ In order to print a image data at a high speed, set the parameter constant of [addTextAlign method](#) to ALIGN\_LEFT and the width parameter of the addImage method to a multiple of 8 which does not exceed the sheet width of the printer.
- ❑ In the page mode, because image data is printed at the current print position with the lower-left dot of the image data as the reference point, the print position does not move.

## addLogo method

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

The NV logo needs to be registered to the printer in advance. For how to register the NV logo, refer to the Technical Reference Guide of the printer.

### Syntax

```
addLogo (key1, key2) ;
```

### Parameter

*key1*

Value	Description
Integer from 0 to 255	Specifies the key code 1 of the NV logo.

*key2*

Value	Description
Integer from 0 to 255	Specifies the key code 2 of the NV logo.

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter "... " is invalid	Error

### Supplementary explanation

- ❑ Multi-gradation printing can be used in the standard mode but not in the page mode.
- ❑ In the page mode, the NV log is printed at the current print position with the lower-left dot of the NV logo as the reference point.

## addBarcode method

Adds a barcode print command to the command buffer.

### Syntax

```
addBarcode(data, type, hri, font, width, height);
```

### Parameter

*data*

String	Description
String	Specifies barcode data as a string.

Use the following escape sequences to specify binary data which cannot be represented as a string:

String	Description
\xnn	Control code
\\	Back slash

*type*

Constant	Barcode type
BARCODE_UPC_A	UPC-A
BARCODE_UPC_E	UPC-E
BARCODE_EAN13	EAN13
BARCODE_JAN13	JAN13
BARCODE_EAN8	EAN8
BARCODE_JAN8	JAN8
BARCODE_CODE39	CODE39
BARCODE_ITF	ITF
BARCODE_CODABAR	CODABAR
BARCODE_CODE93	CODE93
BARCODE_CODE128	CODE128
BARCODE_GS1_128	GS1-128
BARCODE_GS1_DATABAR_OMNIDIRECTIONAL	GS1 DataBar Omnidirectional
BARCODE_GS1_DATABAR_TRUNCATED	GS1 DataBar Truncated
BARCODE_GS1_DATABAR_LIMITED	GS1 DataBar Limited
BARCODE_GS1_DATABAR_EXPANDED	GS1 DataBar Expanded

Barcode 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. Otherwise, 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.
CODE128	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 { : FNC1: {1 FNC2: {2 FNC3: {3 FNC4: {4 CODE A: {A CODE B: {B CODE C: {C SHIFT: {S {: {{

Barcode type	Description
GS1-128	<p>The start character, FNC1, check digit, and stop characters are automatically added.</p> <p>To automatically calculate and add the application ID (AI) and the following check digit, specify "*" at the check digit position.</p> <p>The application ID (AI) can be put in parentheses. The parentheses are used as print characters for HRI and not encoded as data.</p> <p>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.</p> <p>To encode the following characters, specify the corresponding 2-digit code starting with { :</p> <p>FNC1: {1</p> <p>FNC3: {3</p> <p>(: {(</p> <p>): {)</p> <p>*: {*</p> <p>{: {{</p>
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.</p> <p>To encode the following characters, specify the corresponding 2-digit code starting with { :</p> <p>FNC1: {1</p> <p>(: {(</p> <p>): {)</p>

# *hri*

Constant	Description
HRI_NONE (default)	No printing.
HRI_ABOVE	Above the barcode
HRI_BELOW	Below the barcode
HRI_BOTH	Both above and below the barcode

*font*

Constant	Description
FONT_A (default)	Font A
FONT_B	Font B

Constant	Description
FONT_C	Font C
FONT_D	Font D
FONT_E	Font E

*width*

Default: 3

Value	Description
Integer from 2 to 6	Specifies the width of a single module in dots.

*height*

Default: 162

Value	Description
Integer from 1 to 255	Specifies the height of the barcode in dots.

**Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

**Exception**

Exception	Object type
Parameter " ..." is invalid	Error

**Supplementary explanation**

- ❑ Specify the addBarcode method at the beginning of a line.
- ❑ In the page mode, this method is executed at the current position with the lower-left dot of the barcode (except for HRI) as the reference point.
- ❑ Specify a string in accordance with the type of the barcode specified in type. The barcode is not printed if the string specified in data does not match the barcode type specified in type.

## addSymbol method

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

### Syntax

```
addSymbol(data, type, level, width, height, size);
```

### Parameter

*data*

String	Description
String	Specifies 2D symbol data as a text string.

Use the following escape sequences to specify binary data which cannot be represented as a string:

String	Description
\xnn	Control code
\\	Back slash

*type*

Constant	2D symbol type
SYMBOL_PDF417_STANDARD	Standard PDF417
SYMBOL_PDF417_TRUNCATED	Truncated PDF417
SYMBOL_QRCODE_MODEL_1	QR Code Model 1
SYMBOL_QRCODE_MODEL_2	QR Code Model 2
SYMBOL_QRCODE_MICRO *2	Micro QR Code
SYMBOL_MAXICODE_MODE_2	MaxiCode Mode 2
SYMBOL_MAXICODE_MODE_3	MaxiCode Mode 3
SYMBOL_MAXICODE_MODE_4	MaxiCode Mode 4
SYMBOL_MAXICODE_MODE_5	MaxiCode Mode 5
SYMBOL_MAXICODE_MODE_6	MaxiCode Mode 6
SYMBOL_GS1_DATABAR_STACKED	GS1 DataBar Stacked
SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL	GS1 DataBar Stacked Omnidirectional
SYMBOL_GS1_DATABAR_EXPANDED_STACKED	GS1 DataBar Expanded Stacked
SYMBOL_AZTECCODE_FULLRANGE	Aztec Code Full-Range mode
SYMBOL_AZTECCODE_COMPACT	Aztec Code Compact mode
SYMBOL_DATAMATRIX_SQUARE	DataMatrix ECC200 Square

Constant	2D symbol type
SYMBOL_DATAMATRIX_RECTANGLE_8	DataMatrix ECC200 Rectangle, 8 lines
SYMBOL_DATAMATRIX_RECTANGLE_12	DataMatrix ECC200 Rectangle, 12 lines
SYMBOL_DATAMATRIX_RECTANGLE_16	DataMatrix ECC200 Rectangle, 16 lines

2D symbol type	Description
Standard PDF417	Converts the string into UTF-8, processes the escape sequence(s), and encodes the data. 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.
Truncated PDF417	
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: Figure: 0 to 9 Alphanumeric: 0 to 9, A to Z, space, \$, %, *, +, -, ., /, : Kanji character: Shift JIS value 8-bit byte data: 0x00 to 0xff
QR Code Model 2	
Micro QR Code2	
MaxiCode Mode 2	Converts the string into UTF-8, processes the escape sequence(s), and encodes the data. In Mode 2 or 3, if the first data is }0>\x1e01\x1dyy ("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. Otherwise, the primary message starts with the first data. For the mode 2, specify the primary message in the following format: <ul style="list-style-type: none"> <li>Postal code (1- to 9-digit number) GS: (\x1d)</li> <li>ISO country code (1- to 3-digit number) GS: (\x1d)</li> <li>Service class code (1- to 3-digit number)</li> </ul> For the mode 3, specify the primary message in the following format: <ul style="list-style-type: none"> <li>Postal code (data which can be converted with 1 to 6 code sets A) GS (\x1d) ISO</li> <li>country code (1- to 3-digit figure) GS (\x1d)</li> <li>Service class code (1- to 3-digit number)</li> </ul>
MaxiCode Mode 3	
MaxiCode Mode 4	
MaxiCode Mode 5	
MaxiCode Mode 6	
GS1 DataBar Stacked	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.
GS1 DataBar Stacked Omnidirectional	
GS1 DataBar Expanded Stacked	Converts the string into UTF-8, processes the escape sequence(s), and encodes the data. 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 { : FNC1: {1 (: {( ): }D

2D symbol type	Description
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.

*level*

Constant	Description
LEVEL_0	PDF417 Error correction level 0
LEVEL_1	PDF417 Error correction level 1
LEVEL_2	PDF417 Error correction level 2
LEVEL_3	PDF417 Error correction level 3
LEVEL_4	PDF417 Error correction level 4
LEVEL_5	PDF417 Error correction level 5
LEVEL_6	PDF417 Error correction level 6
LEVEL_7	PDF417 Error correction level 7
LEVEL_8	PDF417 Error correction level 8
LEVEL_L	QR Code Error correction level L
LEVEL_M	QR Code Error correction level M
LEVEL_Q	QR Code Error correction level Q
LEVEL_H	QR Code Error correction level H
Integer (5 to 95)	Aztec Code error correction level (default: 23)
LEVEL_DEFAULT	Default level

*width*

2D symbol type	Valid value	Default value
PDF417	2 to 8	3
QR Code	3 to 16	3
MaxiCode	Not used	
2D GS1 DataBar	2 to 8	2
Aztec Code	2 to 16	3
DataMatrix	2 to 16	3

*height*

2D symbol type	Valid value	Default value
PDF417	2 to 8 (Scaling factor for width)	3
QR Code	Not used	
MaxiCode		
2D GS1 DataBar		
Aztec Code		
DataMatrix		

*size*

2D symbol type	Default value	Description
PDF417	0 (auto)	Specifies the number of code words per stage.
QR Code	Not used	
MaxiCode	Not used	
2D GS1 DataBar		
Expanded Stacked	0 (auto)	Specifies the maximum width of the barcode (106 or more).
Other	Not used	
Aztec Code	Not used	
DataMatrix	Not used	

**Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

**Exception**

Exception	Object type
Parameter " ... " is invalid	Error

**Supplementary explanation**

- ❑ Use the addSymbol method at the beginning of a line.

- ❑ In the page mode, a 2D symbol is printed at the current print position with the lower-left dot of the 2D symbol as the reference point.
- ❑ Specify a string in accordance with the type of the 2D symbol specified in type. The 2D symbol is not printed if the string specified in data does not match the 2D symbol type specified in type.
- ❑ Micro QR Code does not support LEVEL\_H.
- ❑ Specify a constant in accordance with the 2D symbol type specified in type.
- ❑ When MaxiCode or 2D GS1 DataBar is specified in data, specify LEVEL\_DEFAULT.

## addHLine method

Draws a horizontal ruled line and adds a horizontal ruled line print command to the command buffer.

### Syntax

```
addHLine(x1, x2, style);
```

### Parameter

*x1*

Value	Description
Integer from 0 to 65535	Specifies the start position to draw a horizontal ruled line in dots.

*x2*

Value	Description
Integer from 0 to 65535	Specifies the end position to draw a horizontal ruled line in dots.

*style*

Constant	Description
LINE_THIN	Solid line: Fine
LINE_MEDIUM	Solid line: Middle
LINE_THICK	Solid line: Thick
LINE_THIN_DOUBLE	Double line: Fine
LINE_MEDIUM_DOUBLE	Double line: Middle
LINE_THICK_DOUBLE	Double line: Thick
undefined	Solid line: Fine

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ... " is invalid	Error

---

***Supplementary explanation***

- ❑ This API does not work in the page mode.
- ❑ Use [addPageLine method](#) to draw a horizontal ruled line in the page mode.

## addVLineBegin method

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

### Syntax

```
addVLineBegin(x, style);
```

### Parameter

*x*

Value	Description
Integer from 0 to 65535	Specifies the start position to draw a vertical ruled line in dots.

*style*

Constant	Description
LINE_THIN	Solid line: Fine
LINE_MEDIUM	Solid line: Middle
LINE_THICK	Solid line: Thick
LINE_THIN_DOUBLE	Double line: Fine
LINE_MEDIUM_DOUBLE	Double line: Middle
LINE_THICK_DOUBLE	Double line: Thick
undefined	Solid line: Fine

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

### Supplementary explanation

- ❑ This API does not work in the page mode.
- ❑ Use [addPageLine method](#) to draw a horizontal ruled line in the page mode.
- ❑ This API draws a vertical ruled line until stopped by [addVLineEnd method](#). Use the addVLineBegin method together with the addVLineEnd method.

## addVLineEnd method

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

### Syntax

```
addVLineBegin(x, style);
```

### Parameter

*x*

Value	Description
Integer from 0 to 65535	Specifies the end position to draw a vertical ruled line in dots.

*style*

Constant	Description
LINE_THIN	Solid line: Fine
LINE_MEDIUM	Solid line: Middle
LINE_THICK	Solid line: Thick
LINE_THIN_DOUBLE	Double line: Fine
LINE_MEDIUM_DOUBLE	Double line: Middle
LINE_THICK_DOUBLE	Double line: Thick
undefined	Solid line: Fine

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

### Supplementary explanation

- ❑ This API does not work in the page mode.
- ❑ Use [addPageLine method](#) to draw a vertical ruled line in the page mode.
- ❑ Use this method together with [addPageBegin method](#).

## addPageBegin method

Adds a page mode start command to the command buffer.  
Executing the addPageBegin method starts operation in the page mode.

---

### Syntax

```
addPageBegin();
```

---

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

---

### Supplementary explanation

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

## addPageEnd method

Adds a page mode end command to the command buffer.  
Executing the addPageBegin method ends operation in the page mode.

**Syntax**

```
addPageEnd ( ) ;
```

**Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

**Supplementary explanation**

Use this method together with [addPageBegin method](#).

## addPageArea method

Adds page mode print area setting to the command buffer.

Use the addPageArea method to specify the page mode print area (coordinates) and to specify print data by the addText or other methods.

### Syntax

```
addPageArea(x, y, width, height);
```

### Parameter

*x*

0 indicates the left edge of the printable area.

Value	Description
Integer from 0 to 65535	Specifies the horizontal origin in dots.

*y*

0 indicates the position before paper feed.

Value	Description
Integer from 0 to 65535	Specifies the vertical origin in dots.

*width*

Value	Description
Integer from 0 to 65535	Specifies the width of a print area in dots.

*height*

Value	Description
Integer from 0 to 65535	Specifies the height of a print area in dots.

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

---

***Supplementary explanation***

- ❑ Define the print area in accordance with the contents to print. Any portion of print data outside the print area is not printed.
- ❑ This API does not work in the standard mode.
- ❑ Specify the width and height of the print area in accordance with the print direction setting. If the width and height of the print area do not match the print direction setting, any portion of print data outside the print area will not be printed. The print direction is specified by [addPageDirection](#) method.

## addPageDirection method

Adds page mode print direction setting to the command buffer.

### Syntax

```
addPageDirection(dir);
```

### Parameter

*dir*

Constant	Description
DIRECTION_LEFT_TO_RIGHT (default)	Do not rotate data. (Data is printed rightward from the upper-left position.)
DIRECTION_BOTTOM_TO_TOP	Rotate data counterclockwise by 90 degrees. (Data is printed upward from the lower-left position.)
DIRECTION_RIGHT_TO_LEFT	Rotate data by 180 degrees. (Data is printed leftward from the lower-right position.)
DIRECTION_TOP_TO_BOTTOM	Rotate data clockwise by 90 degrees. (Data is printed downward from the upper-right position.)

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

### Supplementary explanation

This API does not work in the standard mode.

## addPagePosition method

Specifies the print start position (coordinates) within the print area specified by [addPageArea method](#) and adds print position setting within the print area in the page mode to the command buffer.

### Syntax

```
addPagePosition(x, y);
```

### Parameter

*x*

Default: 0

Value	Description
Integer from 0 to 65535	Specify the horizontal print position in dots.

*y*

Default: 21

Value	Description
Integer from 0 to 65535	Specify the horizontal print position in dots.

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ... " is invalid	Error

### Supplementary explanation

- ❑ This API does not work in the standard mode.
- ❑ Define the print start position (coordinates) in accordance with the contents to print.

Print data	Specification method
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 <i>y</i> to 42 or larger.

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

## addPageLine method

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

### Syntax

```
addPageLine(x1, y1, x2, y2, style);
```

### Parameter

*x1*

Value	Description
Integer from 0 to 65535	Specifies the horizontal draw start position in dots.

*y1*

Value	Description
Integer from 0 to 65535	Specifies the vertical draw start position in dots.

*x2*

Value	Description
Integer from 0 to 65535	Specifies the horizontal draw end position in dots.

*y2*

Value	Description
Integer from 0 to 65535	Specifies the vertical draw end position in dots.

*style*

Constant	Description
LINE_THIN	Solid line: Fine
LINE_MEDIUM	Solid line: Middle
LINE_THICK	Solid line: Thick
LINE_THIN_DOUBLE	Double line: Fine
LINE_MEDIUM_DOUBLE	Double line: Middle
LINE_THICK_DOUBLE	Double line: Thick
undefined	Solid line: Fine

---

**Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

---

**Exception**

Exception	Object type
Parameter "... " is invalid	Error

---

**Supplementary explanation**

- ❑ This API does not work in the standard mode.
- ❑ A diagonal line cannot be drawn. Specify the parameters so that the line to be drawn will be a vertical or horizontal line.

## addPageRectangle method

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

### Syntax

```
addPageRectangle(x1, y1, x2, y2, style);
```

### Parameter

*x1*

Value	Description
Integer from 0 to 65535	Specifies the horizontal draw start position in dots.

*y1*

Value	Description
Integer from 0 to 65535	Specifies the vertical draw start position in dots.

*x2*

Value	Description
Integer from 0 to 65535	Specifies the horizontal draw end position in dots.

*y2*

Value	Description
Integer from 0 to 65535	Specifies the vertical draw end position in dots.

*style*

Constant	Description
LINE_THIN	Solid line: Fine
LINE_MEDIUM	Solid line: Middle
LINE_THICK	Solid line: Thick
LINE_THIN_DOUBLE	Double line: Fine
LINE_MEDIUM_DOUBLE	Double line: Middle
LINE_THICK_DOUBLE	Double line: Thick
undefined	Solid line: Fine

---

**Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

---

**Exception**

Exception	Object type
Parameter " ... " is invalid	Error

---

**Supplementary explanation**

This API does not work in the standard mode.

## addCut method

Adds a sheet cut command to the command buffer.

### Syntax

```
addCut (type) ;
```

### Parameter

*type*

Value	Description
CUT_NO_FEED	Cut without feed (cut the sheet without feeding paper).
CUT_FEED	Feed cut (cut the sheet after feeding paper).
CUT_RESERVE	Cut reservation (print the following texts and cut the sheet at the cutting position).
undefined	Feed cut (cut the sheet after feeding paper).

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ... " is invalid	Error

### Supplementary explanation

- ❑ This API does not work in the page mode.
- ❑ Use this API at the "beginning of a line." If this API is used elsewhere, it will be ignored.

## addPulse method

Adds a drawer kick setting command to the command buffer.

### Syntax

```
addPulse(drawer, time);
```

### Parameter

*drawer*

Value	Description
DRAWER_1	Drawer kick connector pin No.2
DRAWER_2	Drawer kick connector pin No.5
undefined	Drawer kick connector pin No.2

*time*

Value	Description
PULSE_100	100-msec signal
PULSE_200	200-msec signal
PULSE_300	300-msec signal
PULSE_400	400-msec signal
PULSE_500	500-msec signal
undefined	100-msec signal

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ..." is invalid	Error

### Supplementary explanation

- ❑ This API does not work in the page mode.
- ❑ The drawer function cannot be used with the buzzer function.

## addSound method

Adds buzzer sound setting to the command buffer.

### Syntax

```
addSound(pattern, repeat, cycle);
```

### Parameter

*pattern*

Value	Description
PATTERN_NONE	Stop
PATTERN_A	Pattern A (optional external buzzer)
PATTERN_B	Pattern B (optional external buzzer)
PATTERN_C	Pattern C (optional external buzzer)
PATTERN_D	Pattern D (optional external buzzer)
PATTERN_E	Pattern E (optional external buzzer)
PATTERN_ERROR	Error sound pattern (optional external buzzer)
PATTERN_PAPER_END	Paper empty sound pattern (optional external buzzer)
PATERN_0	Pattern 0 (built-in buzzer)
PATERN_1	Pattern 1 (built-in buzzer)
PATERN_2	Pattern 2 (built-in buzzer)
PATERN_3	Pattern 3 (built-in buzzer)
PATERN_4	Pattern 4 (built-in buzzer)
PATERN_5	Pattern 5 (built-in buzzer)
PATERN_6	Pattern 6 (built-in buzzer)
PATERN_7	Pattern 7 (built-in buzzer)
PATERN_8	Pattern 8 (built-in buzzer)
PATERN_9	Pattern 9 (built-in buzzer)
PATERN_10	Pattern 10 (built-in buzzer)
undefined	Pattern A (optional external buzzer)

*repeat*

Value	Description
0	Unlimited

Value	Description
1 to 255	1 to 255 times
undefined	Once

*cycle*

Value	Description
1000 to 25500	Specifies the buzzer sound cycle in milliseconds.

---

### **Return value**

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

---

### **Exception**

Exception	Object type
Parameter " ..." is invalid	Error

---

### **Supplementary explanation**

- ❑ This API does not work in the page mode.
- ❑ The buzzer function cannot be used with the drawer function.
- ❑ *cycle* is only available when PATTERN\_0 to PATTERN\_10 is specified in *pattern*.

## addLayout method

Adds sheet layout setting to the command buffer.

### Syntax

```
addLayout(type, width, height, margin_top,
margin_bottom, offset_cut, offset_label);
```

### Parameter

*type*

Value	Description
LAYOUT_RECEIPT	Receipt
LAYOUT_RECEIPT_BM	Receipt (with black mark)
LAYOUT_LABEL	Label sheet
LAYOUT_LABEL_BM	Label sheet (with black mark)

*width*

Value	Description
290 to 600	Specifies the paper width in 0.1-mm units.

*height*

Sheet type	Valid value	Description
Receipt	0	Specification is not required.
Receipt (with black mark)	<ul style="list-style-type: none"> <li>0 (auto)</li> <li>284 to 1550 (manual)</li> </ul>	Specifies the distance between the top edges of two consecutive black marks in 0.1-mm units.
Label sheet		Specifies the distance between the top edges of two consecutive labels in 0.1-mm units.
Label sheet (with black mark)		Specifies the distance between the bottom edges of two consecutive black marks in 0.1-mm units.

*marginTop*

Sheet type	Valid value	Description
Receipt	0	Specification is not required.
Receipt (with black mark)	-150 to 1500	Specifies the distance between the top edge of a black mark to the top of the sheet in 0.1-mm units.
Label sheet	0 to 1500	Specifies the distance between the top edge of a label to the top of the sheet in 0.1-mm units.

Sheet type	Valid value	Description
Label sheet (with black mark)	-15 to 1500	Specifies the distance between the bottom edge of a black mark to the top of the sheet in 0.1-mm units.

*margin\_bottom*

Sheet type	Valid value	Description
Receipt	0	Specification is not required.
Receipt (with black mark)	0	Specification is not required.
Label sheet	-15 to 0	Specifies the distance between the bottom edge of a label to the bottom of the print area in 0.1-mm units. (A positive value widens the margin and a negative value narrows it.)
Label sheet (with black mark)	-15 to 15	Specifies the distance between the bottom edge of a black mark to the bottom of the print area in 0.1-mm units. (A positive value widens the margin and a negative value narrows it.)

*offset\_cut*

Sheet type	Valid value	Description
Receipt	0	Specification is not required.
Receipt (with black mark)	-290 to 50	Specifies the distance between the top edge of a black mark to the cut position in 0.1-mm units.
Label sheet	0 to 50	Specifies the distance between the bottom edge of a label to the cut position in 0.1-mm units.
Label sheet (with black mark)	0 to 50	Specifies the distance between the top edge of a black mark to the cut position in 0.1-mm units.

*offset\_label*

Sheet type	Valid value	Description
Receipt	0	Specification is not required.
Receipt (with black mark)	0	Specification is not required.
Label sheet	0	Specification is not required.
Label sheet (with black mark)	0 to 15	Specifies the distance between the top edge of a black mark to the bottom edge of a label in 0.1-mm units.

**Return value**

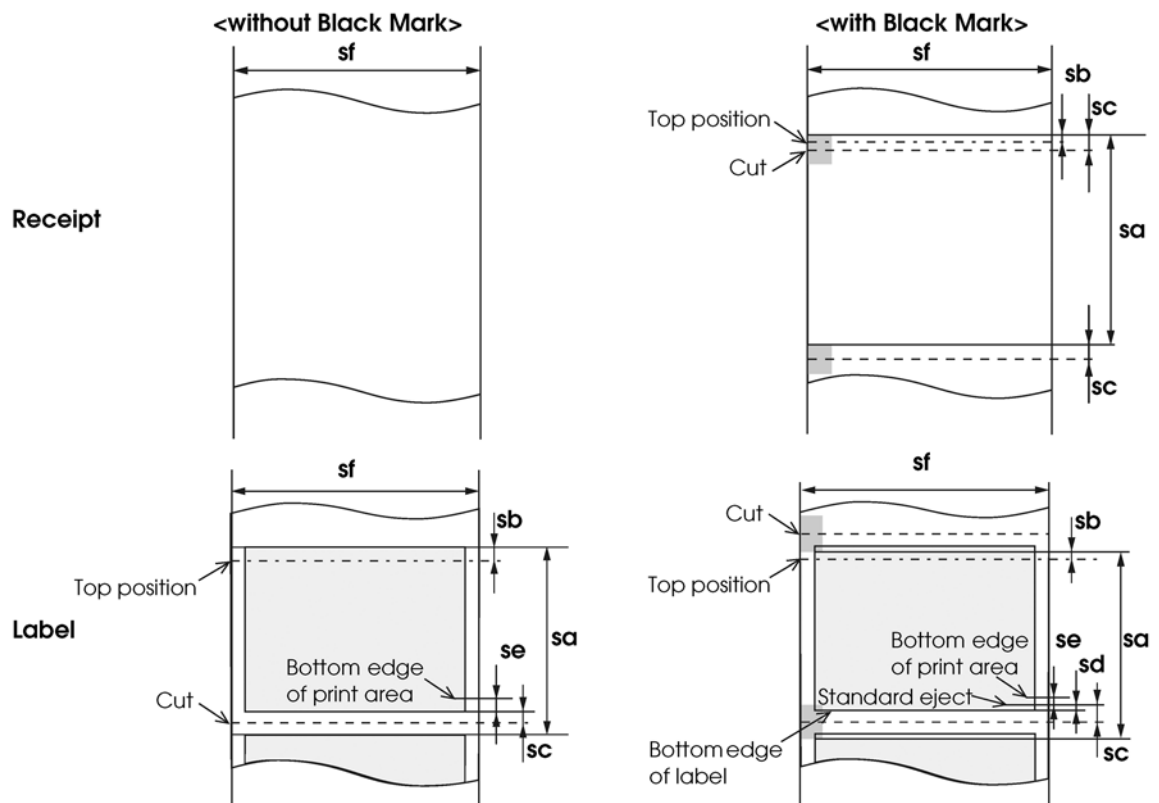
Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

**Exception**

Exception	Object type
Parameter " ... " is invalid	Error

**Detailed description**

Refer to the following for the parameter positions available for each type of paper.



Symbol	Parameter
<i>sf</i>	width
<i>sa</i>	height
<i>sb</i>	margin_top
<i>se</i>	margin_bottom
<i>sc</i>	offset_cut
<i>sd</i>	offset_label

---

***Supplementary explanation***

This API does not work in the page mode.

## recover method

Recovers the printer from an error condition.

When a recoverable error occurs with the printer, just removing the error cause does not recover the printer from the error. By executing the recover method, the printer recovers from the error and becomes ready for printing.

---

### ***Syntax***

```
recover ( ) ;
```

**addRecovery method**

Add a command to recover the printer from an error condition to the command buffer.  
When a recoverable error occurs with the printer, executing the addRecovery method recovers the printer from the error and makes it ready for printing.  
The execution result of the addRecovery method is same as that of [recover method](#).  
It is recommended to use the recover method to recover the printer from an error condition.

**Syntax**

```
addRecovery() ;
```

**Return value**

Return value	Object type
Printer object	Printer

**Exception**

Exception	Object type
Parameter " ... " is invalid	Error

**Supplementary explanation**

- ❑ Enable the forced transmission mode ([force property](#)) when using this method.
- ❑ After recovering from a recoverable error, the buffer of the printer is reset.

## reset method

Resets the printer.

The printer returns to the initialized state and print data remaining in the printer buffer and any other data which is not stored in the printer (e.g., print setting) will be all lost.

---

### ***Syntax***

```
reset ( ) ;
```

## addReset method

Add a command to reset the printer to the command buffer.

The printer returns to the initialized state and print data remaining in the printer buffer and any other data which is not stored in the printer (e.g., print setting) will be all lost.

The execution result of the addReset method is same as that of [reset method](#).

When the addReset method is added to the command buffer to reset the printer, other print commands remaining in the command buffer will not be executed. It is recommended to use the rest method to reset the printer.

---

### Syntax

```
addReset ( ) ;
```

---

### Return value

Return value	Object type
Printer object	Printer

---

### Exception

Exception	Object type
Parameter " ... " is invalid	Error

## addCommand method

Adds the ESC/POS command to the command buffer.

### Syntax

```
addCommand (data) ;
```

### Parameter

*data*

Value	Description
String	Specifies an ESC/POS command as a string.

### Return value

Return value	Object type
Printer object	Printer
HybridPrinter object	HybridPrinter

### Exception

Exception	Object type
Parameter " ... " is invalid	Error

### Supplementary explanation

Refer to the following URL for details of the ESC/POS command.

[https://reference.epson-biz.com/modules/ref\\_escpos/index.php?content\\_id=2](https://reference.epson-biz.com/modules/ref_escpos/index.php?content_id=2)

## send method

Sends data in the command buffer to the printer.  
The print job ID can be specified.

### Syntax

- ❑ `send();`
- ❑ `send(printjobid);`

### Parameter

*printjobid*

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

### Sample program

Send data by specifying the print job ID.

```
var printjobid = 'ABC123';

printer.addText('Hello, World!\n');
printer.addCut();
printer.onreceive = function (res) { alert(res.printjobid); };
printer.onerror = function (err) { alert(err.status); };
printer.send(printjobid);
```

### Supplementary explanation

- ❑ The execution result of the send method is passed to the callback function of [onreceive event](#).
- ❑ The send method disables the forced transmission mode ([force property](#)).

## print method

Prints image data drawn in HTML5 Canvas.

The print job ID can be specified.

Converts the specified area of an HTML5 Canvas RGBA full-color image into raster data according to [halftone property](#) and [brightness property](#) setting. 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

```
❑ print(canvas, cut, mode);  
❑ print(canvas, cut, mode, printjobid);
```

### Parameter

*canvas*

Value	Description
canvas	Specifies an HTML5 Canvas object.

*cut*

Value	Description
true	Uses the automatic cutting function.
false	Does not use the automatic cutting function.
undefined	Does not use the automatic cutting function.

*mode*

Value	Description
MODE_MONO	Monochrome (2 scales)
MODE_GRAY16	Multi-gradation (16 scales)
undefined	Monochrome (2 scales)

*printjobid*

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

---

**Exception**

Exception	Object type
Parameter "... " is invalid	Error

---

**Supplementary explanation**

- ❑ HTML5 Canvas data containing image data downloaded from different domains cannot be printed. A security error occurs due to the Same-Origin policy of JavaScript.
- ❑ Multi-gradation printing can be used in the standard mode but not in the page mode.

## getPrintJobStatus method

Acquires the status of the specified print job ID.  
The print job ID status acquired by the getPrintJobStatus method is passed to [onreceive event](#).

**Syntax**

```
getPrintJobStatus (printjobid) ;
```

**Parameter**

*printjobid*

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

**Supplementary explanation**

When multiple print processes were performed with the same print job ID, the status of the latest print job is acquired.

## startMonitor method

Enables acquisition and update of printer status by the Printer object.

Executing the startMonitor method enables the Printer object to acquire and update the printer status at the interval specified by [interval property](#) and passes the acquired or updated printer status to the following events:

- ❑ [onstatuschange event](#)
- ❑ [onbatterystatuschange event](#)
- ❑ [ononline event](#)
- ❑ [onoffline event](#)
- ❑ [onpoweroff event](#)
- ❑ [oncoverok event](#)
- ❑ [oncoveropen event](#)
- ❑ [onpaperok event](#)
- ❑ [Onpapernearend event](#)
- ❑ [onpaperend event](#)
- ❑ [ondrawerclosed event](#)
- ❑ [ondraweropen event](#)
- ❑ [onbatteryok event](#)
- ❑ [onbatterylow event](#)

---

### Syntax

```
startMonitor();
```

## stopMonitor method

Disables acquisition and update of printer status by the Printer object enabled by [startMonitor method](#).

---

### ***Syntax***

```
stopMonitor();
```

## halftone property

Specifies the halftone processing method.

Applied to monochrome (2-scale) printing by [addImage method](#) and [print method](#).

---

### Object type

*String*

Constant	Process- ing method	Description
HALFTONE_DITHER (default)	Dithering	Printing graphics only
HALFTONE_ERROR_DIFFUSION	Error diffu- sion	Printing that includes text and graphics
HALFTONE_THRESHOLD	Threshold	Printing text only

## brightness property

Specifies the brightness compensation value.

Applied to printing by [addImage method](#) and [print method](#).

---

### **Object type**

*Number*

Default: 1.0

Value	Description
0.1 to 10.0	Specifies the brightness compensation value.

## force property

Specifies the forced transmission mode.

In the forced transmission mode, print commands are forcibly transmitted to the printer.

---

### Object type

*Boolean*

Value	Description
true	Enabled
false (default)	Disabled

---

### Supplementary explanation

- ❑ Use the forced transmission mode while the printer is offline.
- ❑ When it is used while the printer is online, the error code EX\_BADPORT will be passed to code of [onreceive event](#).
- ❑ The following functions are available in the forced transmission mode:
  - Drawer kick ([addPulse method](#))
  - Buzzer stop ([addSound method](#))
  - Recovery from a recoverable error ([addRecovery method](#))
  - Reset ([addReset method](#))
  - Real-time command transmission ([addCommand method](#))

timeout property

Specifies the timeout period for messages sent by [send method](#).  
Adjust the timeout period depending on the model specifications, communication interface, and transmission data size.

Object type

Number

Default: 10000

Value	Description
0 to 600000	Specifies the timeout period in milliseconds.

interval property

Specifies the interval of acquisition and update of printer status enabled by [startMonitor method](#).

**Object type**

*Number*

Default: 3000

When an invalid value is specified, the default value will be used.

Value	Description
1000 to 6000	Specifies the printer status update interval in milliseconds.

## drawerOpenLevel property

Specifies the signal line status of the drawer to generate [ondraweropen event](#) and [ondrawerclosed event](#). Change this value in accordance with the specifications of the drawer used.

---

### Object type

*Integer*

Value	Signal line status	Description
DRAWER_OPEN_LEVEL_LOW (default)	HIGH → LOW	<a href="#">ondraweropen event</a> is generated.
	LOW → HIGH	<a href="#">ondrawerclosed event</a> is generated.
DRAWER_OPEN_LEVEL_HIGH	HIGH → LOW	<a href="#">ondrawerclosed event</a> is generated.
	LOW → HIGH	<a href="#">ondraweropen event</a> is generated.

## message property

Displays a command added by an API of the Printer object as a code.

This property can be used to directly manipulate codes to check, add, and/or delete commands.

---

**Object type**

*String*

## onreceive event

Receives the print result.

### Syntax

```
Function (response)
```

### Parameters of callback function

Parameter: response

Object type: Object

### response object properties

Property	Description	Object type
success	Print result	Boolean
code	Error code	String
status	Status	Number
battery	Battery status	Number
printjobid	Print job ID	String

#### success

Value	Description
true	<ul style="list-style-type: none"> <li>Printing succeeded.</li> <li>Process succeeded (when the spooler function is enabled).</li> </ul>
false	<ul style="list-style-type: none"> <li>Printing failed.</li> <li>Process failed (when the spooler function is enabled).</li> </ul>

#### code

Value	Description
'EPTR_AUTOMATICAL'	Automatic recovery error occurred.
'EPTR_BATTERY_LOW'	Battery has run out.
'EPTR_COVER_OPEN'	Cover open error occurred.
'EPTR_CUTTER'	Auto cutter error occurred.
'EPTR_MECHANICAL'	Mechanical error occurred.
'EPTR_REC_EMPTY'	Roll paper has run out.
'EPTR_UNRECOVERABLE'	Unrecoverable error occurred.
'SchemaError'	Print request XML contains a syntax error.

Value	Description
'DeviceNotFound'	Printer specified by the device ID does not exist.
'PrintSystemError'	Error occurred with the printing system.
'EX_BADPORT'	Error was detected with the communication port.
'EX_TIMEOUT'	Print timeout occurred.
'EX_SPOOLER'	Print queue is full.
'JobNotFound'	Specified job ID does not exist.
'Printing'	Printing

*status*

Perform an AND operation with a constant.

Constant (status)	Description
ASB_NO_RESPONSE	No response from printer
ASB_PRINT_SUCCESS	Print finished/spool completed
ASB_DRAWER_KICK	Drawer kick connector pin No.3 status = "H"
ASB_BATTERY_OFFLINE	Offline status due to the battery level
ASB_OFF_LINE	Offline status
ASB_COVER_OPEN	Cover open
ASB_PAPER_FEED	Paper is being fed by the paper feed switch.
ASB_WAIT_ON_LINE	Waiting for recovery to online
ASB_PANEL_SWITCH	Panel switch is being operated.
ASB_MECHANICAL_ERR	Mechanical error occurred.
ASB_AUTOCUTTER_ERR	Auto cutter error occurred.
ASB_UNRECOVER_ERR	Unrecoverable error occurred.
ASB_AUTORECOVER_ERR	Automatic recovery error occurred.
ASB_RECEIPT_NEAR_END	Roll paper has almost run out.
ASB_RECEIPT_END	Roll paper has run out.
ASB_BUZZER	Buzzer is sounding (supported model only)
ASB_SPOOLER_IS_STOPPED	Spooler stopped

*battery*

- ❑ AC adapter connection status

Constant (battery)	Description
0x30XX	Connected
0x31XX	Not connected

❑ Remaining battery capacity

Constant (battery)	Description
0xFF36	Remaining battery capacity 6
0xFF35	Remaining battery capacity 5
0xFF34	Remaining battery capacity 4
0xFF33	Remaining battery capacity 3
0xFF32	Remaining battery capacity 2
0xFF31	Remaining battery capacity 1 (almost run out)
0xFF30	Remaining battery capacity 0 (run out)

*printjobid*

Value	Description
printjobid	Print job ID

**Supplementary explanation**

- ❑ For a model without battery, 0xFF30 is set to the battery constant.
- ❑ When there is no print job ID, "" (blank character) is set in printjobid.

## onstatuschange event

Receives the printer status acquired by the Printer object.

---

### **Syntax**

```
Function (status)
```

---

### **Parameters of callback function**

Parameter: status

Object type: Number

## onbatterystatuschange event

Receives the battery status acquired by the Printer object.

---

### **Syntax**

```
Function (battery)
```

---

### **Parameters of callback function**

Parameter: battery

Object type: Number

## ononline event

Receives the online status acquired by the Printer object.

---

### ***Syntax***

```
Function ()
```

## onoffline event

Receives the offline status acquired by the Printer object.

---

### **Syntax**

```
Function ()
```

## onpoweroff event

Receives the no response status acquired by the Printer object.

---

### **Syntax**

```
Function ()
```

## oncoverok event

Receives the cover close status acquired by the Printer object.

---

### ***Syntax***

```
Function ()
```

## oncoveropen event

Receives the cover open status acquired by the Printer object.

---

### ***Syntax***

```
Function ()
```

## onpaperok event

Receives the paper remaining status acquired by the Printer object.

---

### ***Syntax***

```
Function ()
```

## Onpapernearend event

Receives the paper almost run out status acquired by the Printer object.

---

### ***Syntax***

```
Function ()
```

## onpaperend event

Receives the paper has run out status acquired by the Printer object.

---

### ***Syntax***

```
Function ()
```

## ondrawerclosed event

Receives the drawer close status acquired by the Printer object.

---

### **Syntax**

```
Function ()
```

---

### **Supplementary explanation**

The signal line status to generate the ondrawerclosed event is specified by [drawerOpenLevel](#) property.

## ondraweropen event

Receives the drawer open status acquired by the Printer object.

---

### **Syntax**

```
Function ()
```

---

### **Supplementary explanation**

The signal line status to generate the ondraweropen event is specified by [drawerOpenLevel](#) property.

## onbatteryok event

Receives the battery remaining status acquired by the Printer object.

---

### **Syntax**

```
Function ()
```

## onbatterylow event

Receives the battery run out status acquired by the Printer object.

---

### **Syntax**

```
Function ()
```

## HybridPrinter object

### lock method

Locks the device port. Use this method when, for example, performing MICR control and slip printing sequentially to prevent other processes from interrupting the operation.

The execution result of the lock method is passed to the callback function of [onreceive event](#).

---

#### **Syntax**

```
lock ( ) ;
```

---

#### **Supplementary explanation**

After executing the lock method, execute [Unlock method](#) before closing the application. If the unlock method is not executed, the port cannot be locked for approximately five minutes until the TM-DT software unlock it and ERROR\_DEVICE\_BUSY will be passed to [onreceive event](#) during this period.

## Unlock method

Unlocks the device port. The execution result of the unlock method is passed to the callback function of [onreceive event](#).

---

### ***Syntax***

```
unlock();
```

## eject method

Ejects the check sheet. The execution result of the eject method is passed to the callback function of [onreceive event](#).

---

### ***Syntax***

```
eject();
```

## ReceiptPrinter.send method

Sends data in the command buffer to the printer to perform receipt printing. The execution result of the ReceiptPrinter.send method is passed to the callback function of [onreceive event](#).

---

### **Syntax**

```
ReceiptPrinter.send();
```

## ReceiptPrinter.print method

Prints image data drawn in HTML5 Canvas.

Converts the specified area of an HTML5 Canvas RGBA full-color image into raster data according to [halftone property](#) and [brightness property](#) setting. 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

```
print(canvas, cut, mode);
```

### Parameter

*canvas*

Value	Description
canvas	Specifies an HTML5 Canvas object.

*cut*

Value	Description
true	Uses the automatic cutting function.
false	Does not use the automatic cutting function.
undefined	Does not use the automatic cutting function.

*mode*

Value	Description
MODE_MONO	Monochrome (2 scales)
MODE_GRAY16	Multi-gradation (16 scales)
undefined	Monochrome (2 scales)

### Supplementary explanation

- ❑ HTML5 Canvas data containing image data downloaded from different domains cannot be printed. A security error occurs due to the Same-Origin policy of JavaScript.
- ❑ Multi-gradation printing can be used in the standard mode but not in the page mode.

## SlipPrinter.send method

Sends data in the command buffer to the printer to perform slip printing on the front side of the check sheet. The execution result of the SlipPrinter.send method is passed to the callback function of [onreceive event](#).

---

### ***Syntax***

```
SlipPrinter.send();
```

## SlipPrinter.cancel method

Cancels the check sheet insertion wait status after executing [SlipPrinter.send method](#). The execution result of the SlipPrinter.cancel method is passed to the callback function of [onreceive event](#).

---

### **Syntax**

```
SlipPrinter.cancel();
```

## EndorsePrinter.enable40cplMode method

Sets slip printing on the back side of the slip sheet in the 40cpl mode.

**Syntax**

```
EndorsePrinter.enable40cplMode(enable) ;
```

**Parameter**

*enable*

Value	Description
true	Enables the 40cpl mode.
false	Disables the 40cpl mode.

**Supplementary explanation**

This API does not work in the page mode.

## EndorsePrinter.send method

Sends data in the command buffer to the printer to perform slip printing on the back side of the check sheet. The execution result of the EndorsePrinter.send method is passed to the callback function of [onreceive event](#).

---

### ***Syntax***

```
EndorsePrinter.send();
```

---

### ***Supplementary explanation***

This API does not work in the page mode.

## EndorsePrinter.cancel method

Cancels the check sheet insertion wait status after executing [EndorsePrinter.send method](#). The execution result of the EndorsePrinter.cancel method is passed to the callback function of [onreceive event](#).

---

### **Syntax**

```
EndorsePrinter.cancel();
```

---

### **Supplementary explanation**

This API does not work in the page mode.

## MICRReader.read method

Performs read by MICR. Inserting a check sheet after executing the MICRReader.read method starts the MICR read operation. The execution result of the MICRReader.read method is passed to the callback function of [onreceive event](#).

### Syntax

```
MICRReader.read(ignoreerror, font);
```

### Parameter

*ignoreerror*

Value	Description
true	Continues processing by replacing an illegible character with "?".
false	Stops processing when an illegible character is encountered.

*font*

Value	Description
"MICR_E13B"	Specifies E13B as the read font.
"MICR_CMC7"	Specifies CMC7 as the read font.

## MICRReader.cleaning method

Cleans the MICR mechanism. Inserting a cleaning sheet after executing the MICRReader.cleaning method starts cleaning the MICR mechanism. The execution result of the MICRReader.cleaning method is passed to the callback function of [onreceive event](#).

---

### ***Syntax***

```
MICRReader.cleaning();
```

## MICRRReader.cancel method

Cancels the cleaning sheet insertion wait status after executing [MICRRReader.cleaning method](#). The execution result of the MICRRReader.cancel method is passed to the callback function of [onreceive event](#).

---

### **Syntax**

```
MICRRReader.cancel ( ) ;
```

## recover method

Recovers the printer from an error condition.

When a recoverable error occurs with the printer, just removing the error cause does not recover the printer from the error. By executing the recover method, the printer recovers from the error and becomes ready for printing.

---

### ***Syntax***

```
recover ( ) ;
```

## reset method

Resets the printer.

The printer returns to the initialized state and print data remaining in the printer buffer and any other data which is not stored in the printer (e.g., print setting) will be all lost.

---

### ***Syntax***

```
reset ( ) ;
```

## startMonitor method

Enables acquisition and update of printer status by the HybridPrinter object.

Executing the startMonitor method enables the HybridPrinter object to acquire and update the printer status at the interval specified by [interval property](#) and passes the acquired or updated printer status to the following events:

- ❑ [onstatuschange event](#)
- ❑ [online event](#)
- ❑ [offline event](#)
- ❑ [onpoweroff event](#)
- ❑ [oncoverok event](#)
- ❑ [oncoveropen event](#)
- ❑ [onpaperok event](#)
- ❑ [Onpapernearend event](#)
- ❑ [onpaperend event](#)
- ❑ [ondrawerclosed event](#)
- ❑ [ondraweropen event](#)

---

### Syntax

```
startMonitor();
```

## stopMonitor method

Disables acquisition and update of printer status by the HybridPrinter object enabled by [startMonitor method](#).

---

### **Syntax**

```
stopMonitor();
```

## halftone property

Specifies the halftone processing method.

Applied to monochrome (2-scale) receipt printing by [ReceiptPrinter.print method](#) and [addImage method](#).

---

### Object type

*String*

Constant	Process- ing method	Description
HALFTONE_DITHER (default)	Dithering	Printing graphics only
HALFTONE_ERROR_DIFFUSION	Error diffu- sion	Printing that includes text and graphics
HALFTONE_THRESHOLD	Threshold	Printing text only

## brightness property

Specifies the brightness compensation value.

Applied to receipt printing by [ReceiptPrinter.print method](#) and [addImage method](#).

---

### **Object type**

*Number*

Default: 1.0

Value	Description
0.1 to 10.0	Specifies the brightness compensation value.

## force property

Specifies the forced transmission mode.

In the forced transmission mode, print commands are forcibly transmitted to the printer.

### Object type

*Boolean*

Value	Description
true	Enabled
false (default)	Disabled

### Supplementary explanation

- ❑ Use the forced transmission mode while the printer is offline.
- ❑ When it is used while the printer is online, the error code EX\_BADPORT will be passed to code of [onreceive event](#).
- ❑ Use the forced transmission mode while the printer is offline.
- ❑ When it is used while the printer is online, the error code EX\_BADPORT will be passed to code of [onreceive event](#).
- ❑ The following functions are available in the forced transmission mode:
  - Drawer kick ([addPulse method](#))
  - Buzzer stop ([addSound method](#))
  - Recovery from a recoverable error ([recover method](#))
  - Reset ([reset method](#))
  - Real-time command transmission ([addCommand method](#))

## SlipPrinter.timeout property

Specifies the timeout period for the check sheet insertion wait status after executing [SlipPrinter.send method](#) in milliseconds.

---

### ***Object type***

*Number*

Default: 10000

## EndorsePrinter.timeout property

Specifies the timeout period for the check sheet insertion wait status after executing [EndorsePrinter.send method](#) in milliseconds.

---

### ***Object type***

*Number*

Default: 10000

## MICRReader.timeout property

Specifies the timeout period for the check sheet or cleaning sheet insertion wait status after executing [MICRReader.read method](#) or [MICRReader.cleaning method](#) in milliseconds.

---

### ***Object type***

*Number*

Default: 10000

interval property

Specifies the interval of acquisition and update of printer status enabled by [startMonitor method](#).

**Object type**

*Number*

Default: 3000

When an invalid value is specified, the default value will be used.

Value	Description
1000 to 6000	Specifies the printer status update interval in milliseconds.

## onreceive event

Receives the execution results of the HybridPrinter object.

### Syntax

```
Function(data, sq);
```

### Parameters of callback function

Parameter: data, sq

Object type: Object, Number

### Properties of data object

Property	Description	Object type
eventtype	Method name to return the event	String
success	Method processing result to return the event	Boolean
code	Method execution result to return the event	String
status	Printer status	String
data	MICR read result	String

#### success

Value	Description
true	Success
false	Failure

#### code

Value	Description
'SUCCESS'	Success
'EPTR_AUTOMATICAL'	Automatic recovery error occurred.
'EPTR_COVER_OPEN'	Cover open error occurred.
'EPTR_CUTTER'	Auto cutter error occurred.
'EPTR_MECHANICAL'	Mechanical error occurred.
'EPTR_REC_EMPTY'	Roll paper has run out.
'EPTR_UNRECOVERABLE'	Unrecoverable error occurred.
'SchemaError'	Print request XML contains a syntax error.
'DeviceNotFound'	Printer specified by the device ID does not exist.

Value	Description
'PrintSystemError'	Error occurred with the printing system.
'EX_BADPORT'	Error was detected with the communication port.
'EX_TIMEOUT'	Print timeout occurred.
'ERROR_DEVICE_NOT_FOUND'	The device was not found.
'ERROR_DEVICE_BUSY'	Failed to open the port.
'CANCEL'	Cancels the check sheet insertion wait status.
'ERROR_TIMEOUT'	Check sheet insertion wait timeout
'ERROR_PARAMETER'	A parameter error occurred.
'ERROR_NOT_SUPPORTED'	Hybrid printer is not connected.
'EPTR_SCHEMAERROR'	Print request XML contains a syntax error.
'ERROR_COMMAND'	Cannot cancel the check sheet insertion wait status.
'EMICR_ILLEGAL_LENGTH'	Inserted check sheet is not of an appropriate length.
'EMICR_NO_MICR'	Cannot detect MICR data.
'EMICR_RECOGNITION'	Illegible MICR text was detected.
'EMICR_READ'	Error occurred during MICR read operation.
'EMICR_NOISE_DETECTED'	Noise error was detected.
'EMICR_COVER_OPEN'	Cover was opened during MICR read operation.
'EMICR_PAPER_JAM'	Paper jam error occurred.

*status*

Perform an AND operation with a constant.

Constant (status)	Description
ASB_NO_RESPONSE	No response from printer
ASB_PRINT_SUCCESS	Printing completed.
ASB_DRAWER_KICK	Drawer kick connector pin No.3 status = "H"
ASB_OFF_LINE	Offline status
ASB_COVER_OPEN	Cover open
ASB_PAPER_FEED	Paper is being fed by the paper feed switch.
ASB_WAIT_ON_LINE	Waiting for recovery to online
ASB_PANEL_SWITCH	Paper feed switch is held depressed.

Constant (status)	Description
ASB_MECHANICAL_ERR	Mechanical error occurred.
ASB_AUTOCUTTER_ERR	Auto cutter error occurred.
ASB_UNRECOVER_ERR	Unrecoverable error occurred.
ASB_AUTORECOVER_ERR	Automatic recovery error occurred.
ASB_SLIP_INSERT_WAIT	Waiting for insertion of a check sheet for slip printing
ASB_RECEIPT_NEAR_END	Roll paper has almost run out.
ASB_SLIP_REMOVE_WAIT	Waiting for ejection of a check sheet for slip printing
ASB_RECEIPT_END	Roll paper has run out.
ASB_TOF_NOPAPER	Check sheet is not inserted deep enough.
ASB_BOF_NOPAPER	Check sheet is not correctly aligned with the right edge of the paper guide.
ASB_BUZZER	Buzzer is sounding (supported model only)
ASB_SLIP_NO_SELECT	Slip printing is not selected.
ASB_SLIP_IMPOSSIBLE_PRINT	Cannot print on the check sheet.
ASB_SPOOLER_IS_STOPPED	Spooler is stopped (not used).

### ***sq object properties***

Property	Description	Object type
sq	Process sequence number	Number

### ***Supplementary explanation***

When a method other than [MICRReader.read method](#) is executed, null will be set in the data property.

# Scanner object

## ondata event

Receives information ready by the barcode scanner from a barcode.

**Syntax**

```
Function(data) ;
```

**Parameters of callback function**

- Parameter: data
- Object type: Object

**Properties of data object**

Property	Description	Object type
input	Detected string	String

# SimpleSerial object

## sendCommand

Transfers a command. Response data from a device acquired by executing sendCommand is passed to the callback function of [oncommandreply event](#).

**Syntax**

```
sendCommand (data) ;
```

**Parameter**

*data*

Value	Description
data	Specifies a command as a string.

**oncommandreply event**

Receives response data from a device acquired by executing [sendCommand](#).

**Syntax**

```
Function(data) ;
```

**Parameters of callback function**

Parameter: data  
Object type: Object

**Properties of data object**

Property	Description	Object type
data	Response data string	String

**Supplementary explanation**

Since response data from a device may be divided into several packets, be sure to check if the entire response data has been received with the oncommandreply event.

When the response data is divided into multiple packets, multiple oncommandreply events occurs.

Wait for the succeeding data before proceeding with the process.

# DeviceHubTerminal object

## shutdown method

Shuts down the printer.

### Syntax

```
shutdown(password, callback);
```

### Parameter

*password*

Value	Description
password	Specify the password set in EPSON TMNet WebConfig as a string.

*callback*

Value	Description
callback	Specifies a callback function to receive the execution result.

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
status	Shutdown result	String

*status*

Value	Description
"SUCCESS"	Success
"AUTHENTICATION_ERROR"	Password authentication error
"ACCESS_DENIED"	Shutdown was tried while it is set to "Not Allowed."
"SYSTEM_ERROR"	System error

### Supplementary explanation

- ❑ Required to set the printer shutdown setting to "Allow" by using EPSON TMNet WebConfig. For details, refer to the Technical Reference Guide of the printer.

- ❑ When password authentication is set to "Required" in EPSON TMNet WebConfig shutdown setting, authenticate with the password as a specified string.

## restart method

Restarts the printer.

### Syntax

```
restart(password, callback);
```

### Parameter

*password*

Value	Description
password	Specify the password set in EPSON TMNet WebConfig as a string.

*callback*

Value	Description
callback	Specifies a callback function to receive the execution result.

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
status	Execution result of restart	String

*status*

Value	Description
"SUCCESS"	Success
"AUTHENTICATION_ERROR"	Password authentication error
"ACCESS_DENIED"	Restart was tried while shutdown is set to "Not Allowed".
"SYSTEM_ERROR"	System error

### Return value

Return value	Description	Object type
sq	Process sequence number	String

---

***Supplementary explanation***

- ❑ Required to set the printer shutdown setting to "Allow" by using EPSON TMNet WebConfig. For details, refer to the Technical Reference Guide of the printer.
- ❑ When password authentication is set to "Required" in EPSON TMNet WebConfig shutdown setting, authenticate with the password as a specified string.

# CommBoxManager object

## openCommBox method

Opens the communication box.

The TM-DT software and TM-i firmware create a communication box and add an application as its member.

### Syntax

```
openCommBox(boxID, option, callback);
```

### Parameter

*boxID*

Value	Description
boxID	Specifies the box ID to open.

*option*

Property	Description	Object type
memberID	Specifies a member ID to identify the application itself in the communication box.	String

*callback*

Specifies a callback function to receive the open process result.

The commBox object is passed to the first parameter and the following strings is passed to the second parameter to indicate the result.

A sequence number which is same as the return value is passed to the third parameter.

String	Description
"OK"	Communication box opened successfully.
"ALREADY_OPENED"	Communication box is already open.
"MEMBERID_ALREADY_USED"	Specified member ID is already in use.
"BOX_COUNT_OVER"	The number of created communication boxes has exceeded the upper limit.
"BOX_CLIENT_OVER"	The number of members belong to the communication box has exceeded the upper limit.
"PARAMETER_ERROR"	A parameter error occurred.
"SYSTEM_ERROR"	An unknown error occurred.

---

***Return value***

Return value	Description	Object type
sq	Process sequence number	String

---

***Supplementary explanation***

When the process of the openCommBox method fails, null will be passed to the first parameter.

## closeCommBox method

Closes the communication box.

The TM-DT software and TM-i firmware delete applications from the member of communication box and the empty communication box will be deleted.

### Syntax

```
closeCommBox(commBoxObj, callback);
```

### Parameter

*commBoxObj*

Value	Description
commBoxObj	Specifies the commBox object to close.

*callback*

Specifies a callback function to receive the close process result.

One of the following strings is passed to the first parameter to indicate the result and a sequence number which is same as the return value is passed to the second parameter.

String	Description
"OK"	Communication box closed successfully.
"NOT_OPENED"	Communication box is not open.
"PARAMETER_ERROR"	A parameter error occurred.
"SYSTEM_ERROR"	An unknown error occurred.

### Return value

Return value	Description	Object type
sq	Process sequence number	String

# CommBox object

## getCommHistory method

Acquires the transmission history of the communication box.

### Syntax

- ❑ `getCommHistory(callback);`
- ❑ `getCommHistory(option, callback);`

### Parameter

*option*

Value	Description
true	Acquires the entire transmission history of the communication box.
false	Acquires the transmission history of data sent to the own member ID only.

*callback*

Specifies the callback function which acquires the transmission history of the communication box. One of the following strings is passed to the first parameter to indicate the result.

String	Description
"OK"	Transmission history acquired successfully.
"NOT_OPENED"	Communication box is not open.
"SYSTEM_ERROR"	An unknown error occurred.

The following historyList is passed to the second parameter.

historyList.(index)	Description	Object type
senderId	memberID of the sender	String
receiverId	memberID of the receiver	String
message	Received message	Hash

A sequence number which is same as the return value is passed to the third parameter.

### Return value

Return value	Description	Object type
sq	Process sequence number	String

---

***Supplementary explanation***

false is set to an option omitted.

## send method

Sends data to the communication box.

### Syntax

```
send(message, memberId, callback);
```

### Parameter

*message*

Value	Description
message	Specifies data to send.

*memberId*

Value	Description
memberId	Specifies the member ID of the receiver.

*callback*

Specifies a callback function to receive the execution result of the send method.

One of the following strings is passed to the first parameter to indicate the result.

String	Description
"OK"	Message transmission succeeded.
"NOT_OPENED"	Communication box is not open.
"MEMBER_NOT_FOUND"	Specified member cannot be found.
"SYSTEM_ERROR"	An unknown error occurred.

The number of clients which tried data transmission is passed to the second parameter and a sequence number which is same as the return value is passed to the second parameter.

### Return value

Return value	Description	Object type
sq	Process sequence number	String

### Supplementary explanation

When null or "" (blank character) is specified in member Id, data is sent to all the members other than the sender.

## onreceive event

Notifies an application of the contents received in the communication box.

### Syntax

```
Function(data) ;
```

### Parameters of callback function

Parameter: data

Object type: Object

### Properties of data object

Property	Description	Object type
senderId	The member ID of the sender	String
receiverId	The member ID of the receiver	String
message	Received data	String

### Supplementary explanation

- ❑ If no member ID was specified when running [openCommBox method](#), "" (blank character) is set in senderId.
- ❑ If data was sent to all the members of the communication box, "" (blank character) is set in receiverId.

## ePosDeviceConfiguration object

### Constructor

Creates an ePosDeviceConfiguration object.

---

#### Syntax

```
ePosDeviceConfiguration(address) ;
```

---

#### Parameter

*address*

Value	Description
address	Specifies the IP address of the connecting printer.

## getRegisterdDevices method

Acquires the device availability information registered to the printer and notifies an application of the information.

### Syntax

```
getRegisterdDevices(deviceGroup, callback);
```

### Parameter

*deviceGroup*

Value	Description
DEVICE_GROUP_ALL	Acquires all devices.

*callback*

Specifies a callback function to receive the execution result of the getRegisterdDevices method.

The ePosDeviceConfiguration object is passed to the first parameter and the following value is passed to the second parameter to indicate the result:

Property	Description
deviceId	Device ID
deviceType	Device type
status	Device status

- deviceType

Value	Description
type_cash_changer	Automatic cash changer
type_display	Customer display
type_keyboard	Keyboard
type_msr	MSR
type_printer	Printer
type_hybrid_printer	Hybrid printer
type_scanner	Barcode scanner
type_simple_serial	Serial communication device

- status

Value	Description
online	Available
offline	Unavailable
unknown	Unknown status

---

***Supplementary explanation***

The deviceGroup parameter is fixed to DEVICE\_GROUP\_ALL.

## Error Code List

### Error Codes acquired in the Callback Parameter and Counteractions

Error code	Cause	Counteraction
PARAM_ERROR	An invalid parameter was passed. <Example> A value outside the supported range was specified.	Check the value specified in the parameter.
ERROR_PARAMETER		
PARAMETER_ERROR		
ERROR_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.
DEVICE_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.
DEVICE_IN_USE	The specified device is in use. <Example> The device is being used by another application.	Stop using the device from another application.
ERR_TYPE_INVALID	The device object is not correct (Printer, Display).	Check the type of the connected device and connect to it with the correct device class.
	This TM printer does not support ESC/POS.	Use it as the TM intelligent printer.
DEVICE_OPEN_ERROR	Failed to connect to the device.	<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>
DEVICE_NOT_OPEN	<ul style="list-style-type: none"> <li>The device is not connected.</li> <li>Tried to control the device without calling <a href="#">createDevice method</a>.</li> </ul>	<ul style="list-style-type: none"> <li>Check communication status and connect with the device.</li> <li>Check if <a href="#">createDevice method</a> has been called.</li> </ul>
DEVICE_CLOSE_ERROR	Failed to disconnect the device.	Check connection with the device.
ALREADY_OPENED	Communication box is already open.	Finish communication with the communication box.
MEMBERID_ALREADY_USED	Specified member ID is already in use.	Specify a different member ID.

Error code	Cause	Counteraction
MEMBER_NOT_FOUND	The specified target could not be found. <Example> The member specified as the data receiver does not exist in the communication box.	Check the member ID and communication with the device.
BOX_COUNT_OVER	The number of created communication boxes has exceeded the upper limit.	Delete an unnecessary communication box.
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.
NOT_OPENED	Communication box is not open.	Open the communication box.
SYSTEM_ERROR	An unknown error occurred.	Check for a problem with the execution environment.

## Error Codes acquired in the Onreceive Event and Countermeasure

### Error code

❑ Printer object

Error code	Cause	Counteraction
EPTR_AUTOMATICAL	Automatic recovery error occurred.	Run the process after the printer has been recovered.
EPTR_BATTERY_LOW	Battery has run out.	Replace the battery or use the AC adapter.
EPTR_COVER_OPEN	Cover is open.	Close the printer cover.
EPTR_CUTTER	Auto cutter error occurred.	Remove the error cause and power off and then on the printer.
EPTR_MECHANICAL	Mechanical error occurred.	Remove the error cause and power off and then on the printer.
EPTR_REC_EMPTY	Paper has run out.	Set the paper.
EPTR_UNRECOVERABLE	Unrecoverable error occurred.	Power off and then on the printer. Contact the distributor or service center if the problem persists.
SchemaError	Print request XML contains a syntax error.	Check the print request XML syntax.
DeviceNotFound	<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> <li>The specified device is not connected to the printer.</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> <li>Check the registration status of device to the printer.</li> </ul>
PrintSystemError	An error occurred with the TM-i firmware or TM-DT software.	Power off and then on the TM intelligent printer to restart the OS.
EX_BADPORT	Forced transmission was run in the online state.	Run forced transmission in the offline state.
EX_TIMEOUT	The process exceeded the specified timeout period.	Adjust the timeout period.
EX_SPOOLER	Print data exceeding the spooler capacity was transmitted.	Check if communication with the printer is disconnected.
JobNotFound	A print job ID which did not exist was specified.	Check the specified job ID.
Printing	<a href="#">getPrintJobStatus method</a> was run by specifying a print job ID which was being printed.	Run the process after printing completes.

❑ HybridPrinter object

Error code	Cause	Counteraction
EPTR_AUTOMATICAL	Automatic recovery error occurred.	Run the process after the printer has been recovered.
EPTR_COVER_OPEN	Cover is open.	Close the printer cover.
EPTR_CUTTER	Auto cutter error occurred.	Remove the error cause and power off and then on the printer.
EPTR_MECHANICAL	Mechanical error occurred.	Remove the error cause and power off and then on the printer.
EPTR_REC_EMPTY	Paper has run out.	Set the paper.
EPTR_UNRECOVERABLE	Unrecoverable error occurred.	Power off and then on the printer. Contact the distributor or service center if the problem persists.
SchemaError	Print request XML contains a syntax error.	Check the print request XML syntax.
DeviceNotFound	<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>
PrintSystemError	An error occurred with the TM-i firmware or TM-DT software.	Power off and then on the TM intelligent printer to restart the OS.
EX_BADPORT	Forced transmission was run in the online state.	Run forced transmission in the offline state.
EX_TIMEOUT	The process exceeded the specified timeout period.	Adjust the timeout period.
ERROR_DEVICE_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> <li>The specified device is not connected to the printer.</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> <li>Check the registration status of device to the printer.</li> </ul>
ERROR_DEVICE_BUSY	<ul style="list-style-type: none"> <li>The specified device is in use.</li> <li>Slip printing is in progress.</li> </ul>	<ul style="list-style-type: none"> <li>Stop using the device from another application.</li> <li>Perform the operation after slip printing completes.</li> </ul>
ERROR_TIMEOUT	Specified timeout period has passed the time waiting for insertion of the check sheet.	Adjust the timeout period.
ERROR_PARAMETER	An invalid parameter was passed.	Check the value specified in the parameter.

Error code	Cause	Counteraction
ERROR_NOT_SUPPORTED	Function not supported by the device was specified.	Check if the function is supported by the connection device.
EPTR_SCHEMAERROR	Print request XML contains a syntax error.	Check the print request XML syntax.
ERROR_COMMAND	Invalid command was passed.	Check the device status.
EMICR_ILLEGAL_LENGTH	Paper length is not appropriate.	Check the paper length.
EMICR_NO_MICR	MICR data cannot be detected.	Check the check sheet and clean the MICR mechanism if necessary.
EMICR_RECOGNITION	Illegible MICR text was detected.	Check the contents of the check sheet.
EMICR_READ	MICR read error occurred.	Remove the error cause and try again. If the error persists, restart the printer.
EMICR_NOISE_DETECTED	Error occurred during noise measurement.	Remove the error cause and try the noise measurement again. If the error persists, restart the printer.
EMICR_COVER_OPEN	Cover was opened during MICR read operation.	Close the printer cover.
EMICR_PAPER_JAM	Paper jam error occurred.	Remove the jammed paper.

❑ Display object

Error code	Cause	Counteraction
EDSP_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>
EDSP_NOT_OPEN	Device may be faulty.	Restart the printer and try again. If the problem persists, contact the distributor or service support.
EDSP_INVALID_WINDOW	An unregistered window was specified.	Check the specified window number.
EX_BADPORT	Use of display is disabled in EPSON TMNet WebConfig.	Check the setting in EPSON TMNet WebConfig.
EX_TIMEOUT	The process exceeded the specified timeout period.	Adjust the timeout period.
EX_INVALID_VALUE	An invalid parameter was passed.	Check the value specified in the parameter.

## Status

❑ Printer status

Constant (status)	Cause	Counteraction
ASB_NO_RESPONSE	<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.
ASB_BATTERY_OFFLINE	The printer is offline because the battery is low.	Replace the battery or use the AC adapter.
ASB_OFF_LINE	Offline status.	Remove a cause which forces the printer offline (e.g., the cover is open or paper has run out).
ASB_COVER_OPEN	Cover is open.	Close the printer cover.
ASB_PAPER_FEED	Paper is being fed by pressing the Paper Feed button.	Run the process after paper feed completes.
ASB_WAIT_ON_LINE	Waiting for recovery to online.	Retrun the printer online.
ASB_PANEL_SWITCH	Panel switch is being operated.	Run the process after the operation completes.
ASB_MECHANICAL_ERR	Mechanical error occurred.	Remove the error cause and power off and then on the printer.
ASB_AUTOCUTTER_ERR	Auto cutter error occurred.	Remove the error cause and power off and then on the printer.
ASB_UNRECOVER_ERR	Unrecoverable error occurred.	Power off and then on the printer. Contact the distributor or service center if the problem persists.
ASB_AUTORECOVER_ERR	Automatic recovery error occurred.	Run the process after the printer has been recovered.
ASB_RECEIPT_NEAR_END	Paper has almost run out.	Set the paper.
ASB_RECEIPT_END	Paper has run out.	Set the paper.
ASB_BUZZER	Buzzer is sounding.	Check the buzzer sounding condition of the printer, and run the process after removing the cause for buzzer sounding.
ASB_SPOOLER_IS_STOPPED	Print data exceeding the spooler capacity was transmitted.	Check if communication with the printer is disconnected.

❑ Battery status

Constant (battery)	Cause	Counteraction
0x31XX	AC adapter is not connected.	Check connection status of the AC adapter.
0xXX31	Battery has almost run out.	Charge the battery or use the AC adapter.

Constant (battery)	Cause	Counteraction
0xXX30	Battery has run out.	Charge the battery or use the AC adapter.

## Key code list

Constant	Code	Constant	Code
VK_BACK	0x08	VK_L	0x4C
VK_TAB	0x09	VK_M	0x4D
VK_RETURN	0x0D	VK_N	0x4E
VK_SHIFT	0x10	VK_O	0x4F
VK_CONTROL	0x11	VK_P	0x50
VK_MENU	0x12	VK_Q	0x51
VK_CAPITAL	0x14	VK_R	0x52
VK_ESCAPE	0x1B	VK_S	0x53
VK_CONVERT	0x1C	VK_T	0x54
VK_NONCONVERT	0x1D	VK_U	0x55
VK_SPACE	0x20	VK_V	0x56
VK_PRIOR	0x21	VK_W	0x57
VK_NEXT	0x22	VK_X	0x58
VK_END	0x23	VK_Y	0x59
VK_HOME	0x24	VK_Z	0x5A
VK_LEFT	0x25	VK_MULTIPLY	0x6A
VK_UP	0x26	VK_ADD	0x6B
VK_RIGHT	0x27	VK_SUBTRACT	0x6D
VK_DOWN	0x28	VK_F1	0x70
VK_INSERT	0x2D	VK_F2	0x71
VK_DELETE	0x2E	VK_F3	0x72
VK_0	0x30	VK_F4	0x73
VK_1	0x31	VK_F5	0x74
VK_2	0x32	VK_F6	0x75
VK_3	0x33	VK_F7	0x76
VK_4	0x34	VK_F8	0x77
VK_5	0x35	VK_F9	0x78
VK_6	0x36	VK_F10	0x79
VK_7	0x37	VK_F11	0x7A
VK_8	0x38	VK_F12	0x7B

Constant	Code	Constant	Code
VK_9	0x39	VK_OEM_1	0xBA
VK_A	0x41	VK_OEM_PLUS	0xBB
VK_B	0x42	VK_OEM_COMMA	0xBC
VK_C	0x43	VK_OEM_MINUS	0xBD
VK_D	0x44	VK_OEM_PERIOD	0xBE
VK_E	0x45	VK_OEM_2	0xBF
VK_F	0x46	VK_OEM_3	0xC0
VK_G	0x47	VK_OEM_4	0xDB
VK_H	0x48	VK_OEM_5	0xDC
VK_I	0x49	VK_OEM_6	0xDD
VK_J	0x4A	VK_OEM_7	0xDE
VK_K	0x4B	VK_OEM_ATTN	0xF0

# Device Control Scripts

This chapter provides the necessary information needed for customers to develop device control scripts.

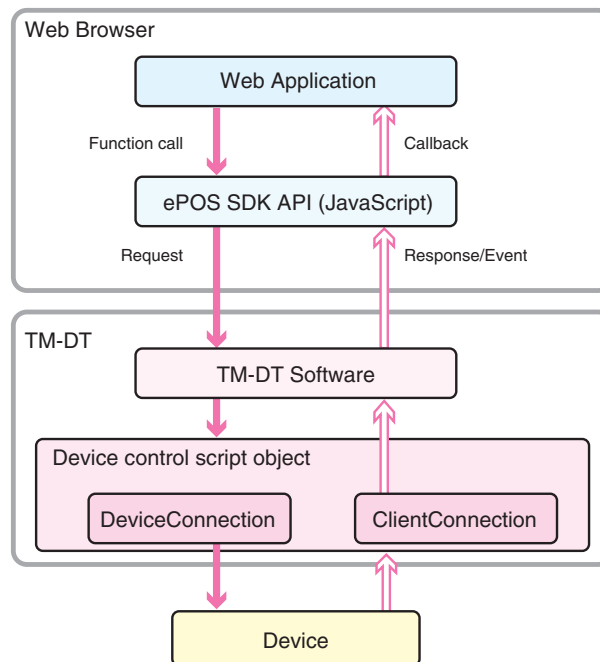


These scripts can only be used with the TM-DT series of TM intelligent printers.

## Programming

### Using Device Control Scripts

Using device control script APIs provided by Epson ePOS SDK for JavaScript enables customization of device data processing and use of new devices from Web applications.



Executing the [createDevice method](#) of the ePOSDevice object generates an object so that TM-DT software can use the device control script corresponding to the device requested.

The device can be controlled with this generated object.

### Device Control Script Objects

The following objects are passed from the TM-DT software to the device control script. Device control scripts communicate with Web applications and devices by using these objects.

Object	Description
ClientConnection	Object used to send data to device objects in the Web browser
DeviceConnection	Object used to send and receive data to/from devices

## Functions that Use Device Control Script Objects

The available functions that use the device control script API are as follows.

- ❑ Calls of user-defined events for device objects in the Web browser
- ❑ Sending of data to devices
- ❑ Receiving of data generated by devices

## Device Control Script Structure

Create device control scripts in accordance with the following conditions.

- ❑ All device control code should be contained in one file.  
This is because only one file can be registered when configuring devices using EPSON TMNet WebConfig.
- ❑ The part of the file name before the first dot should be the name of the constructor.  
Ex.) Filename: ?Keyboard\_Generic.ver1.0.js -> Name of constructor: Keyboard\_Generic
- ❑ Declare exports for constructor external references.  
Ex.) exports.Keyboard\_Generic = Keyboard\_Generic;
- ❑ Device control scripts must have the following properties. Constructors must be configured with appropriate names.
  - DEVICE\_TYPE property (Type of object: String)

Setting value	Description
type_cash_changer	Specifies the use of automatic change dispensing machines.
type_keyboard	Specifies the use of keyboard devices.
type_msr	Specifies the use of MSR.
type_scanner	Specifies the use of barcode scanners.
type_simple_serial	Specifies the use of simple serial communication.

- DEVICE\_GROUP property (Type of object: String)

Setting value	Description
group_hid	Specifies the use of key input devices operable via HID drivers.
group_serial	Specifies the use of serial communication devices.
group_other	Specifies the use of other devices.

- ❑ The onDeviceData method must be created to receive data generated by devices.  
Refer to [Device Control Scripts Naming Object](#) for more information.
- ❑ Methods corresponding to methods for device objects that function in Web browsers must be created.  
Refer to [User-defined event](#) for more information.

### Example Device Control Script Structure

```
// Declares exports
exports.Keyboard_Generic = Keyboard_Generic;

// Defines a function with the same name as the filename with two arguments
function Keyboard_Generic(clientConn, deviceConn){
// Defines the DEVICE_TYPE properties
    this.DEVICE_TYPE = 'type_keyboard';
// Defines the DEVICE_GROUP properties
    this.DEVICE_GROUP = 'group_hid';
    this.clientConn = clientConn;
    this.deviceConn = deviceConn;
    .....
    .....
}

Keyboard_Generic.prototype = {
// Defines the onDeviceData method
    onDeviceData : function(event, keycode, ascii){...},
// Defines a method corresponding to a device object
    setprefix : function(data){...}
}
```

# List of Device Control Script APIs

Device control script APIs are preconfigured with the following objects.

- ❑ [ClientConnection Object](#)
- ❑ [DeviceConnection Object](#)
- ❑ [Device Control Scripts Naming Object](#)

## ClientConnection Object

This object is passed to the first parameter from the device control script constructor.

API		Description
Send	<a href="#">send</a>	This object sends data to device objects operating in the Web browser.

## DeviceConnection Object

This object is passed to the second parameter from the device control script constructor.

API		Description
Send	<a href="#">send</a>	This object sends data to serial communication devices.

## Device Control Scripts Naming Object

This object receives data from devices.

API		Description
Receive results	<a href="#">onDeviceData Event (key input device)</a>	Event that receives data from key input devices
	<a href="#">onDeviceData Event (serial communication device)</a>	Event that receives data from serial communication devices
	<a href="#">User-defined event</a>	Event that receives results of API execution regarding device objects operating in the Web browser

# ClientConnection Object

## send

This object sends data to device objects operating in the Web browser.

### Syntax

```
send(event, data);
```

### Parameter

#### event

Setting value	Description
String	Specifies the name of the device object event

#### data

Setting value	Description
Object	Specifies the data to be passed to the device object event.

### Sample Programs

This sample program calls the device object onkeypress event and uses the onkeypress event data parameter to receive a value of 49 from data.keycode and a value of 1 from data.ascii.

```
data = {'keycode' : 49, 'ascii' : '1'};
clientConn.send('onkeypress', data)
```

# DeviceConnection Object

## send

This object sends data to serial communication devices.

---

### Syntax

```
send (data) ;
```

---

### Parameter

*data*

Setting value	Description
Buffer	Specifies data to be sent to devices

---

### Supplemental information

Data cannot be sent to input devices operable via HID drivers.

# Device Control Scripts Naming Object

## onDeviceData Event (key input device)

This event receives detected data from key input devices operable via HID drivers. Create this event when using device control scripts for key input devices.

### Syntax

```
onDeviceData(event, keycode, ascii);
```

### Parameter

#### *event*

Receives key operation state information.

Value	Description
1	Key down
2	Key up

#### *keycode*

Value	Description
Number	Keycode

#### *ascii*

Value	Description
String	Text corresponding to the operated key

### Supplemental information

- Refer to [Key code list](#) for information on keycodes received with the keycode parameter.
- A value of "undefined" is input when there is no text corresponding to the keycode received by the ascii parameter.

## onDeviceData Event (serial communication device)

This event receives detected data from serial communication devices.

Create this event when using device control scripts for serial communication devices.

---

### Syntax

```
onDeviceData (data) ;
```

---

### Parameter

*data*

Value	Description
Buffer	Data received from serial communication devices

## User-defined event

This event receives results of API execution regarding device objects operating in the Web browser.

---

### Syntax

```
Name specified with callEvent(data);
```

---

### Parameter

*data*

Value	Description
Object	Object with parameter specified by the <a href="#">callEvent method</a> device object

# Device Specifications

Provides information about restriction on the use of APIs depend on devices such as printer and POS peripheral device, and the parameter setting value.

## Supported printers for each class

The following is a list of supported printers for each class.

Class	Supported Printers
<a href="#">ePOSDevice object</a>	All Printers
<a href="#">Common to device objects</a>	TM-DT series
<a href="#">CashChanger object</a>	TM-DT series
<a href="#">Display object</a>	Use together with the following printer and customer display. <ul style="list-style-type: none"> <li>• TM intelligent printer + DM-D110</li> <li>• TM-m30 + DM-D30</li> </ul>
<a href="#">Keyboard object</a>	TM intelligent printer
<a href="#">MSR object</a>	TM-DT series
<a href="#">Printer object</a>	All Printers Availability and restriction on the use of API differs by printers. Refer to <a href="#">List of supported APIs</a> .
<a href="#">HybridPrinter object</a>	Hybrid printer
<a href="#">Scanner object</a>	TM intelligent printer
<a href="#">SimpleSerial object</a>	TM intelligent printer
<a href="#">DeviceHubTerminal object</a>	TM-DT series
<a href="#">CommBoxManager object</a>	TM intelligent printer
<a href="#">CommBox object</a>	TM intelligent printer
<a href="#">ePosDeviceConfiguration object</a>	TM-DT series of TM-DT software Ver. 3.0 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.

Refer to [Printer-specific Support Information](#).

### Printer Objects

#### TM Printers

API	TM-m10	TM-m30	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)	TM-P80	TM-T20	TM-T20II	TM-T70	TM-T70II	TM-T81II	TM-T82	TM-T82II	TM-T88V	TM-U220	TM-U330
<a href="#">addTextAlign method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<a href="#">addTextLineSpace method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<a href="#">addTextRotate method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<a href="#">addText method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<a href="#">addTextLang method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<a href="#">addTextFont method</a>	△	△	○	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
<a href="#">addTextSmooth method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<a href="#">addTextDouble method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<a href="#">addTextSize method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
<a href="#">addTextStyle method</a>	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
<a href="#">addTextPosition method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
<a href="#">addTextVPosition method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
<a href="#">addFeedUnit method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<a href="#">addFeedLine method</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

API	TM-m10	TM-m30	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)	TM-P80	TM-T20	TM-T20II	TM-T70	TM-T70II	TM-T81II	TM-T82	TM-T82II	TM-T88V	TM-U220	TM-U330
addFeedPosition method	-	-	△	-	○	-	○	△	-	-	-	-	-	-	-	-	-	△
addFeed method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
addImage method	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
addLogo method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	○
addBarcode method	△	△	○	△	△	△	△	△	△	△	△	△	△	△	△	△	-	-
addSymbol method	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	-	-
addHLine method	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addVLineBegin method	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addVLineEnd method	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
addPageBegin method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
addPageEnd method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
addPageArea method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
addPageDirection method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
addPagePosition method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
addPageLine method	-	-	△	△	△	△	△	△	-	-	-	-	-	-	-	-	-	-
addPageRectangle method	-	-	△	△	△	△	△	△	-	-	-	-	-	-	-	-	-	-
addCut method	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
addPulse method	○	○	-	-	-	-	-	-	○	○	○	○	○	○	○	○	○	○
addSound method	△	△	△	-	-	△	△	△	△	△	-	△	-	△	△	△	-	△
addLayout method	-	-	△	-	○	-	○	△	-	-	-	-	-	-	-	-	-	-
recover method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
addRecovery method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-

API	TM-m10	TM-m30	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)	TM-P80	TM-T20	TM-T20II	TM-T70	TM-T70II	TM-T81II	TM-T82	TM-T82II	TM-T88V	TM-U220	TM-U330
reset method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
addReset method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
addCommand method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
send method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
print method	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	△	△
getPrintJobStatus method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
startMonitor method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
stopMonitor method	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
halftone property	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
brightness property	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
force property	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
timeout property	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
interval property	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
drawerOpenLevel property	○	○	-	-	-	-	-	-	○	○	○	○	○	○	○	○	○	○
message property	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
onreceive event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
onstatuschange event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
onbatterystatus-change event	-	-	○	○	○	○	○	○	-	-	-	-	-	-	-	-	-	-
ononline event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
onoffline event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
onpoweroff event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
oncoverok event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
oncoveropen event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
onpaperok event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

API	TM-m10	TM-m30	TM-P20	TM-P60 (Receipt)	TM-P60 (Peeler)	TM-P60II (Receipt)	TM-P60II (Peeler)	TM-P80	TM-T20	TM-T20II	TM-T70	TM-T70II	TM-T81II	TM-T82	TM-T82II	TM-T88V	TM-U220	TM-U330
Onpapernearend event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
onpaperend event	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
ondrawerclosed event	○	○	-	-	-	-	-	-	○	○	○	○	○	○	○	○	○	○
ondraweropen event	○	○	-	-	-	-	-	-	○	○	○	○	○	○	○	○	○	○
onbatteryok event	-	-	○	○	○	○	○	○	-	-	-	-	-	-	-	-	-	-
onbatterylow event	-	-	○	○	○	○	○	○	-	-	-	-	-	-	-	-	-	-

### TM Intelligent Printers

API	TM-T20II-i	TM-T70-i	TM-T70II-DT	TM-T82II-i	TM-T83II-i	TM-T88V-i	TM-T88V-DT	TM-U220-i	TM-H6000IV-DT
addTextAlign method	○	○	○	○	○	○	○	○	○
addTextLineSpace method	○	○	○	○	○	○	○	○	○
addTextRotate method	○	○	○	○	○	○	○	○	○
addText method	○	○	○	○	○	○	○	○	○
addTextLang method	○	○	○	○	○	○	○	○	○
addTextFont method	△	△	△	△	△	△	△	△	△
addTextSmooth method	○	○	○	○	○	○	○	○	○
addTextDouble method	○	○	○	○	○	○	○	○	○
addTextSize method	○	○	○	○	○	○	○	-	○
addTextStyle method	△	△	△	△	△	△	△	△	△
addTextPosition method	○	○	○	○	○	○	○	-	○

API	TM-T20II-i	TM-T70-i	TM-T70II-DT	TM-T82II-i	TM-T83II-i	TM-T88V-i	TM-T88V-DT	TM-U220-i	TM-H6000IV-DT
addTextVPosition method	○	○	○	○	○	○	○	-	○
addFeedUnit method	○	○	○	○	○	○	○	○	○
addFeedLine method	○	○	○	○	○	○	○	○	○
addFeedPosition method	-	-	-	-	-	-	-	-	-
addFeed method	○	○	○	○	○	○	○	○	○
addImage method	△	△	△	△	△	△	△	△	△
addLogo method	○	○	○	○	○	○	○	-	○
addBarcode method	△	△	△	△	△	△	△	-	△
addSymbol method	△	△	△	△	△	△	△	-	△
addHLine method	-	-	-	-	-	-	-	-	-
addVLineBegin method	-	-	-	-	-	-	-	-	-
addVLineEnd method	-	-	-	-	-	-	-	-	-
addPageBegin method	○	○	○	○	○	○	○	-	○
addPageEnd method	○	○	○	○	○	○	○	-	○
addPageArea method	○	○	○	○	○	○	○	-	○
addPageDirection method	○	○	○	○	○	○	○	-	○
addPagePosition method	○	○	○	○	○	○	○	-	○
addPageLine method	-	-	-	-	-	-	-	-	-
addPageRectangle method	-	-	-	-	-	-	-	-	-
addCut method	△	△	△	△	△	△	△	△	△
addPulse method	○	○	○	○	○	○	○	○	○
addSound method	△	-	△	△	△	△	△	-	-
addLayout method	-	-	-	-	-	-	-	-	-

API	TM-T20II-i	TM-T70-i	TM-T70II-DT	TM-T82II-i	TM-T83II-i	TM-T88V-i	TM-T88V-DT	TM-U220-i	TM-H6000IV-DT
recover method	○	○	○	○	○	○	○	-	○
addRecovery method	○	○	○	○	○	○	○	-	○
reset method	○	○	○	○	○	○	○	○	○
addReset method	○	○	○	○	○	○	○	○	○
addCommand method	○	○	○	○	○	○	○	○	○
send method	○	○	○	○	○	○	○	○	○
print method	△	△	○	△	△	○	○	△	○
getPrintJobStatus method	○	○	○	○	○	○	○	○	○
startMonitor method	○	○	○	○	○	○	○	○	○
stopMonitor method	○	○	○	○	○	○	○	○	○
halftone property	○	○	○	○	○	○	○	○	○
brightness property	○	○	○	○	○	○	○	○	○
force property	○	○	○	○	○	○	○	-	○
timeout property	○	○	○	○	○	○	○	○	○
interval property	○	○	○	○	○	○	○	○	○
drawerOpenLevel property	○	○	○	○	○	○	○	○	○
message property	○	○	○	○	○	○	○	○	○
onreceive event	○	○	○	○	○	○	○	○	○
onstatuschange event	○	○	○	○	○	○	○	○	○
onbatterystatus-change event	-	-	-	-	-	-	-	-	-
ononline event	○	○	○	○	○	○	○	○	○
onoffline event	○	○	○	○	○	○	○	○	○
onpoweroff event	○	○	○	○	○	○	○	○	○
oncoverok event	○	○	○	○	○	○	○	○	○
oncoveropen event	○	○	○	○	○	○	○	○	○

API	TM-T20II-i	TM-T70-i	TM-T70II-DT	TM-T82II-i	TM-T83II-i	TM-T88V-i	TM-T88V-DT	TM-U220-i	TM-H6000IV-DT
onpaperok event	○	○	○	○	○	○	○	○	○
Onpapernearend event	○	○	○	○	○	○	○	○	○
onpaperend event	○	○	○	○	○	○	○	○	○
ondrawerclosed event	○	○	○	○	○	○	○	○	○
ondraweropen event	○	○	○	○	○	○	○	○	○
onbatteryok event	-	-	-	-	-	-	-	-	-
onbatterylow event	-	-	-	-	-	-	-	-	-

### Network Printers

API	TM-T88IV	TM-T90	TM-L90	TM-H6000IV
addTextAlign method	○	○	○	○
addTextLineSpace method	○	○	○	○
addTextRotate method	○	○	○	○
addText method	○	○	○	○
addTextLang method	○	○	○	○
addTextFont method	△	△	△	△
addTextSmooth method	○	○	○	○
addTextDouble method	○	○	○	○
addTextSize method	○	○	○	○
addTextStyle method	△	△	△	△
addTextPosition method	○	○	○	○
addTextVPosition method	○	○	○	○

API	TM-T88IV	TM-T90	TM-L90	TM-H6000IV
addFeedUnit method	○	○	○	○
addFeedLine method	○	○	○	○
addFeedPosition method	-	-	○	-
addFeed method	○	○	○	○
addImage method	△	△	△	△
addLogo method	○	○	○	○
addBarcode method	△	△	△	△
addSymbol method	△	△	△	△
addHLine method	-	-	-	-
addVLineBegin method	-	-	-	-
addVLineEnd method	-	-	-	-
addPageBegin method	○	○	○	○
addPageEnd method	○	○	○	○
addPageArea method	○	○	○	○
addPageDirection method	○	○	○	○
addPagePosition method	○	○	○	○
addPageLine method	-	-	-	-
addPageRectangle method	-	-	-	-
addCut method	△	△	△	△
addPulse method	○	○	○	○
addSound method	-	-	-	-
addLayout method	-	-	-	-
recover method	○	○	○	○
addRecovery method	○	○	○	○

API	TM-T88IV	TM-T90	TM-L90	TM-H6000IV
reset method	○	○	○	○
addReset method	○	○	○	○
addCommand method	○	○	○	○
send method	○	○	○	○
print method	○	○	○	○
getPrintJobStatus method	○	○	○	○
startMonitor method	○	○	○	○
stopMonitor method	○	○	○	○
halftone property	○	○	○	○
brightness property	○	○	○	○
force property	○	○	○	○
timeout property	○	○	○	○
interval property	○	○	○	○
drawerOpenLevel property	○	○	○	○
message property	○	○	○	○
onreceive event	○	○	○	○
onstatuschange event	○	○	○	○
onbatterystatus-change event	-	-	-	-
ononline event	○	○	○	○
onoffline event	○	○	○	○
onpoweroff event	○	○	○	○
oncoverok event	○	○	○	○
oncoveropen event	○	○	○	○
onpaperok event	○	○	○	○
Onpapernearend event	○	○	○	○

API	TM-T88IV	TM-T90	TM-L90	TM-H6000IV
onpaperend event	○	○	○	○
ondrawerclosed event	○	○	○	○
ondraweropen event	○	○	○	○
onbatteryok event	-	-	-	-
onbatterylow event	-	-	-	-

## 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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• SYMBOL_AZTECCODE_FULLRANGE</li> <li>• SYMBOL_AZTECCODE_COMPACT</li> <li>• SYMBOL_DATAMATRIX_SQUARE</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>
addSound method	pattern	<ul style="list-style-type: none"> <li>• PATTERN_NONE</li> <li>• PATTERN_A</li> <li>• PATTERN_B</li> <li>• PATTERN_C</li> <li>• PATTERN_D</li> <li>• PATTERN_E</li> <li>• PATTERN_ERROR</li> <li>• PATTERN_PAPER_END</li> <li>• undefined</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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	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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• SYMBOL_AZTECCODE_FULLRANGE</li> <li>• SYMBOL_AZTECCODE_COMPACT</li> <li>• SYMBOL_DATAMATRIX_SQUARE</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>
addSound method	pattern	<ul style="list-style-type: none"> <li>• PATTERN_NONE</li> <li>• PATTERN_A</li> <li>• PATTERN_B</li> <li>• PATTERN_C</li> <li>• PATTERN_D</li> <li>• PATTERN_E</li> <li>• PATTERN_ERROR</li> <li>• PATTERN_PAPER_END</li> <li>• undefined</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addFeedPosition method	pos	<ul style="list-style-type: none"> <li>• FEED_CUTTING</li> <li>• FEED_CURRENT_TOF</li> <li>• FEED_NEXT_TOF</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• SYMBOL_AZTECCODE_FULLRANGE</li> <li>• SYMBOL_AZTECCODE_COMPACT</li> <li>• SYMBOL_DATAMATRIX_SQUARE</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addPageRectangle method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"> <li>• PATTERN_NONE</li> <li>• PATTERN_1</li> <li>• PATTERN_2</li> <li>• PATTERN_3</li> <li>• PATTERN_4</li> <li>• PATTERN_5</li> <li>• PATTERN_6</li> <li>• PATTERN_7</li> <li>• PATTERN_8</li> <li>• PATTERN_9</li> <li>• PATTERN_10</li> <li>• undefined</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• undefined</li> </ul>
addLayout method	type	<ul style="list-style-type: none"> <li>• LAYOUT_RECEIPT</li> <li>• LAYOUT_RECEIPT_BM</li> </ul>
	height	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
	marginTop	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
	margin_bottom	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
	offset_cut	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
	offset_label	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	type	<ul style="list-style-type: none"> <li>• BARCODE_UPC_A</li> <li>• BARCODE_UPC_E</li> <li>• BARCODE_EAN13</li> <li>• BARCODE_JAN13</li> <li>• BARCODE_EAN8</li> <li>• BARCODE_JAN8</li> <li>• BARCODE_CODE39</li> <li>• BARCODE_ITF</li> <li>• BARCODE_CODABAR</li> <li>• BARCODE_CODE93</li> <li>• BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>

API	Parameter	Specifiable Setting Value
addPageLine method	style	<ul style="list-style-type: none"><li>• LINE_THIN</li><li>• LINE_MEDIUM</li><li>• LINE_THICK</li><li>• undefined</li></ul>
addPageRectangle method	style	<ul style="list-style-type: none"><li>• LINE_THIN</li><li>• LINE_MEDIUM</li><li>• LINE_THICK</li><li>• undefined</li></ul>
addCut method	type	<ul style="list-style-type: none"><li>• CUT_NO_FEED</li><li>• CUT_FEED</li><li>• undefined</li></ul>
print method	mode	<ul style="list-style-type: none"><li>• MODE_MONO</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	type	<ul style="list-style-type: none"> <li>• BARCODE_UPC_A</li> <li>• BARCODE_UPC_E</li> <li>• BARCODE_EAN13</li> <li>• BARCODE_JAN13</li> <li>• BARCODE_EAN8</li> <li>• BARCODE_JAN8</li> <li>• BARCODE_CODE39</li> <li>• BARCODE_ITF</li> <li>• BARCODE_CODABAR</li> <li>• BARCODE_CODE93</li> <li>• BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• SYMBOL_AZTECCODE_FULLRANGE</li> <li>• SYMBOL_AZTECCODE_COMPACT</li> <li>• SYMBOL_DATAMATRIX_SQUARE</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addPageRectangle method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• SYMBOL_AZTECCODE_FULLRANGE</li> <li>• SYMBOL_AZTECCODE_COMPACT</li> <li>• SYMBOL_DATAMATRIX_SQUARE</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addPageRectangle method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_1</li><li>• PATTERN_2</li><li>• PATTERN_3</li><li>• PATTERN_4</li><li>• PATTERN_5</li><li>• PATTERN_6</li><li>• PATTERN_7</li><li>• PATTERN_8</li><li>• PATTERN_9</li><li>• PATTERN_10</li><li>• undefined</li></ul>
	repeat	<ul style="list-style-type: none"><li>• 1 to 255</li><li>• undefined</li></ul>
print method	mode	<ul style="list-style-type: none"><li>• MODE_MONO</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• SYMBOL_AZTECCODE_FULLRANGE</li> <li>• SYMBOL_AZTECCODE_COMPACT</li> <li>• SYMBOL_DATAMATRIX_SQUARE</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addPageRectangle method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"> <li>• PATTERN_NONE</li> <li>• PATERN_1</li> <li>• PATERN_2</li> <li>• PATERN_3</li> <li>• PATERN_4</li> <li>• PATERN_5</li> <li>• PATERN_6</li> <li>• PATERN_7</li> <li>• PATERN_8</li> <li>• PATERN_9</li> <li>• PATERN_10</li> <li>• undefined</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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	16 dots from the top of the character

*Parameter Restrictions*

API	Parameter	Specifiable Setting Value
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addFeedPosition method	pos	<ul style="list-style-type: none"> <li>• FEED_CUTTING</li> <li>• FEED_CURRENT_TOF</li> <li>• FEED_NEXT_TOF</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> <li>• SYMBOL_AZTECCODE_FULLRANGE</li> <li>• SYMBOL_AZTECCODE_COMPACT</li> <li>• SYMBOL_DATAMATRIX_SQUARE</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_8</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_12</li> <li>• SYMBOL_DATAMATRIX_RECTANGLE_16</li> </ul>
addPageLine method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addPageRectangle method	style	<ul style="list-style-type: none"> <li>• LINE_THIN</li> <li>• LINE_MEDIUM</li> <li>• LINE_THICK</li> <li>• undefined</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"> <li>• PATTERN_NONE</li> <li>• PATERN_1</li> <li>• PATERN_2</li> <li>• PATERN_3</li> <li>• PATERN_4</li> <li>• PATERN_5</li> <li>• PATERN_6</li> <li>• PATERN_7</li> <li>• PATERN_8</li> <li>• PATERN_9</li> <li>• PATERN_10</li> <li>• undefined</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• undefined</li> </ul>
addLayout method	type	<ul style="list-style-type: none"> <li>• LAYOUT_RECEIPT</li> <li>• LAYOUT_RECEIPT_BM</li> </ul>
	height	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
	marginTop	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
	margin_bottom	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
	offset_cut	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
	offset_label	<ul style="list-style-type: none"> <li>• Receipt</li> <li>• Receipt (with black mark)</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</li></ul>
	repeat	<ul style="list-style-type: none"><li>• 1 to 255</li><li>• undefined</li></ul>
print method	mode	<ul style="list-style-type: none"><li>• MODE_MONO</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</li></ul>
	repeat	<ul style="list-style-type: none"><li>• 1 to 255</li><li>• undefined</li></ul>
print method	mode	<ul style="list-style-type: none"><li>• MODE_MONO</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	type	<ul style="list-style-type: none"> <li>• BARCODE_UPC_A</li> <li>• BARCODE_UPC_E</li> <li>• BARCODE_EAN13</li> <li>• BARCODE_JAN13</li> <li>• BARCODE_EAN8</li> <li>• BARCODE_JAN8</li> <li>• BARCODE_CODE39</li> <li>• BARCODE_ITF</li> <li>• BARCODE_CODABAR</li> <li>• BARCODE_CODE93</li> <li>• BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_SPECIAL_A</li> <li>• FONT_SPECIAL_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"> <li>• PATTERN_NONE</li> <li>• PATTERN_A</li> <li>• PATTERN_B</li> <li>• PATTERN_C</li> <li>• PATTERN_D</li> <li>• PATTERN_E</li> <li>• PATTERN_ERROR</li> <li>• PATTERN_PAPER_END</li> <li>• undefined</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	type	<ul style="list-style-type: none"> <li>• BARCODE_UPC_A</li> <li>• BARCODE_UPC_E</li> <li>• BARCODE_EAN13</li> <li>• BARCODE_JAN13</li> <li>• BARCODE_EAN8</li> <li>• BARCODE_JAN8</li> <li>• BARCODE_CODE39</li> <li>• BARCODE_ITF</li> <li>• BARCODE_CODABAR</li> <li>• BARCODE_CODE93</li> <li>• BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_SPECIAL_A</li> <li>• FONT_SPECIAL_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"> <li>• PATTERN_NONE</li> <li>• PATTERN_A</li> <li>• PATTERN_B</li> <li>• PATTERN_C</li> <li>• PATTERN_D</li> <li>• PATTERN_E</li> <li>• PATTERN_ERROR</li> <li>• PATTERN_PAPER_END</li> <li>• undefined</li> </ul>
	repeat	<ul style="list-style-type: none"> <li>• 1 to 255</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_SPECIAL_A</li> <li>• FONT_SPECIAL_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</li></ul>
	repeat	<ul style="list-style-type: none"><li>• 1 to 255</li><li>• undefined</li></ul>
print method	mode	<ul style="list-style-type: none"><li>• MODE_MONO</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_SPECIAL_A</li> <li>• FONT_SPECIAL_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</li></ul>
	repeat	<ul style="list-style-type: none"><li>• 1 to 255</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>
addFeedPosition method	pos	<ul style="list-style-type: none"> <li>• FEED_CUTTING</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>
addSound method	pattern	<ul style="list-style-type: none"> <li>• PATTERN_NONE</li> <li>• PATERN_0</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</li></ul>
print method	mode	<ul style="list-style-type: none"><li>• MODE_MONO</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	type	<ul style="list-style-type: none"> <li>• BARCODE_UPC_A</li> <li>• BARCODE_UPC_E</li> <li>• BARCODE_EAN13</li> <li>• BARCODE_JAN13</li> <li>• BARCODE_EAN8</li> <li>• BARCODE_JAN8</li> <li>• BARCODE_CODE39</li> <li>• BARCODE_ITF</li> <li>• BARCODE_CODABAR</li> <li>• BARCODE_CODE93</li> <li>• BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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	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	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	Specificable Setting Value
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_SPECIAL_A</li> <li>• FONT_SPECIAL_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_SPECIAL_A</li> <li>• FONT_SPECIAL_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</li></ul>
print method	mode	<ul style="list-style-type: none"><li>• MODE_MONO</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</li></ul>
print method	mode	<ul style="list-style-type: none"><li>• MODE_MONO</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_SPECIAL_A</li> <li>• FONT_SPECIAL_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_SPECIAL_A</li> <li>• FONT_SPECIAL_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addSound method	pattern	<ul style="list-style-type: none"><li>• PATTERN_NONE</li><li>• PATTERN_A</li><li>• PATTERN_B</li><li>• PATTERN_C</li><li>• PATTERN_D</li><li>• PATTERN_E</li><li>• PATTERN_ERROR</li><li>• PATTERN_PAPER_END</li><li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>
	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>
print method	mode	<ul style="list-style-type: none"> <li>• MODE_MONO</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode method	type	<ul style="list-style-type: none"> <li>• BARCODE_UPC_A</li> <li>• BARCODE_UPC_E</li> <li>• BARCODE_EAN13</li> <li>• BARCODE_JAN13</li> <li>• BARCODE_EAN8</li> <li>• BARCODE_JAN8</li> <li>• BARCODE_CODE39</li> <li>• BARCODE_ITF</li> <li>• BARCODE_CODABAR</li> <li>• BARCODE_CODE93</li> <li>• BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode method	type	<ul style="list-style-type: none"> <li>• BARCODE_UPC_A</li> <li>• BARCODE_UPC_E</li> <li>• BARCODE_EAN13</li> <li>• BARCODE_JAN13</li> <li>• BARCODE_EAN8</li> <li>• BARCODE_JAN8</li> <li>• BARCODE_CODE39</li> <li>• BARCODE_ITF</li> <li>• BARCODE_CODABAR</li> <li>• BARCODE_CODE93</li> <li>• BARCODE_CODE128</li> </ul>
	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> <li>• FONT_C</li> </ul>
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• COLOR_2</li> <li>• undefined</li> </ul>

API	Parameter	Specifiable Setting Value
addBarcode method	type	<ul style="list-style-type: none"><li>• BARCODE_UPC_A</li><li>• BARCODE_UPC_E</li><li>• BARCODE_EAN13</li><li>• BARCODE_JAN13</li><li>• BARCODE_EAN8</li><li>• BARCODE_JAN8</li><li>• BARCODE_CODE39</li><li>• BARCODE_ITF</li><li>• BARCODE_CODABAR</li><li>• BARCODE_CODE93</li><li>• BARCODE_CODE128</li></ul>
	font	<ul style="list-style-type: none"><li>• FONT_A (default)</li><li>• FONT_B</li></ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</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
addTextFont method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>
addTextStyle method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addImage method	color	<ul style="list-style-type: none"> <li>• COLOR_NONE</li> <li>• COLOR_1 (default)</li> <li>• undefined</li> </ul>
addBarcode method	font	<ul style="list-style-type: none"> <li>• FONT_A (default)</li> <li>• FONT_B</li> </ul>

API	Parameter	Specifiable Setting Value
addSymbol method	type	<ul style="list-style-type: none"> <li>• SYMBOL_PDF417_STANDARD</li> <li>• SYMBOL_PDF417_TRUNCATED</li> <li>• SYMBOL_QRCODE_MODEL_1</li> <li>• SYMBOL_QRCODE_MODEL_2</li> <li>• SYMBOL_MAXICODE_MODE_2</li> <li>• SYMBOL_MAXICODE_MODE_3</li> <li>• SYMBOL_MAXICODE_MODE_4</li> <li>• SYMBOL_MAXICODE_MODE_5</li> <li>• SYMBOL_MAXICODE_MODE_6</li> <li>• SYMBOL_GS1_DATABAR_STACKED</li> <li>• SYMBOL_GS1_DATABAR_STACKED_OMNIDIRECTIONAL</li> <li>• SYMBOL_GS1_DATABAR_EXPANDED_STACKED</li> </ul>
	level	<ul style="list-style-type: none"> <li>• LEVEL_0</li> <li>• LEVEL_1</li> <li>• LEVEL_2</li> <li>• LEVEL_3</li> <li>• LEVEL_4</li> <li>• LEVEL_5</li> <li>• LEVEL_6</li> <li>• LEVEL_7</li> <li>• LEVEL_8</li> <li>• LEVEL_L</li> <li>• LEVEL_M</li> <li>• LEVEL_Q</li> <li>• LEVEL_H</li> <li>• LEVEL_DEFAULT</li> </ul>
	width	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	height	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
	size	<ul style="list-style-type: none"> <li>• PDF417</li> <li>• QR Code</li> <li>• MaxiCode</li> <li>• 2D GS1 DataBar</li> </ul>
addCut method	type	<ul style="list-style-type: none"> <li>• CUT_NO_FEED</li> <li>• CUT_FEED</li> <li>• undefined</li> </ul>

## Usage restriction by firmware version

Availability and restriction on the use of API differs by TM-DT software and TM-i firmware version installed on TM intelligent printer.

For how to check or update the version of TM-DT software and TM-i firmware, refer to the Technical Reference Guide of the printer.

Class	API	Parameter	Value	Description
ePOSDevice object	createDevice method	options	-	Supported by TM-DT software Ver. 2.2 and TM-i firmware 4.0 or later.
Printer object	addTextVPosition method	-	-	
	addLayout method	-	-	
	addRecovery method	-	-	
	addReset method	-	-	
	force property	-	-	
	onbatterystatuschange event	-	-	
	onbatteryok event	-	-	
	onbatterylow event	-	-	
	onbatterylow event	-	-	
	addTextLang method	lang	zh-hans	
		lang	zh-hant	
	addSymbol method	type	SYMBOL_AZTEC-CODE_FULLRANGE	
			SYMBOL_AZTEC-CODE_COMPACT	
			SYMBOL_DATAMATRIX_SQUARE	
			SYMBOL_DATAMATRIX_RECTANGLE_8	
	addSymbol method	type	SYMBOL_DATAMATRIX_RECTANGLE_12	

Class	API	Parameter	Value	Description
Printer object	addSymbol method	type	SYMBOL_DATAMATRIX_RECTANGLE_16	Supported by TM-DT software Ver. 2.2 and TM-i firmware 4.0 or later.
		level	Integer (5 to 95)	
	addSound method	pattern	PATTERN_1	
			PATTERN_2	
			PATTERN_3	
			PATTERN_4	
			PATTERN_5	
			PATTERN_6	
			PATTERN_7	
			PATTERN_8	
			PATTERN_9	
			PATTERN_10	
		cycle	-	
	recover method	-	-	Supported by TM-DT software Ver. 2.5 and TM-i firmware 4.0 or later.
	reset method	-	-	
	send method	printjobid	-	Supported by TM-DT software Ver. 2.5 and TM-i firmware 4.1 or later.
	print method	printjobid	-	
	getPrintJob-Status method	-	-	
	onreceive event	printjobid	-	
		code	EX_SPOOLER	
			JobNotFound	
			Printing	
		status	ASB_SPOOLER_IS_STOPPED	

Class	API	Parameter	Value	Description
Printer object	drawerOpen-Level property	-	-	Supported by TM-DT software Ver. 3.0 and TM-i firmware 4.1 or later.
DeviceHubTerminal object	restart method	-	-	
CommBox object	getCommHistory method	option	-	
ePosDeviceConfiguration object	-	-	-	

# Sample Programs

The sample programs provided with Epson ePOS SDK for JavaScript are implementation samples of Web applications.

## Functionality

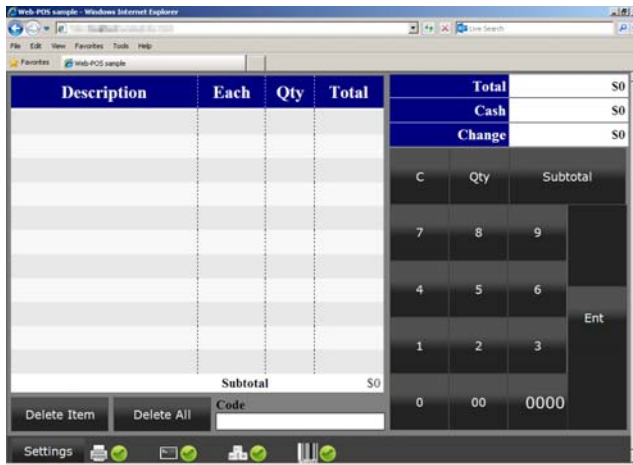
The sample programs provided with the Epson ePOS SDK for JavaScript contains the following functions.

Sample Program	Description	TM Intelligent Printers		TM Printers
		TM-DT	TM-i	
<a href="#">POS Terminal</a> <ul style="list-style-type: none"> <li>• POS Terminal Sample</li> <li>• POS Terminal Customer Display Sample</li> </ul>	This is the POS system sample program. This enables use of communication box functionality for tablet terminal displays.	○	○	-
<a href="#">Entry Terminal</a> <ul style="list-style-type: none"> <li>• Call Sample</li> <li>• Entry Sample</li> </ul>	This is the reception terminal sample program. This program enables communication with Web browsers on tablets or similar devices using bi-directional communication functionality of communication boxes.	○	○	-
<a href="#">Receipt Designer</a>	This program easily generates and prints print data for receipt printers.	○	○	○
<a href="#">Printer Sample</a>	This program generates and prints printer print data. We recommend to use <a href="#">Receipt Designer</a> to generate data for receipt printers.	○	○	○
<a href="#">Hybrid Printer Sample</a>	This program generates and prints print data for hybrid printers as well as reads MICR data.	○	-	-
<a href="#">Customer Display Sample</a>	This program generates and displays display data for customer displays.	○	○	○
<a href="#">Keyboard Sample</a>	This program retrieves data input from keyboards.	○	○	-
<a href="#">MSR Sample</a>	This program retrieves MSR data.	○	-	-
<a href="#">Barcode Scanner Sample</a>	This program retrieves barcode data from barcode scanners.	○	○	-



When using POS Terminal Sample in Internet Explorer, use Internet Explorer 9 or later.

## POS Terminal

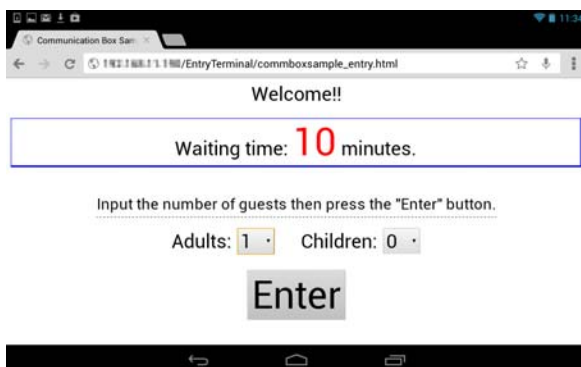


<POS Terminal Customer Display Sample>



## Entry Terminal

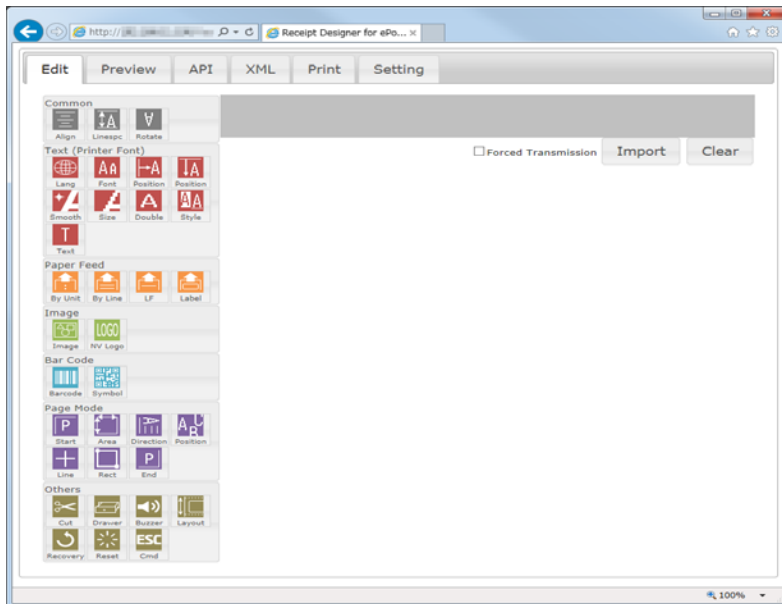
<Entry Sample>



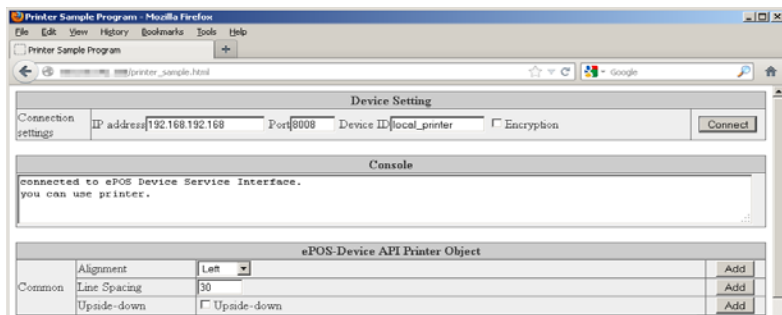
<Call Sample>



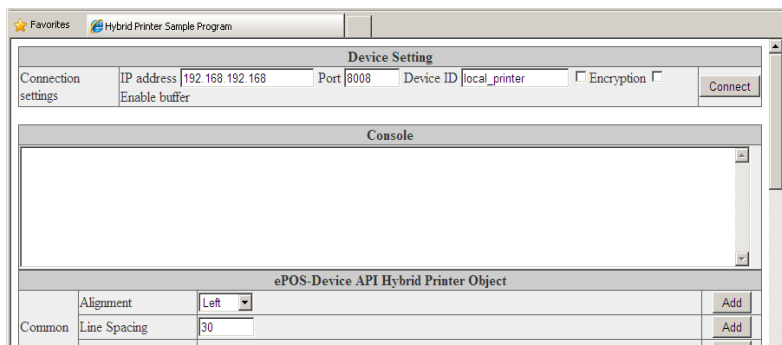
## Receipt Designer



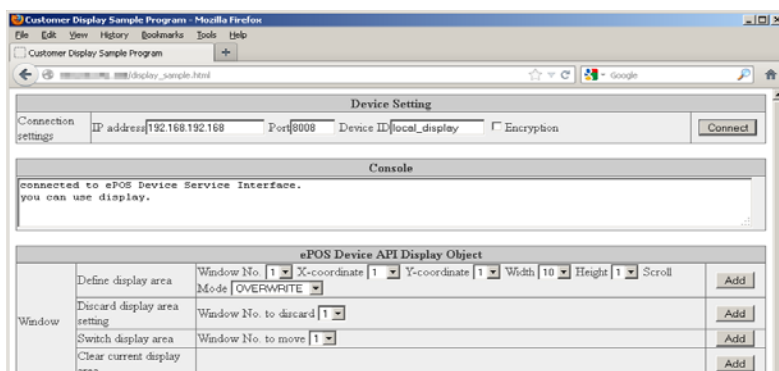
## Printer Sample



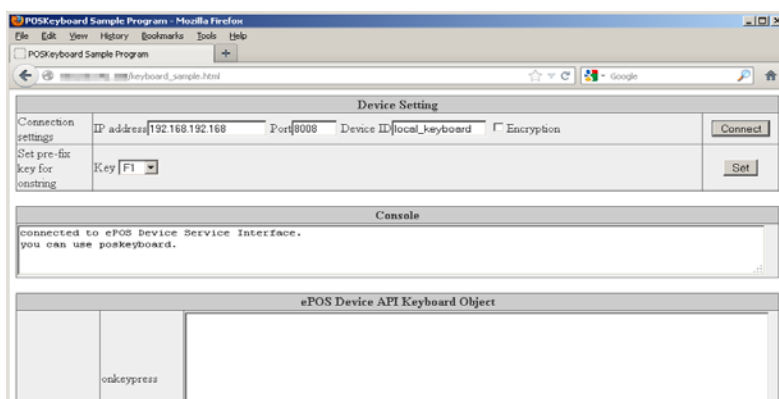
## Hybrid Printer Sample



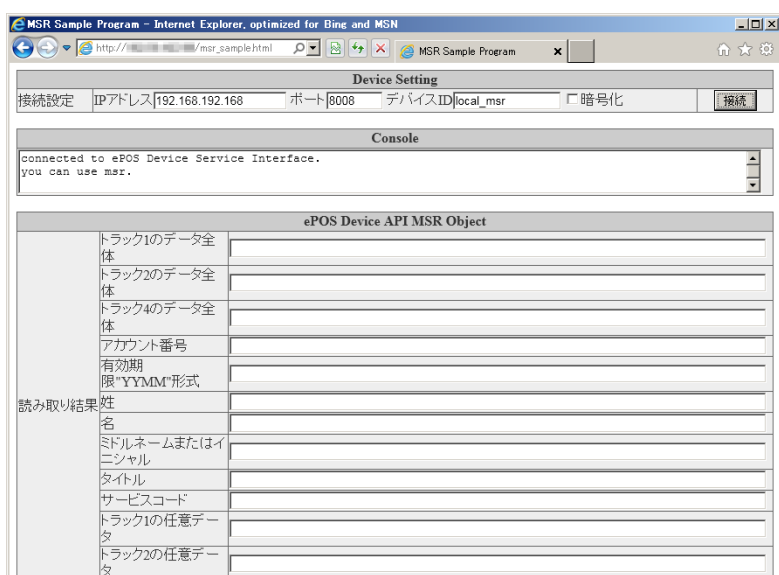
## Customer Display Sample



## Keyboard Sample



## MSR Sample



## Barcode Scanner Sample

Barcode Scanner Sample Program - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Barcode Scanner Sample Program

scanner\_sample.html

Device Setting

Connection settings IP address: 192.168.192.168 Port: 8008 Device ID: local\_scanner Encryption Connect

Use barcode symbology identification code ☒ Enabled  
 ※Please do setting to use an identification code with a bar code scanner beforehand.

Scanner setting Type: - Identification cord length: 1 Identification cord position: Prefix of barcode data

Barcode type Identification code

Identification code setting

EAN-8	
UPC-A/EAN-13	
Interleaved 2of5	
CODE39	
CODE128	
NW-7(CODABAR)	

# Use Environment

Refer to [Application Operating Environment](#).

## Procedure to Start Sample Programs

This sections describes the procedure to start sample programs provided with Epson ePOS SDK for JavaScript.

### 1. [Configure the printer environment](#)



### 2. [Starting Sample Programs](#)

#### Configure the printer environment

The method by which the environment is configured varies depending on the printer.

- ☐ [TM Intelligent Printers](#)
- ☐ [TM Printers](#)

## TM Intelligent Printers



Refer to the Technical Reference Guide of each printer for more information on configuration procedures.

- 1** Connect the desired device to the printer.
- 2** Configure network settings on the printer.
- 3** Register the sample programs (ePOS\_SDK\_Sample\_JavaScript.zip) into the printer. From the **Web Service Settings** menu in EPSON TMNet WebConfig, navigate to **Web Content** and then **Update Settings** to use the manual update tool to register the sample programs.
- 4** Configure devices in the printer.  
Use EPSON TMNet WebConfig to configure the following settings for each device that will be used.

Device	Configuration Parameter	Setting value
Customer Displays	Customer Displays	Use
Keyboard	Device ID	local_keyboard
	Device name	Select the appropriate device from the list.
	Control script	Keyboard_Generic.js
MSR	Device ID	local_msr
	Device name	Select the appropriate device from the list.
	Control script	MSR_V3TU_FK.js
Barcode Scanners	Device ID	local_scanner
	Device name	Select the appropriate device from the list.
	Control script	Scanner_Generic.js

## TM Printers



Refer to the Technical Reference Guide of each printer for more information on configuration procedures.

- 1 Decompress the ePOS\_SDK\_Sample\_JavaScript.zip file containing the sample programs and copy the files to the following folder on the Web server.  
System drive: \Inetpub\wwwroot (IIS Web servers)



Perform the copy operation of the sample programs as a user with administrative privileges.

- 2 Configure network settings on the printer.
- 3 Start a Web browser and access the following URL.  
[http://\(Printer IP address\)/](http://(Printer IP address)/)
- 4 Click **ePOS-Print**. The **ePOS-Print** screen appears.  
Configure settings as follows.
  - Wireless LAN interfaces (UB-R04)

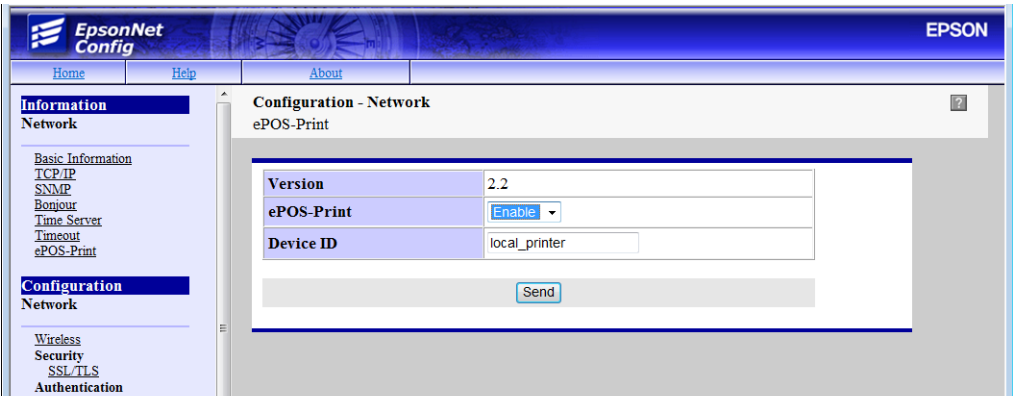
The screenshot shows the EpsonNet Config web interface. The left sidebar contains a navigation menu with sections: Information (Basic Information, TCP/IP, SNMP, Bonjour, Time Setting, Timeout, ePOS-Print), Configuration (Network, Wireless, Security, SSL/TLS, Authentication, Certificate List, Certificate Import), and Network. The main content area is titled 'Configuration - Network' and 'ePOS-Print'. It contains a table with the following settings:

Version	
ePOS-Print	Enable
Device ID	local_printer
Printing Method	Thermal (180dpi)
Character Code Tables	Page 0-5, 16-19

Below the table is a 'Send' button.

Item	Settings
ePOS-Print	Select <b>Enable</b> . (Default value: Disabled)
Device ID	Configure in accordance with system settings. (Default value: local_printer)
Printing Method	Configure in accordance with the connected TM printer.
Character Code Table	Configure the TM printer code page in accordance with the connected TM printer.

- Mobile printers



Item	Settings
ePOS-Print	Select <b>Enable</b> . (Default value: Disabled)
Device ID	Configure in accordance with system settings. (Default value: local_printer)

- 5 Click **Send**.
- 6 Turn the power to the TM printer off and on again.

## Starting Sample Programs

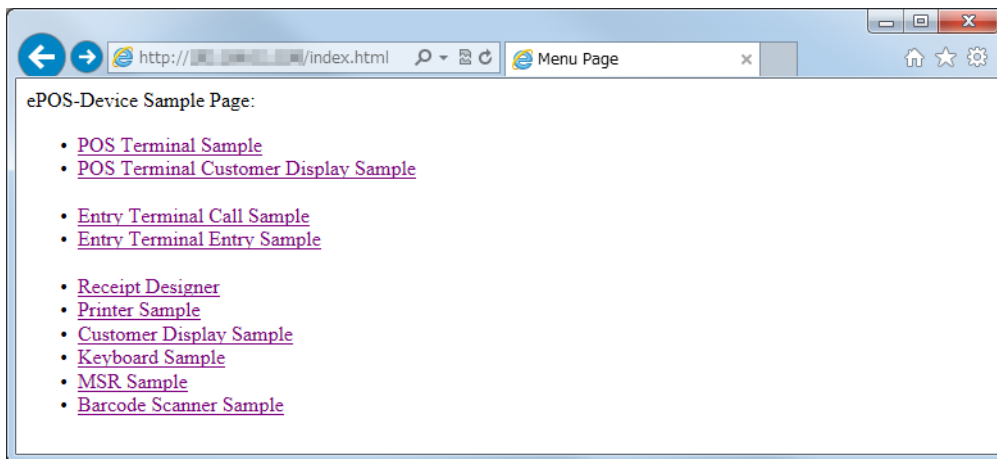
- 1 Start a Web browser and access the following URL.

Printers		URL
TM Intelligent Printers	TM-DT series	http://(Printer IP address)/index.html
	TM-i series	http://(Printer IP address)/webapp/index.html
TM Printers		http://(Server IP address)/index.html

- 2 The sample program appears in the Web browser.



If the programs do not appear, check the printer network connection.



# Using Sample Programs

- ❑ [POS Terminal Sample](#)
- ❑ [Entry Terminal](#)
- ❑ [Receipt Designer](#)
- ❑ [Printer Sample](#)
- ❑ [Hybrid Printer Sample](#)
- ❑ [Customer Display Sample](#)
- ❑ [Keyboard Sample](#)
- ❑ [MSR Sample](#)
- ❑ [Barcode Scanner Sample](#)

## POS Terminal Sample

This sample program can be used to operate POS systems.

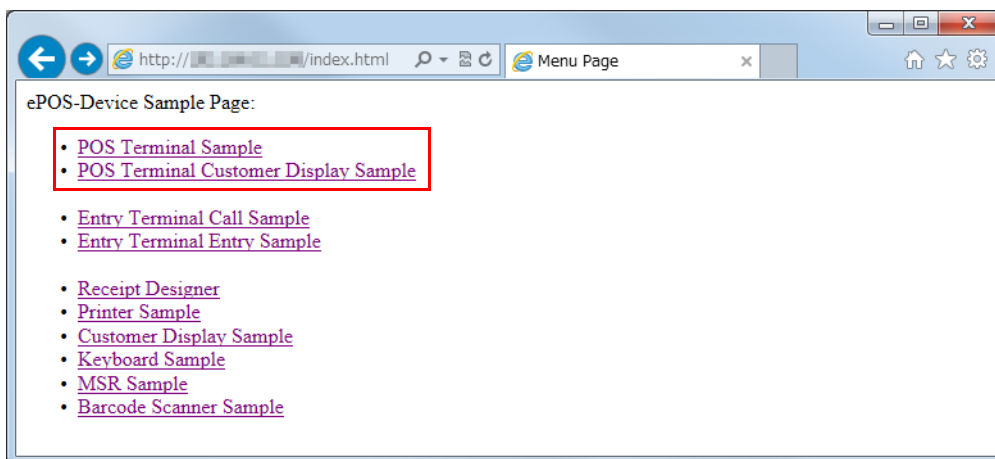
### Preparation

Start the sample program and configure devices.  
Open the following sample program in different Web browsers.

- ❑ [POS Terminal Customer Display Sample](#)
- ❑ [POS Terminal Sample](#)



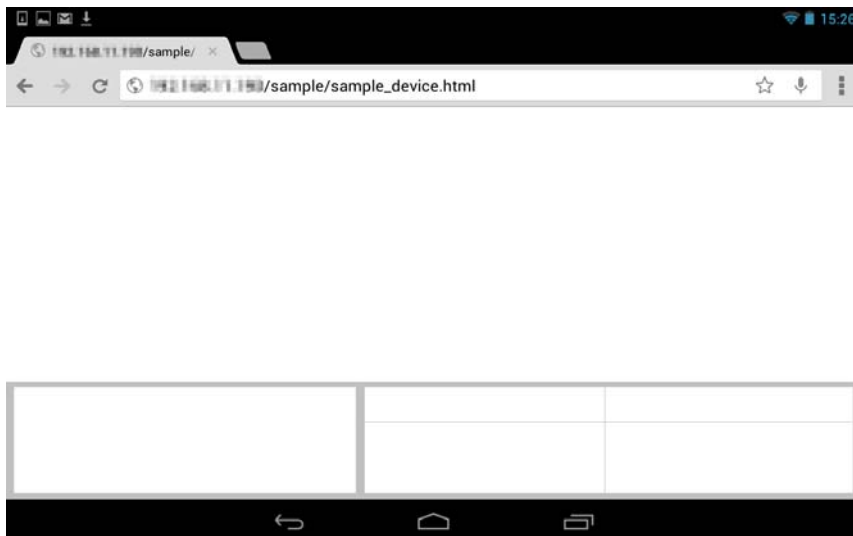
Use the following procedure to connect the following sample programs in this order: **POS Terminal Customer Display Sample** and then **POS Terminal Sample**.  
If programs are connected in the wrong order, the POS Terminal Customer Display Sample will not function correctly.



- 1 Display the **POS Terminal Customer Display Sample** screen.
- 2 The **Connection Information** screen appears.  
Enter the IP address and port number for the TM intelligent printer and click the **Connect** button.

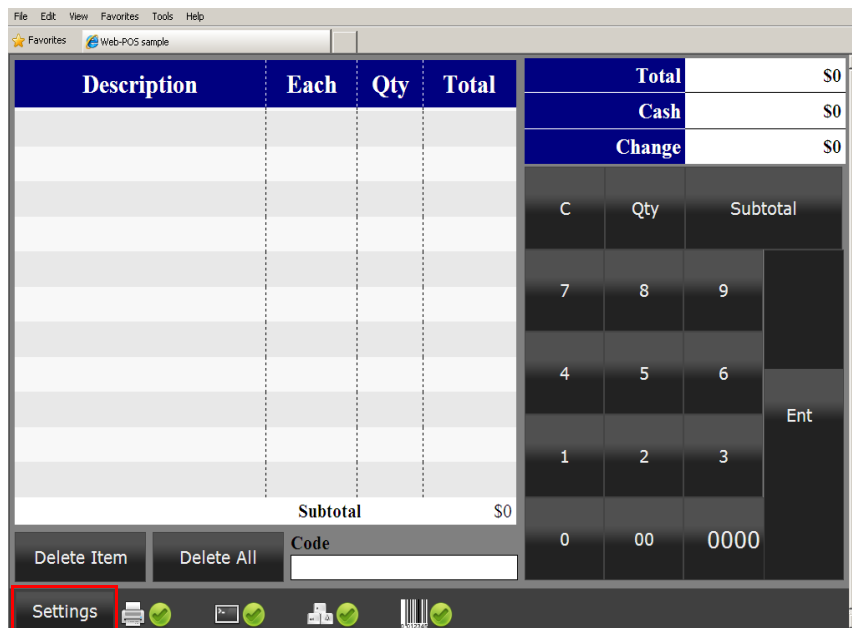


- 3 The following screen appears.



This completes the configuration of the POS Terminal Customer Display Sample.

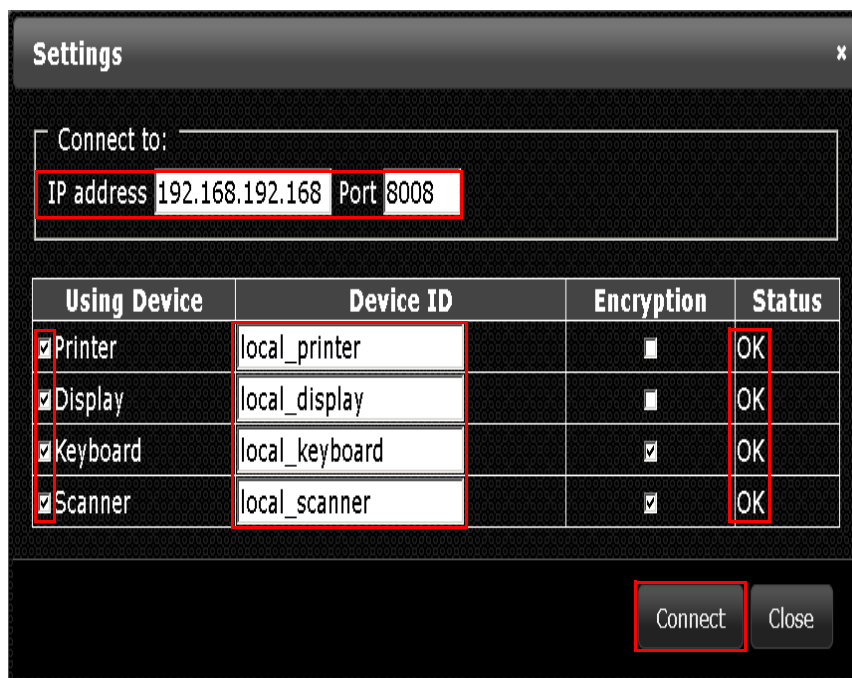
- 4 Display the **POS Terminal Sample** screen. Click the **Settings** button.



- 5 The **Settings** screen appears. Configure the following settings and click the **Connect** button.

Close the screen after confirming that "OK" appears for each status.

- Configure the settings in the **Connect to** area.
- Select the check box and enter the device ID for the desired devices in the **Device ID** area.



This completes the configuration of the POS Terminal Sample.

- 6 After a few moments, the digital signage appears on the **POS Terminal Customer Display Sample** screen.



## Operation

This section describes the process from reading product data through printing receipts.



Sample product barcodes can be found in the PDF that accompanies the sample programs. Print these barcodes for use with the sample programs.

- 1 Use the barcode scanner or POS keyboard to enter product data. After entering the product data, click the **Subtotal** button. Click the **Delete Item** button to remove the currently selected product. Click the **Delete All** button to remove all products. To change quantities, click the **Qty** button after entering the product data and then enter the quantity. Click the **Ent** button to accept the quantity.

Description	Each	Qty	Total
Parka	70	1	70
T-shirt	25	1	25
Sox	6	2	12
<b>Subtotal</b>			<b>\$107</b>

Total

\$107

Cash

\$0

Change

\$0

C

Qty

Subtotal

7

8

9

4

5

6

1

2

3

0

00

0000

Ent

Delete Item

Delete All

Code

Settings

Printer

Receipt

Barcode

Green Checkmark



The scanned data and **Total** appears on the **POS Terminal Customer Display Sample** screen.

- 2** Enter the amount of cash received. After entering the amount of cash received, click the **Ent** button.

Description	Each	Qty	Total
Parka	70	1	70
T-shirt	25	1	25
Sox	6	2	12
Subtotal			\$107

Total	Cash	Change
\$107	\$0	\$0

Buttons: Delete Item, Delete All, Code

Keypad: C, Qty, Subtotal, 7, 8, 9, 4, 5, 6, 1, 2, 3, 0, 00, 0000, Ent

- 3** The amount of change appears and a receipt is printed from the printer.

Description	Each	Qty	Total
Parka	70	1	70
T-shirt	25	1	25
Sox	6	2	12
Subtotal			\$107

Total	Cash	Change
\$107	\$110	\$3

Buttons: Delete Item, Delete All, Code

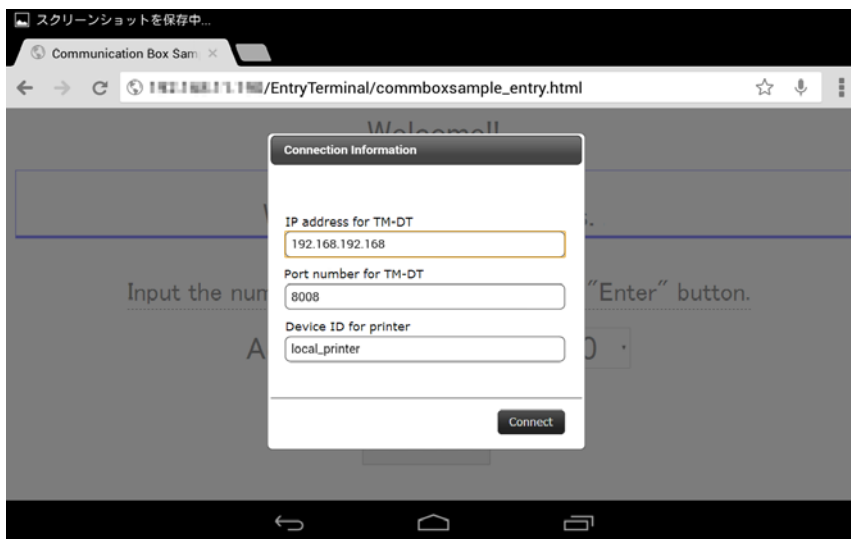
Keypad: C, Qty, Subtotal, 7, 8, 9, 4, 5, 6, 1, 2, 3, 0, 00, 0000, Ent

## Entry Terminal

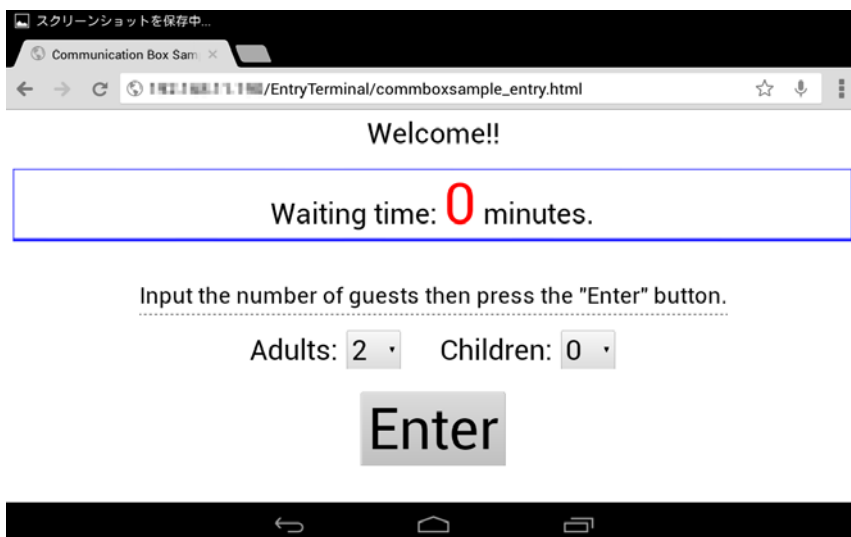
This sample program was created for use with reception terminals.

Data communication between applications is performed using communication box functionality.

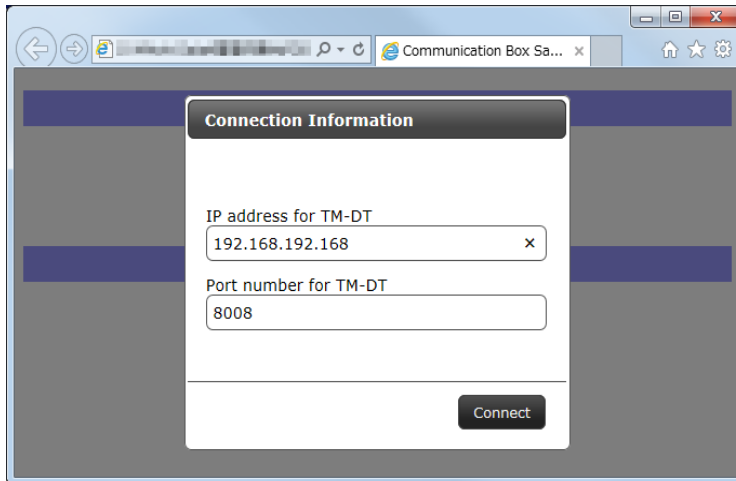
- 1 Start the sample program for reception terminals. Select **Entry Terminal Entry Sample**.
- 2 The **Connection Information** screen appears.  
Enter the **IP address for TM-DT**, **Port number for TM-DT**, **Device ID for printer**, and then click the **Connect** button.



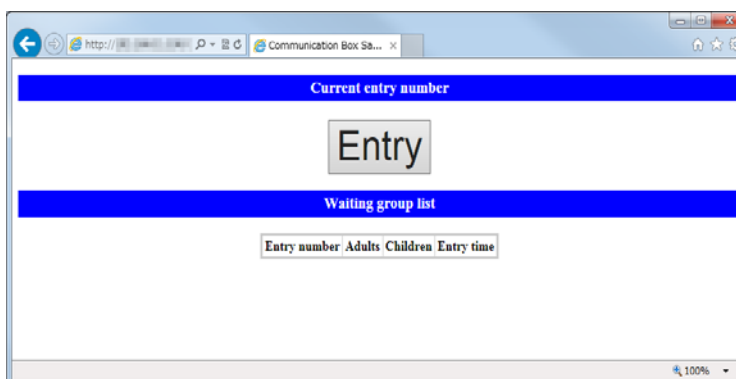
- 3 The **Entry Terminal Entry Sample** screen appears.



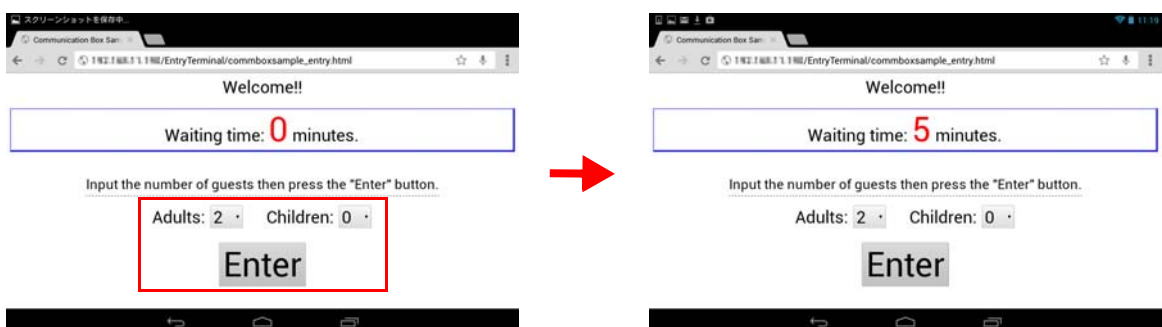
- 4 Start the sample program for calls. Select **Entry Terminal Call Sample**.
- 5 The **Connection Information** screen appears.  
Enter the **IP address for TM-DT** and **Port number for TM-DT** and click the **Connect** button.



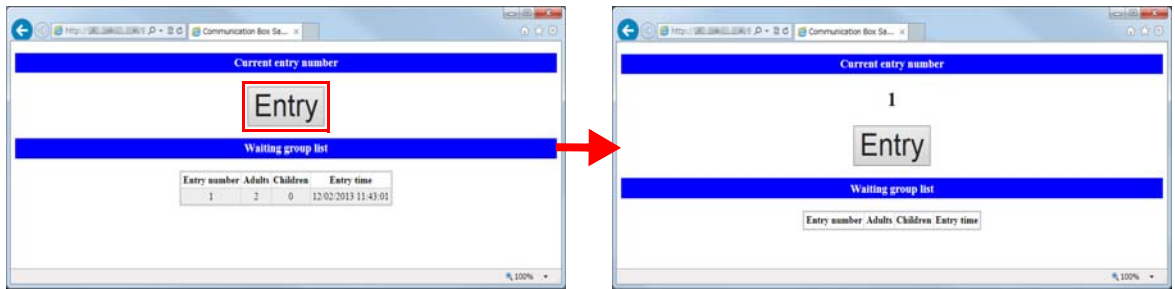
- 6 The **Entry Terminal Call Sample** screen appears.



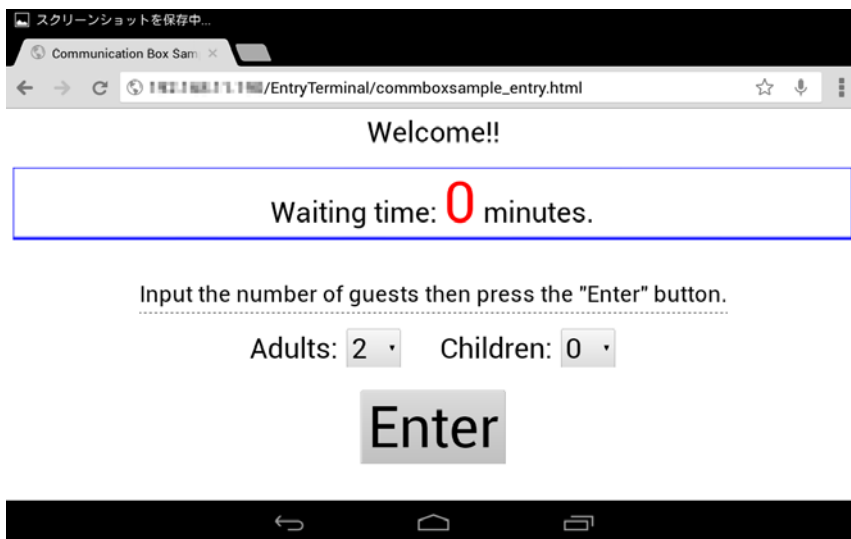
- 7 Perform operations in accordance with the **Entry Terminal Entry Sample** screen.  
The entry number is printed from a TM intelligent printer and the waiting time appears.



- 8 After performing the operation in step 7, the entry number appears on the **Entry Terminal Call Sample** screen and the **Entry** button becomes enabled. Click **Entry**.



- 9 The wait time is updated in the **Entry Terminal Entry Sample** screen.



## Receipt Designer

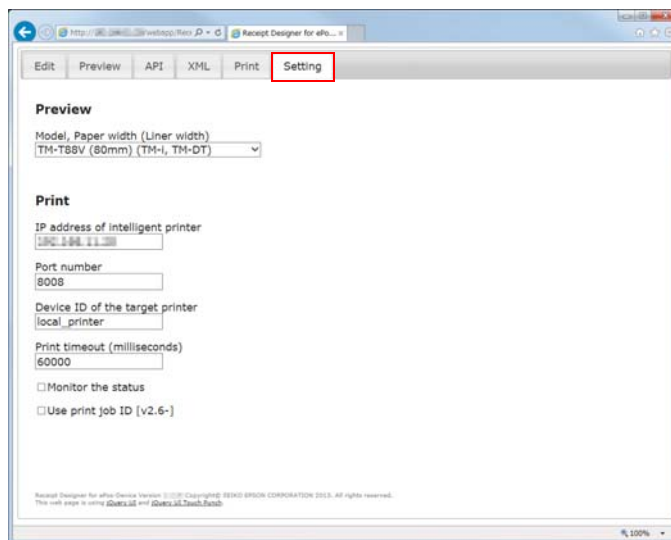
This easily generates and prints sample code for print data for receipt printers.



- Displaying previews that include images in Google Chrome generates the "SECURITY\_ERR DOM Exception 18" error.
- Attempting to print in Windows Internet Explorer 9 generates the "SCRIPT5: Access is denied." error.

### Preparation

- 1 Start the sample program. Select **Receipt Designer**.
- 2 The **Receipt Designer for ePOS-Device** screen appears. Click the **Setting** tab.



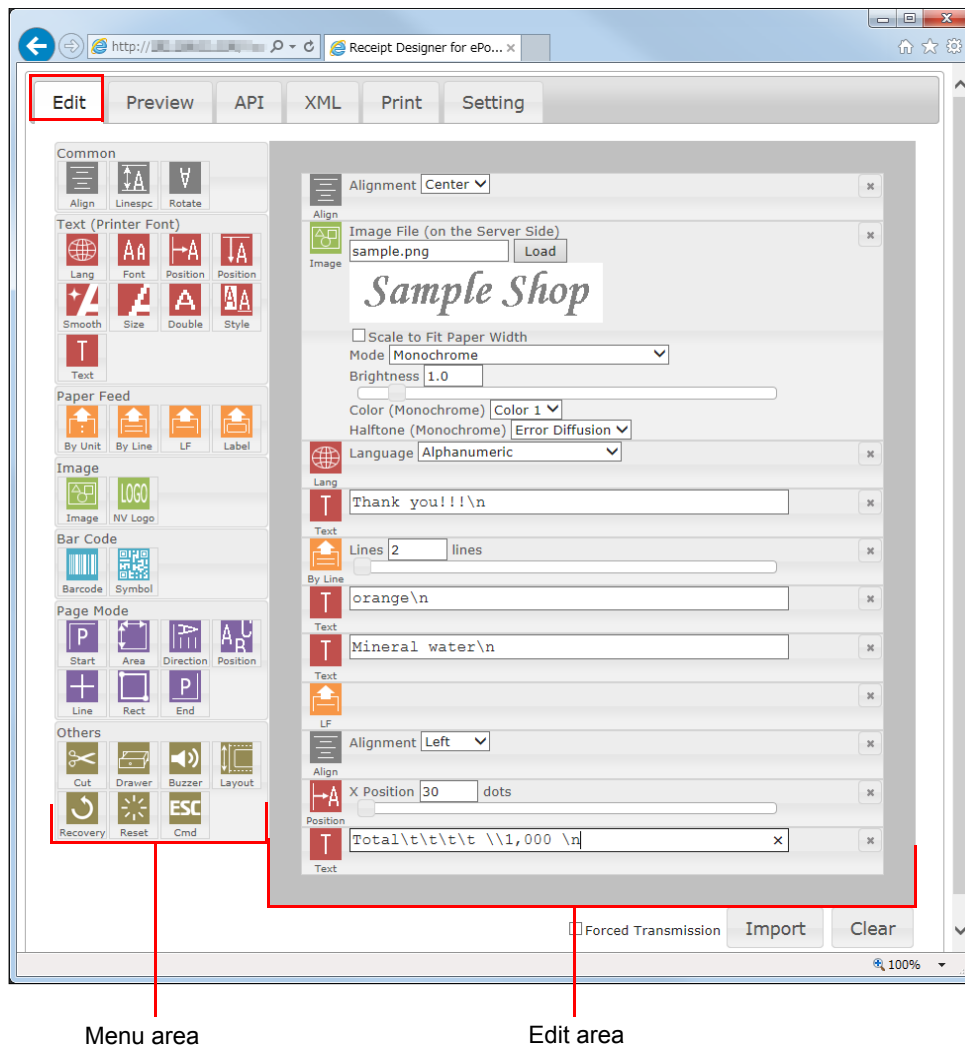
Configure the following settings.

Name of function	Description
Model, paper width	Select the model of your printer and the width of paper. The preview screen changes in accordance with the model and paper width.
Intelligent printer IP address	Specify the IP address for the printer. This parameter must be configured.
Port number	Specify the port number used by the TM-DT software. This is normally set to 8008. Set this to 8043 to use SSL communication.
Printer device ID	Specify the printer device ID. This parameter must be configured.
Print timeout (in msec units)	Specify the print timeout in units of milliseconds. The maximum possible value is 60,000 milliseconds, which is equivalent to 60 seconds.
Monitor status	Select this check box to monitor the printer status.
Use print job IDs *	Select this check box to print documents that also include the print job ID.

\* Supported in TM-DT software Ver. 3.0 or later and TM-i firmware Ver. 4.1 or later.

## Creating Sample Code

Select the **Edit** tab to display the Edit screen. Sample code for Epson ePOS SDK for JavaScript is created in the Edit screen.



Item	Description
Menu area	This area displays the usable functions. Click to add items to the end of the Edit area or drag items to their desired positions in the Edit area.
Edit area	Functions selected in the Menu area appear here. The order of elements can be changed by dragging items to different positions. Remove elements by clicking the <b>x</b> button to the right of the element.
Import	Previously saved XML data can be imported into Receipt Designer using ePOS-Device XML. Refer to <a href="#">Import</a> for more information.
Clear	Deletes the content created or edited here.
Manual transmission	Configures settings for manual transmission mode.

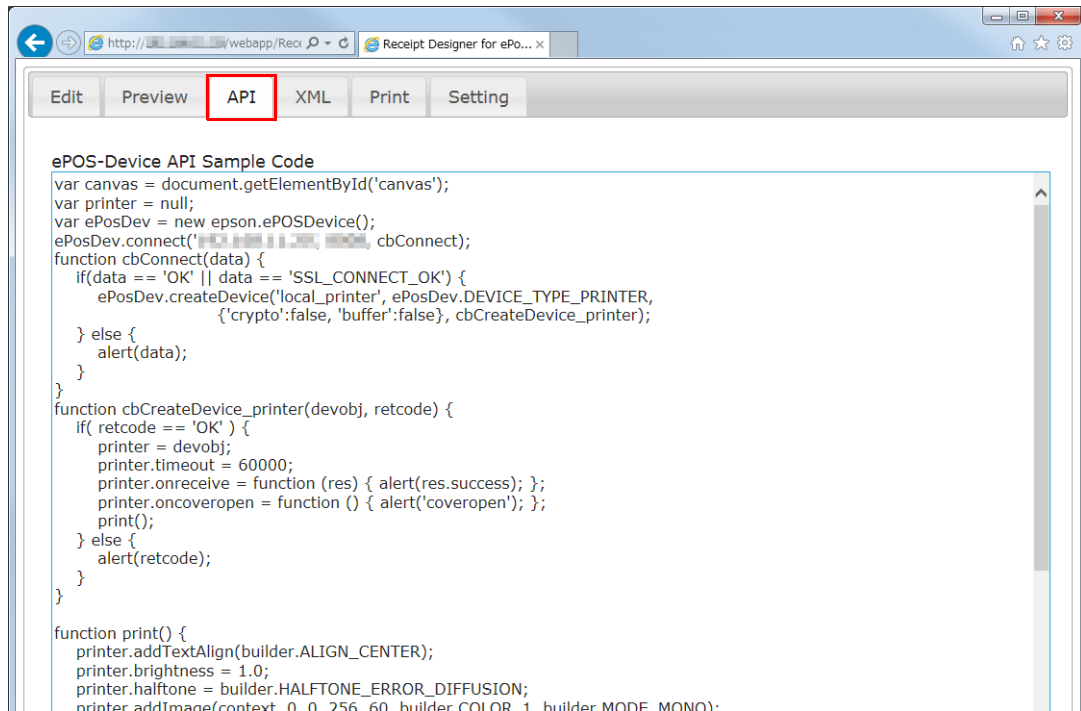
Use the following procedure to create sample code.

- 1** Click an icon in the Menu area to add the element to the Edit area.  
The position of the added function can be changed by dragging it.
- 2** Configure the added element.  
Ex.: Configure the keycode if the NV logo has been added.
- 3** Select the **Preview** tab to look at the preview.  
You can perform a test print if a printer is connected.  
Refer to [Printing](#) for more information.



- Logo printing, barcode printing, 2D code printing, ESC commands, buzzer sounds, drawer kicks, and paper cuts appear as icons.
- The layout may change depending on the preview settings.  
Refer to [Preparation](#) for more information.

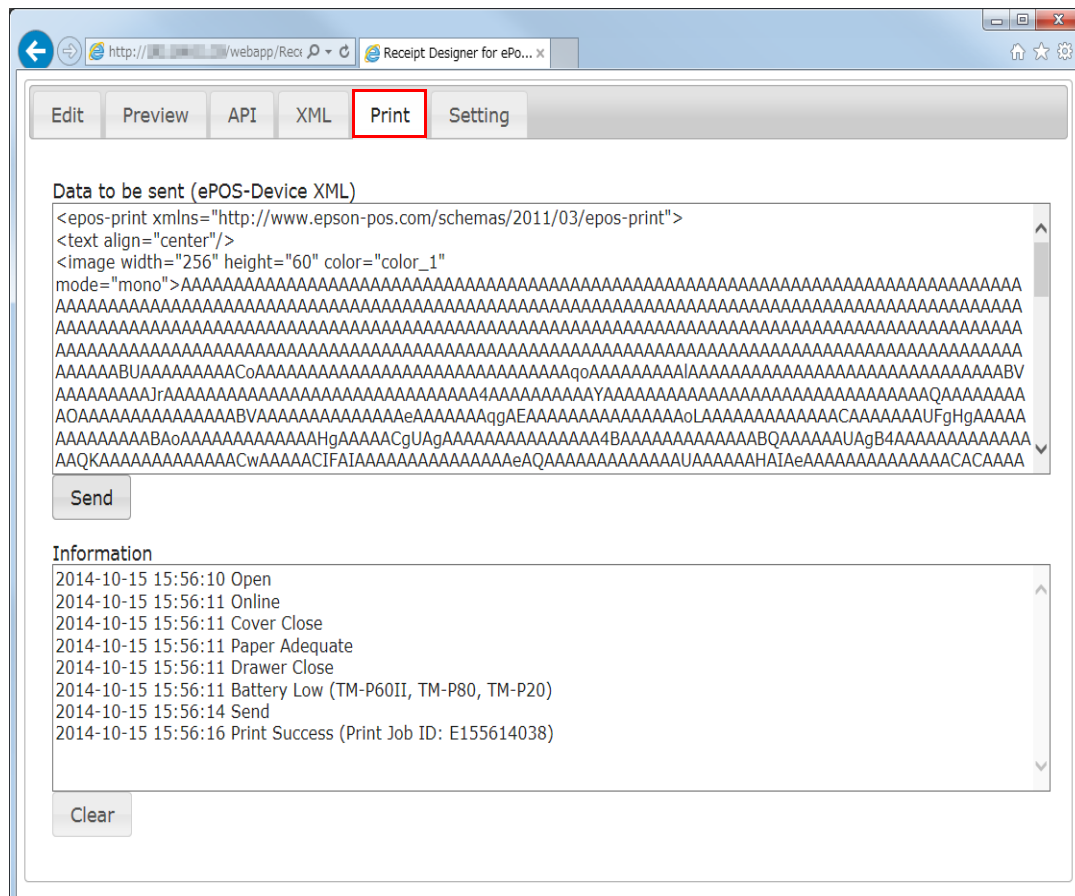
- 4 Select the **API** tab. The Epson ePOS SDK for JavaScript sample code appears. Copy the code for actual use.



ePOS-Device XML print documents are used for importing.  
Select the **XML** tab and then copy and save the ePOS-Device XML print document as necessary.

## Printing

Perform a test print of the print document using the current printer settings.  
Refer to [Preparation](#) for more information on printer settings.




Item	Description
Data to be sent (ePOS-Device XML):	The ePOS-Device XML print document appears here.
Send	Sends the data to the printer to be printed.
Information	The print status appears here.
Clear	This deletes the information in the <b>Information</b> window.

Use the following procedure to print documents.

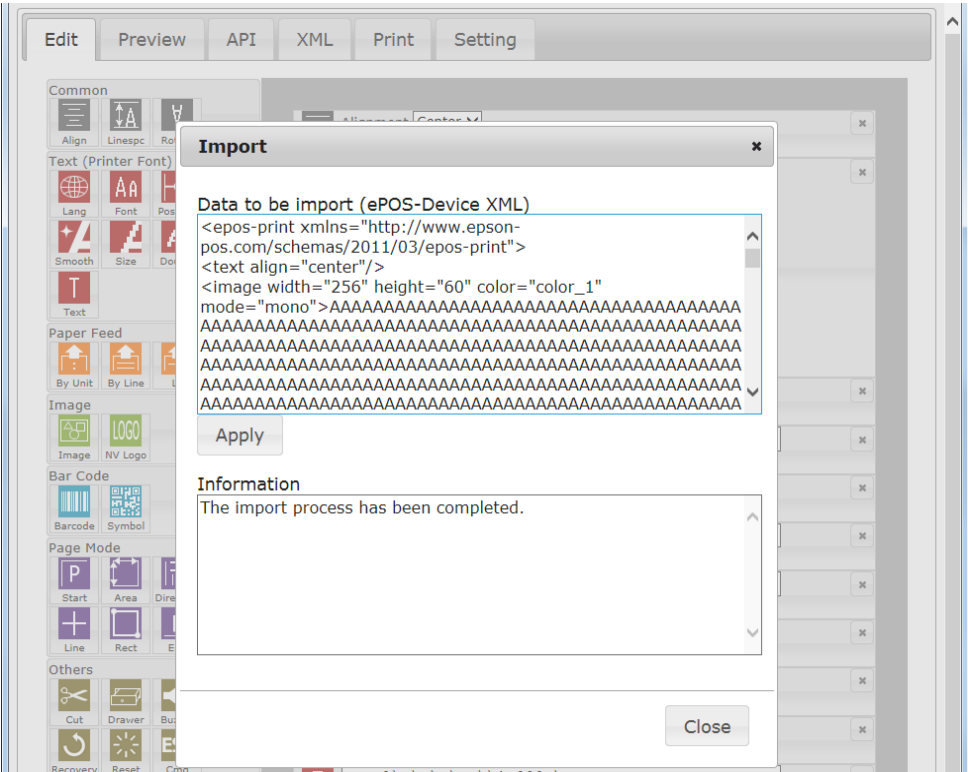
- 1 Select the **Print** tab.
- 2 Check the content in the **Data to be sent (ePOS-Device XML)** area and then click the **Send** button.  
The ePOS-Device XML print document created on the **Edit** tab appears in the **Data to be sent (ePOS-Device XML)** area.
- 3 The print document is printed by the intelligent printer.  
The retrieved status appears in the **Information** window.

Import

Previously created and imported ePOS-Device XML print documents can be further edited in Receipt Designer.



Source code created in the Epson ePOS SDK for JavaScript cannot be imported.  
Make sure to import print data in ePOS-Device XML format.



Item	Description
Data to be import (ePOS-Device XML):	The content of the ePOS-Device XML print document to be imported is pasted here for review.
Apply	Imports the ePOS-Device XML print documents.
Information	Information regarding the import process appears here.
Close	Closes the <b>Import</b> window.

Use the following procedure to import ePOS-Device XML print documents into Receipt Designer.

- 1 Select the **Edit** tab and click the **Import** button.
- 2 The **Import** window appears. The content of the ePOS-Device XML print document is pasted into the **Data to be import (ePOS-Device XML)** area.
- 3 Click the **Apply** button.
- 4 The **Confirm** screen appears. Click the **Yes** button.

## Printer Sample

This sample program can be used to operate printers and generate printer sample code.

- 1 Start the sample program. Select **Printer Sample**.
- 2 The **Printer Sample** screen appears. Click the **Connect** button. Once the connection has been successfully established, the following message appears in the **Console** area.



The settings in the **Device Setting** area do not need to be changed. However, change the values as necessary when the IP address and others are changed.

**Printer Sample Program - Mozilla Firefox**

File Edit View History Bookmarks Tools Help

Printer Sample Program

Device Setting

Connection settings IP address 192.168.192.168 Port 8008 Device ID local\_printer Encryption **Connect**

**Console**

connected to ePOS Device Service Interface.  
you can use printer.

**ePOS-Device API Printer Object**

Common	Alignment	Left	Add
	Line Spacing	30	Add
	Upside-down	<input type="checkbox"/> Upside-down	Add
Text	Print Characters	Hello,World!n Horizontal Tab(HT): '\t', Line Feed(LF): '\n', Carriage Return(CR): '\r', Back Slash: '\'	Add
	Language	ANK	Add
	Font	Font A	Add
	Smoothing	<input type="checkbox"/> Enabled	Add
	Double	<input type="checkbox"/> Double-width <input type="checkbox"/> Double-height	Add
	Size	Width Normal Height Normal	Add
	Style	<input type="checkbox"/> White/Black Reverse <input type="checkbox"/> Underline <input type="checkbox"/> Emphasized Color Color 1	Add
Position	X Position 0	Add	

- 3 Configure the desired devices and then click the **Add** button.

**ePOS-Device API Printer Object**

Common	Alignment	Left	Add
	Line Spacing	30	Add
	Upside-down	<input type="checkbox"/> Upside-down	Add
Text	Print Characters	Hello,World!n Horizontal Tab(HT): '\t', Line Feed(LF): '\n', Carriage Return(CR): '\r', Back Slash: '\'	Add
	Language	ANK	Add
	Font	Font A	Add
	Smoothing	<input type="checkbox"/> Enabled	Add
	Double	<input type="checkbox"/> Double-width <input type="checkbox"/> Double-height	Add
	Size	Width Normal Height Normal	Add
	Style	<input type="checkbox"/> White/Black Reverse <input type="checkbox"/> Underline <input type="checkbox"/> Emphasized Color Color 1	Add
Position	X Position 0	Add	

- 4 The source code for the device added in step 3 appears in the **printer-Print API Sample Code** area. This code can be copied for use elsewhere.

**Printer Object Sample Code**

```

var canvas = document.getElementById('canvas');
var printer = null;
var ePosDev = new epos.ePOSDevice();
ePosDev.connect('192.168.192.168', 8008, cbConnect);
function cbConnect(data) {
  if(data == 'OK') {
    ePosDev.createDevice('local_printer', ePosDev.DEVICE_TYPE_PRINTER,
false, cbCreateDevice_printer);
  } else {
    alert(data);
  }
}

```

**Test print**

Interval 3000 **Send**

Status ☐ onstatuschange ☒ ononline, onoffline, onpoweroff ☒ oncoverok, oncoveropen  
☒ onpaperok, onpaperend, onpapernearend ☒ ondrawerclosed, ondraweropen

**Start** **Stop**

- 5 Click the **Send** button to perform a test print using the function added in step 3.

## Hybrid Printer Sample

This sample program can be used to operate hybrid printers and generate hybrid printer sample code.

### Preparation

- 1 Start the sample program. Select **Hybrid Printer Sample**.
- 2 The **Hybrid Printer Sample** screen appears. Click the **Connect** button. Once the connection has been successfully established, the following message appears in the **Console** area.



The settings in the **Device Setting** area do not need to be changed. Change the values as necessary when desired.

Device Setting			
Connection settings	IP address	192.168.11.190	Port 8008
	Enable buffer		
	Device ID	local_printer	<input type="checkbox"/> Encryption <input type="checkbox"/>
			<b>Connect</b>

Console			
connected to ePOS Device Service Interface. you can use hybrid printer.			

ePOS-Device API Hybrid Printer Object			
Common	Alignment	Left	<input type="button" value="Add"/>
	Line Spacing	30	<input type="button" value="Add"/>
	Upside-down	<input type="checkbox"/> Upside-down	<input type="button" value="Add"/>

## Using Printer Functions

- 1 Configure the desired functions within the **ePOS-Device API Hybrid Printer Object** and then click the **Add** button.

ePOS-Device API Hybrid Printer Object			
Common	Alignment	Left	Add
	Line Spacing	30	Add
	Upside-down	<input type="checkbox"/> Upside-down	Add
Text	Print Characters	Hello, World!\n	Add
	Language	ANK	Add
	Font	Font A	Add
	Smoothing	<input type="checkbox"/> Enabled	Add
	Double	<input type="checkbox"/> Double-width <input type="checkbox"/> Double-height	Add

- 2 Select the print method from the **target** menu.

```

var canvas = document.getElementById('canvas');
var printer = null;
var ePosDev = new epos.ePOSDevice();
ePosDev.connect('192.168.192.168', 8008, cbConnect);
function cbConnect(data) {
    if(data == 'OK') {
        ePosDev.createDevice('local_printer', ePosDev.DEVICE_TYPE_HYBRIDPRINTER,
        cbCreateDevice_hybridprinter);
    } else {
        alert(data);
    }
}
  
```

- 3 The source code for the function added in step 1 appears in the **Hybrid Printer Object Sample Code** area. This code can be copied for use elsewhere.

```

var canvas = document.getElementById('canvas');
var printer = null;
var ePosDev = new epos.ePOSDevice();
ePosDev.connect('192.168.192.168', 8008, cbConnect);
function cbConnect(data) {
    if(data == 'OK') {
        ePosDev.createDevice('local_printer', ePosDev.DEVICE_TYPE_HYBRIDPRINTER,
        cbCreateDevice_hybridprinter);
    } else {
        alert(data);
    }
}
  
```

- 4 Configure different print methods in the **Test print** area. Click the **Print** button to perform a test print using the function added in step 3.

Hybrid Printer Object Sample Code -- target   Receipt		
<pre> var canvas = document.getElementById('canvas'); var printer = null; var ePosDev = new epos.ePOSDevice(); ePosDev.connect('192.168.192.168', 8008, cbConnect); function cbConnect(data) {     if(data == 'OK') {         ePosDev.createDevice('local_printer', ePosDev.DEVICE_TYPE_HYBRIDPRINTER,         cbCreateDevice_hybridprinter);     } else {         alert(data);     } }           </pre>		
Test print		
lock/unlock		lock unlock
MICR	ignoreerror	<input checked="" type="radio"/> true <input type="radio"/> false
	font	E13B
	timeout	1 (min)
Test print	Receipt print	<input type="checkbox"/> Forced Transmission Print
	Slip print	timeout 1 (min) Print Cancel
	Endorse print	timeout 1 (min) Print Cancel

## Using MICR Functions

- 1 Click the **lock** button in the **Test print** area.

The screenshot shows a 'Test print' section with a 'lock/unlock' label and two buttons: 'lock' and 'unlock'. The 'lock' button is highlighted with a red rectangle.

- 2 Configure the MICR settings and then click the **Read** button.

The screenshot shows a window titled 'Hybrid Printer Object Sample Code -- target Receipt'. It contains a code editor with JavaScript code for connecting to an Epson device. Below the code is a 'Test print' section with a 'lock/unlock' label and 'lock'/'unlock' buttons. The 'MICR' section is highlighted with a red rectangle and contains the following settings:
 

- ignoreerror: ☒ true ☐ false
- font: E13B (dropdown)
- timeout: 1 (min)

 To the right of these settings is a 'Read' button, which is highlighted with a red rectangle. Other buttons like 'Eject', 'Cancel', and 'Clean' are also visible.

- 3 Add check paper into the hybrid printer.  
Scan the MICR data configured in step 2.
- 4 After this process completes, click the **Eject** button.  
The check paper is ejected from the printer.

The screenshot shows the 'Test print' section with the 'MICR' settings (ignoreerror, font, timeout) and the 'Read' button. The 'Eject' button is highlighted with a red rectangle.

- 5 Click the **unlock** button.

The screenshot shows the 'Test print' section with the 'lock/unlock' label and 'lock'/'unlock' buttons. The 'unlock' button is highlighted with a red rectangle.

## Customer Display Sample

This sample program can be used to generate sample code that appears on customer displays and to send generated code used to operate customer displays.

- 1 Start the sample program. Select **Customer Display Sample**.
- 2 The **Customer Display Sample** screen appears. Click the **Connect** button. Once the connection has been successfully established, the following message appears in the **Console** area. The customer display also changes.



The settings in the **Device Setting** area do not need to be changed. Change the values as necessary when desired.

**Customer Display Sample Program - Mozilla Firefox**

File Edit View History Bookmarks Tools Help

Customer Display Sample Program

192.168.192.168/display\_sample.html

**Device Setting**

Connection settings IP address 192.168.192.168 Port 8008 Device ID local\_display Encryption **Connect**

**Console**

Connected to ePOS Device Service Interface.  
you can use display.

**ePOS Device API Display Object**

Window	Define display area	Window No. 1	X-coordinate 1	Y-coordinate 1	Width 10	Height 1	Scroll	Add
	Discard display area setting <td>Window No. to discard 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td> </td>	Window No. to discard 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>						Add
	Switch display area <td>Window No. to move 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td> </td>	Window No. to move 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>						Add
	Clear current display area <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>							Add
Cursor	Set cursor position <td>X-coordinate 1 <td>Y-coordinate 1 <td></td> <td></td> <td></td> <td></td> <td>Add</td> </td></td>	X-coordinate 1 <td>Y-coordinate 1 <td></td> <td></td> <td></td> <td></td> <td>Add</td> </td>	Y-coordinate 1 <td></td> <td></td> <td></td> <td></td> <td>Add</td>					Add
	Move cursor position in current window <td>Top left</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>	Top left						Add
	Cursor Type <td>No cursor</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>	No cursor						Add

- 3 Configure the desired devices and then click the **Add** button.

**Customer Display Sample Program - Mozilla Firefox**

File Edit View History Bookmarks Tools Help

Customer Display Sample Program

192.168.192.168/display\_sample.html

**ePOS Device API Display Object**

Window	Define display area	Window No. 1	X-coordinate 1	Y-coordinate 1	Width 10	Height 1	Scroll	Add
	Discard display area setting <td>Window No. to discard 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td> </td>	Window No. to discard 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>						Add
	Switch display area <td>Window No. to move 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td> </td>	Window No. to move 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>						Add
	Clear current display area <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>							Add
Cursor	Set cursor position <td>X-coordinate 1 <td>Y-coordinate 1 <td></td> <td></td> <td></td> <td></td> <td>Add</td> </td></td>	X-coordinate 1 <td>Y-coordinate 1 <td></td> <td></td> <td></td> <td></td> <td>Add</td> </td>	Y-coordinate 1 <td></td> <td></td> <td></td> <td></td> <td>Add</td>					Add
	Move cursor position in current window <td>Top left</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>	Top left						Add
	Cursor Type <td>No cursor</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Add</td>	No cursor						Add
Text	Display text	String	Language None	X-coordinate None	Y-coordinate None			Add
	Display inverted text	String	Language None	X-coordinate None	Y-coordinate None			Add
	Display marquee	String	Format Start from right-edge	Display interval(100~2,000)(ms) 100	Repeat interval(100~2,000)(ms) 100	Repeat count(0~127) 0	Language None	Add

- 4** The source code for the function added in step 3 appears in the **Display Object Sample Code** area. This code can be copied for use elsewhere.

Cursor	Set cursor position	X-coordinate   1   Y-coordinate   1	Add
	Move cursor position in current window	Top left	Add
	Cursor Type	No cursor	Add
Text	Display text	String Hello World! Language   None   X-coordinate   None   Y-coordinate   None	Add
	Display inverted text	String Hello World! Language   None   X-coordinate   None   Y-coordinate   None	Add
	Display marquee	String Hello World! Format   Start from right-edge   Display interval(100~2,000)(ms)   100   Repeat interval(100~2,000)(ms)   100   Repeat count(0~127)   0   Language   None	Add
	Blinking display	Blinking interval(0~12,700)(ms)   0	Add
Properties	Brightness	20%	Add
	Display clock		Add
Others	command	12345	Add
	Reset display		Add
<b>Display Object Sample Code</b>			
<pre>     alert(retcode); } function executeAddedCode() { display.addText('Hello World!'); </pre>			
			Clear

- 5** Clicking the **Send** button changes the customer display using the function added in step 3.

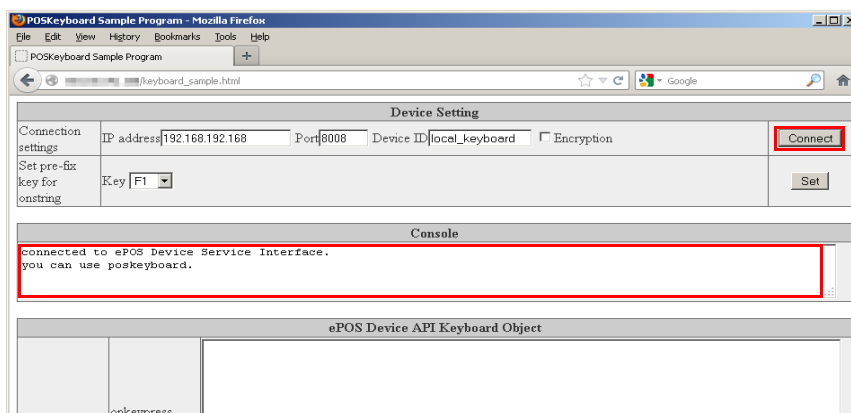
## Keyboard Sample

This sample program can be used to retrieve input from POS keyboards.

- 1 Start the sample program. Select **Keyboard Sample**.
- 2 The **Keyboard Sample** screen appears. Click the **Connect** button. Once the connection has been successfully established, the following message appears in the **Console** area.



The settings in the **Device Setting** area do not need to be changed. Change the values as necessary when desired.



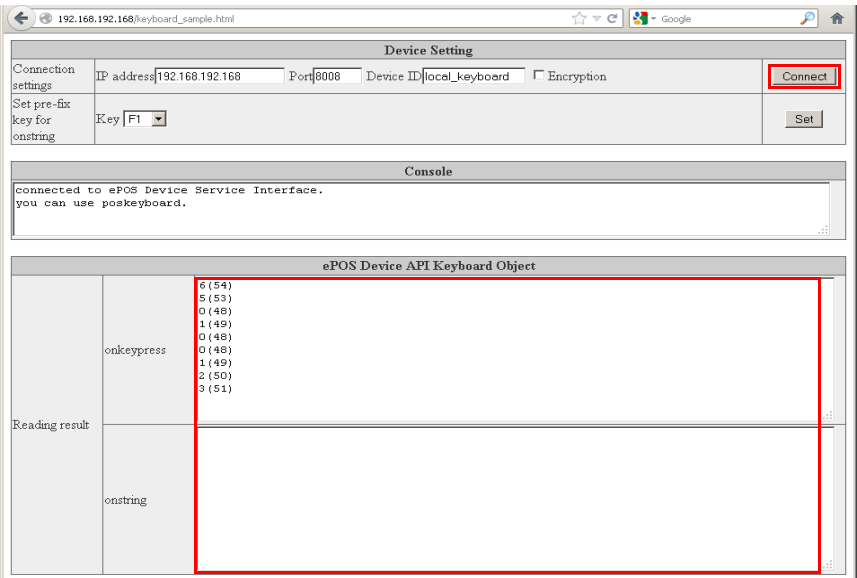
- 3 Select the key which determines when a text string starts and then click the **Register** button.

This configuration needs to be registered on the POS keyboard beforehand.

Ex.: F1 + specified text string + Enter

4 When input is generated with the POS keyboard, the input data appears in the **ePOS Device API Keyboard Object** area.

Direct input of text strings: Appears in the onkeypress area.  
Input of text string configured to a POS key: Pressing the key of the specified text string displays the text string in the onstring area.



## MSR Sample

This sample program can be used to retrieve input from MSR devices.



These scripts can only be used with the TM-DT series of TM intelligent printers.

- 1 Start the sample program. Select **MSR Sample**.
- 2 The **MSR Sample** screen appears. Click the **Connect** button. Once the connection has been successfully established, the following message appears in the **Console** area.



The settings in the **Device Setting** area do not need to be changed. However, change the values as necessary when the IP address and others are changed.

ePOS Device API MSR Object	
読み取り結果	トラック1のデータ全体
	トラック2のデータ全体
	トラック4のデータ全体
	アカウント番号
	有効期限"YYMM"形式
	姓
	名
	ミドルネームまたはイニシャル
	タイトル
	サービスコード
	トラック1の任意データ
	トラック2の任意データ

- 3 The information in the card read by the MSR device appears in the **ePOS Device API MSR Object** area.

ePOS Device API MSR Object	
読み取り結果	トラック1のデータ全体
	トラック2のデータ全体
	トラック4のデータ全体
	アカウント番号
	有効期限"YYMM"形式
	姓
	名
	ミドルネームまたはイニシャル
	タイトル
	サービスコード
	トラック1の任意データ
	トラック2の任意データ

## Barcode Scanner Sample

This sample program can be used to retrieve input from barcode scanners.

- 1 Start the sample program. Select **Barcode Scanner Sample**.
- 2 The **Barcode Scanner Sample** screen appears. Click the **Connect** button. Once the connection has been successfully established, the following message appears in the **Console** area.



The settings in the **Device Setting** area do not need to be changed. Change the values as necessary when desired.

- 3 The information corresponding to the read barcode appears in the **ePOS Device API Scanner Object** area.

ePOS Device API Scanner Object			
Reading result	Data for Identification	Identification code	1
	Barcode data	Barcode type	UNKNOWN
			000000001013

# Application Guide

## To monitor continuously

```

var ePosDev = new epson.ePOSDevice();
var printer = null;

function connect(){
    //Connects to a device
    ePosDev.connect('192.168.192.168', '8008', callback_connect);
}

function callback_connect(resultConnect){
    if ((resultConnect == 'OK') || (resultConnect == 'SSL_CONNECT_OK')) {
        //Retrieves the Printer object
        ePosDev.createDevice('local_printer', ePosDev.DEVICE_TYPE_PRINTER, {'crypto' :
false, 'buffer' : false}, callback_createDevice);
    }
    else {
        //Displays error messages
    }
}

function callback_createDevice(deviceObj, retcode){
    printer = deviceObj;
    if( retcode == 'OK' ) {
        printer = devobj;
        printer.timeout = 60000;
        //Registers an event
        printer.onstatuschange = function (res) { alert(res.success); };
        printer.onbatterystatuschange = function (res) { alert(res.success); };
        print();
    } else {
        alert(retcode);
    }
}

function startMonitor(){
    //Starts the status monitoring process
    printer.startMonitor();
}

//Opens the printer cover

function startMonitor(){
    //Stops the status monitoring process
    printer.stopMonitor();
}

function disconnect(){
    //Discards the Printer object
    ePosDev.deleteDevice(printer, callback_deleteDevice);
}

function callback_deleteDevice(errorCode){
    //Terminates connection with device
    ePosDev.disconnect();
}

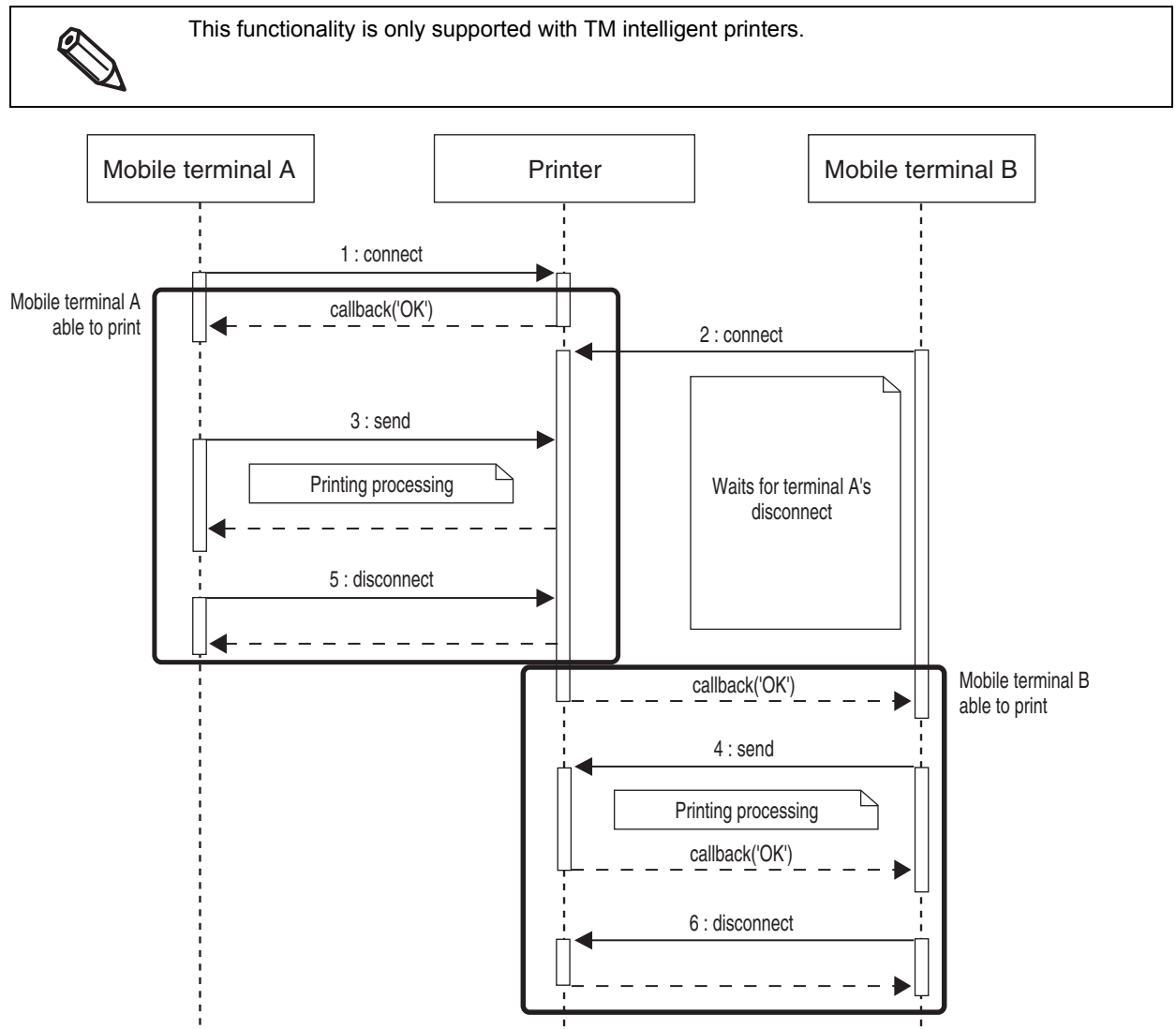
```



Refer to [Error Codes acquired in the Onreceive Event and Countermeasure](#) 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.

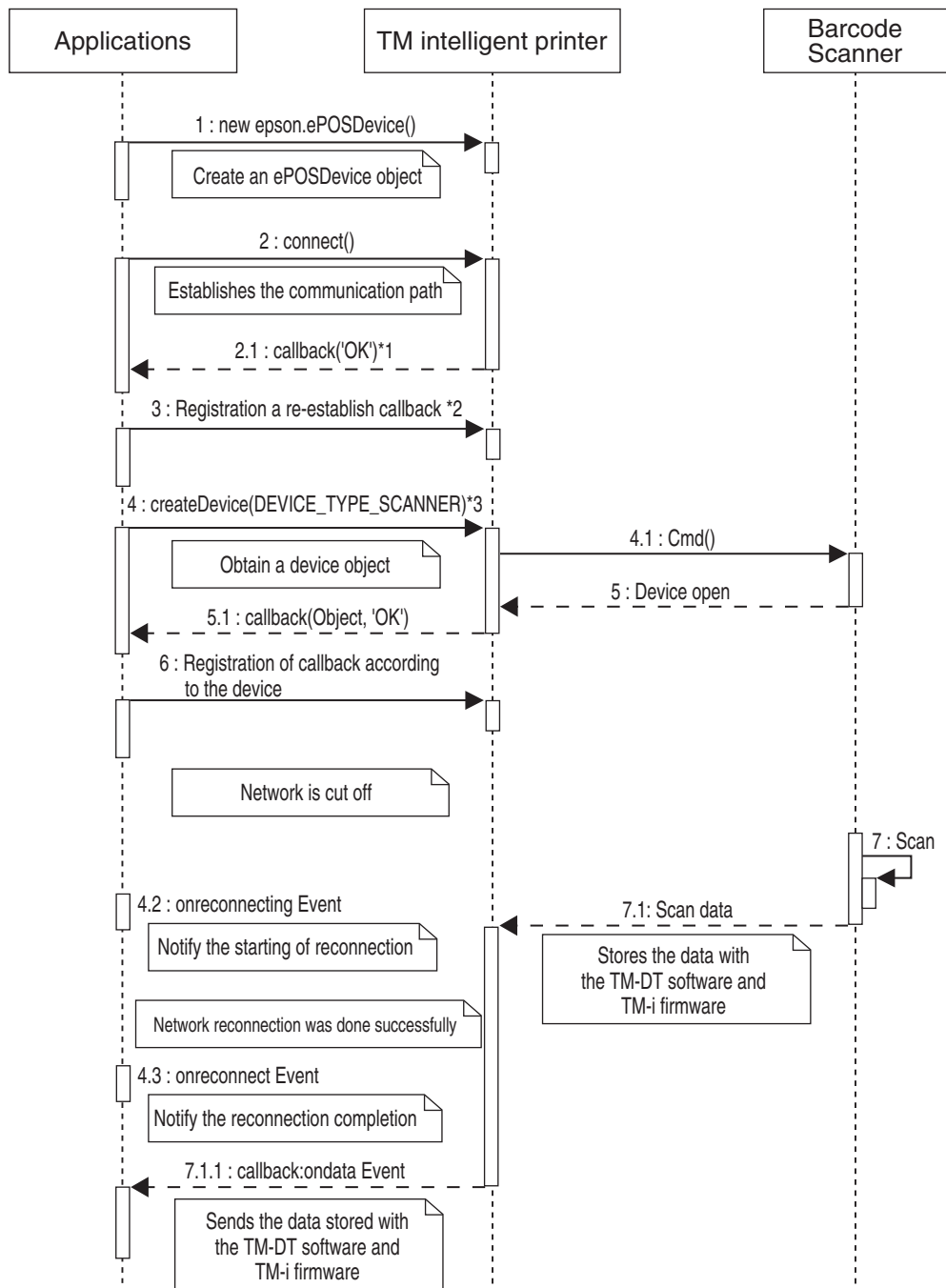


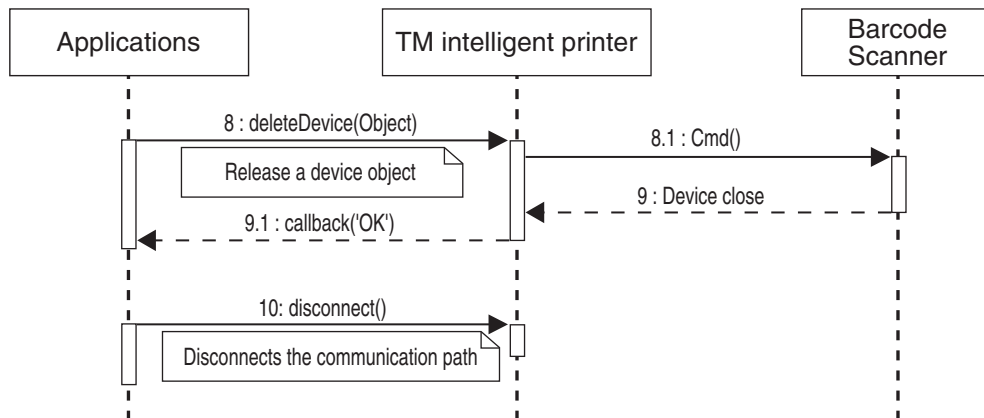
## To reconnect to the network automatically

The following is a sequence for automatically reconnecting if network communication is cut off with the TM intelligent printer.



The following uses a case where the barcode scanner is used as an example.





\*1: "SSL\_CONNECT\_OK" (SSL communication)

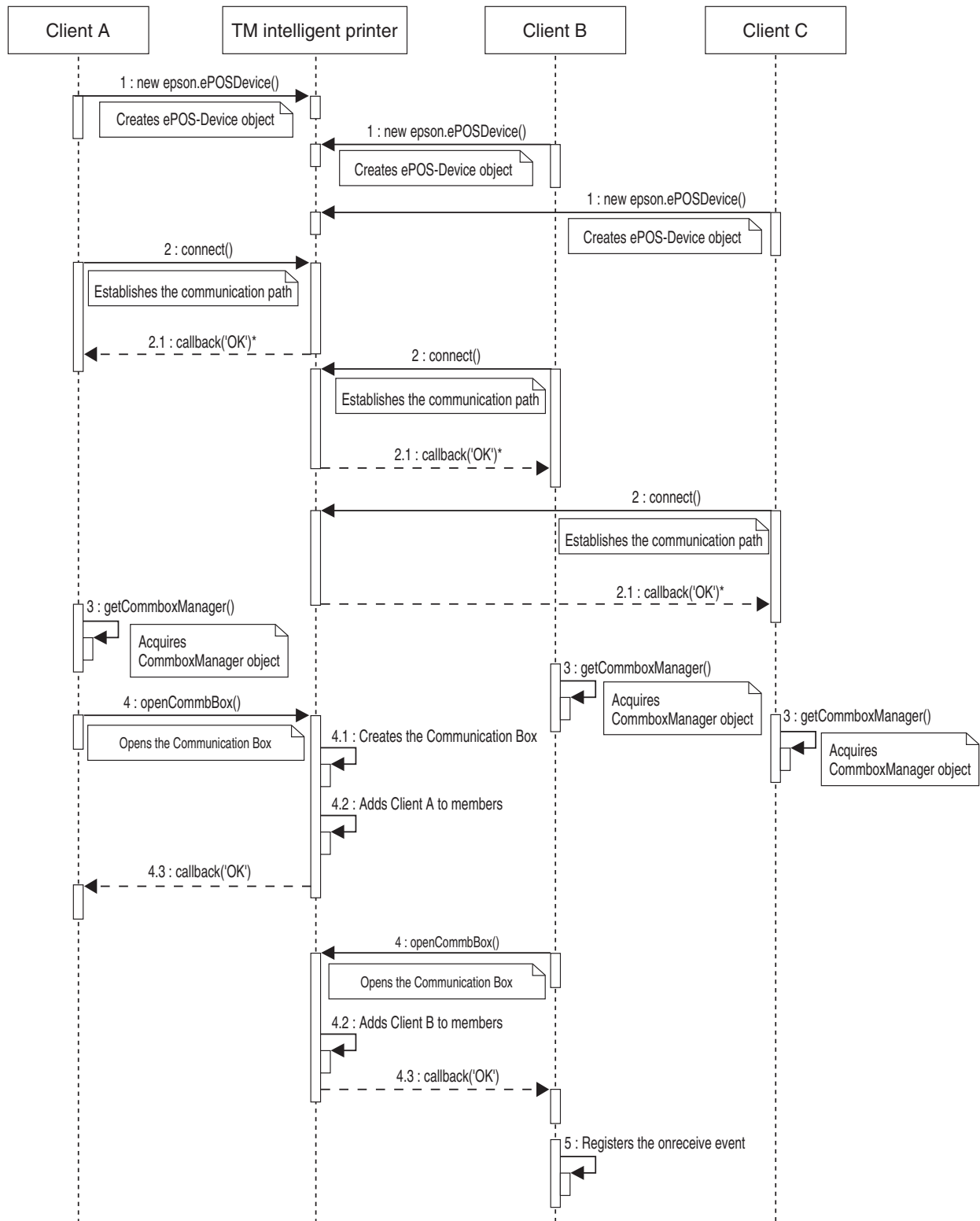
\*2: The reconnection process start event, reconnection stop event, and reconnection failure event are included.

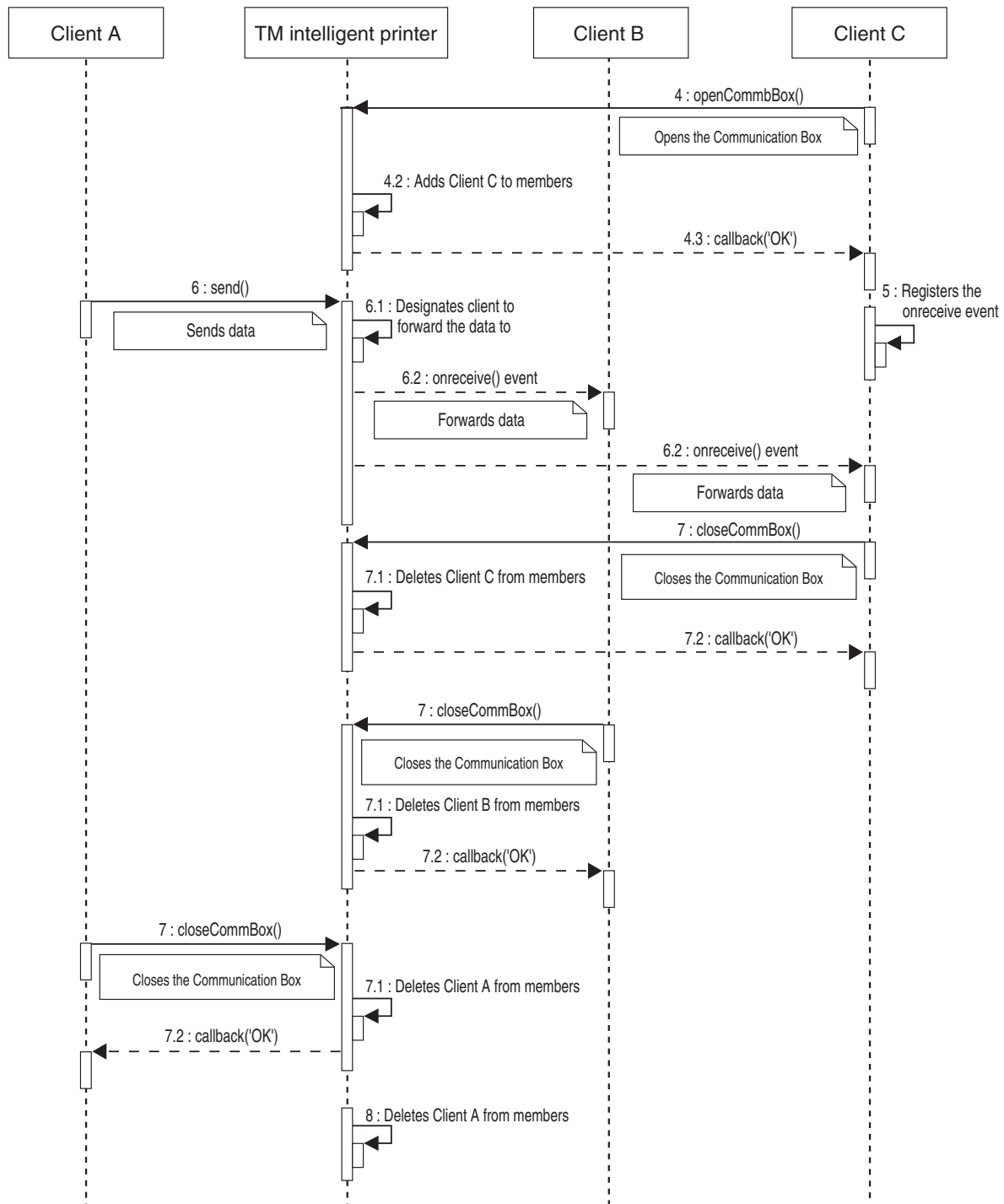
\*3: Configure the options parameters so that data is resent when the network connection is reestablished.

# To transmit and receive the data between applications

Use the Communication Box function of the TM intelligent printer.

The following diagram illustrates the sequence of basic programming using communication boxes. The term "Client" as used in the sequence diagram represents the application.



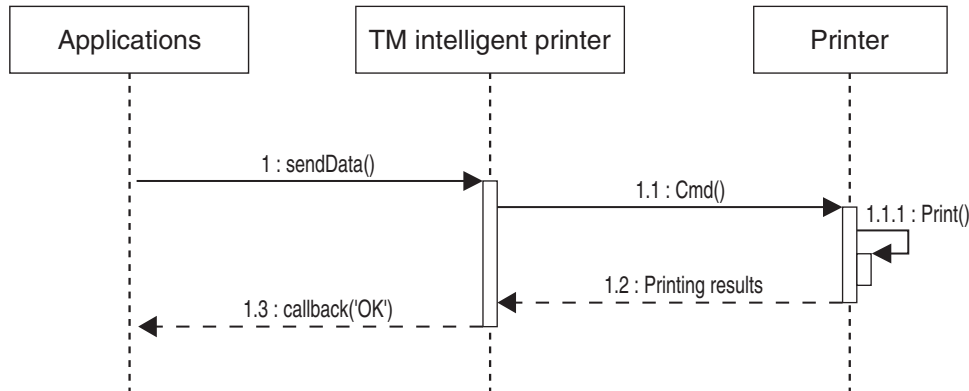


\*: "SSL\_CONNECT\_OK" (SSL communication)

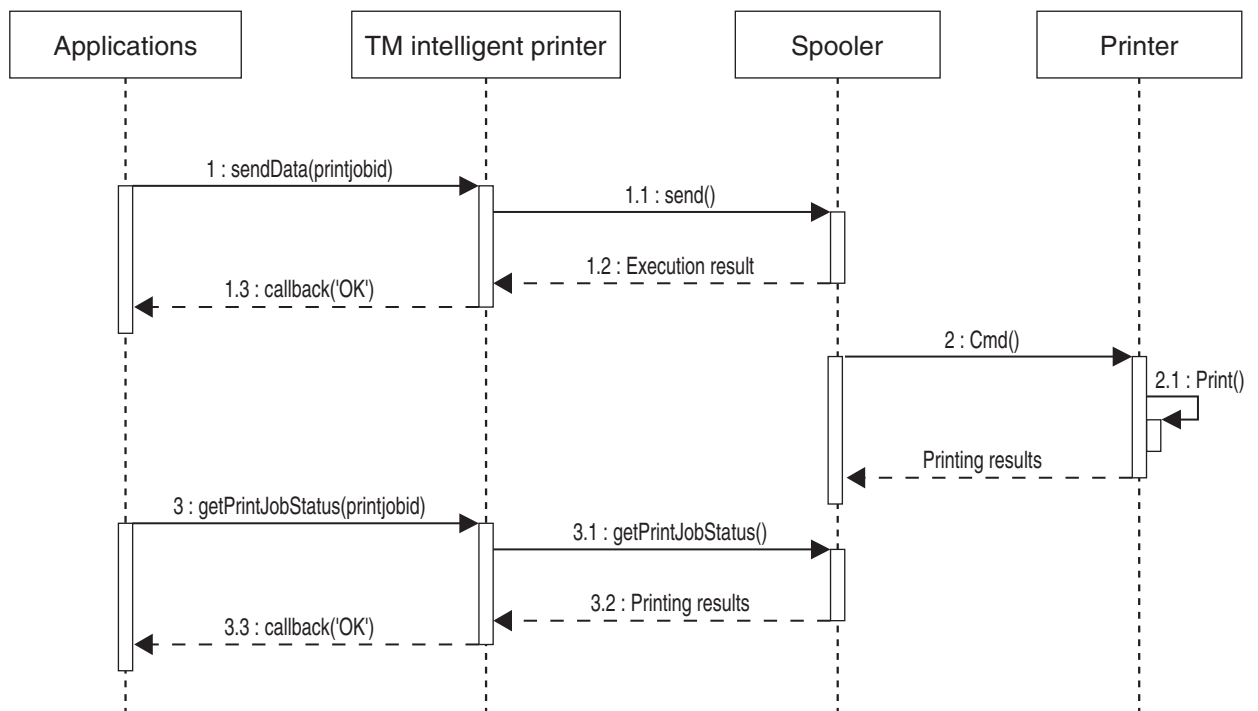
## To perform forward printing

Use the TM intelligent printer spooler function. The spooler function and forward printing function are supported in TM-DT software version 3.0 or later, or TM-i firmware version 4.1 or later.

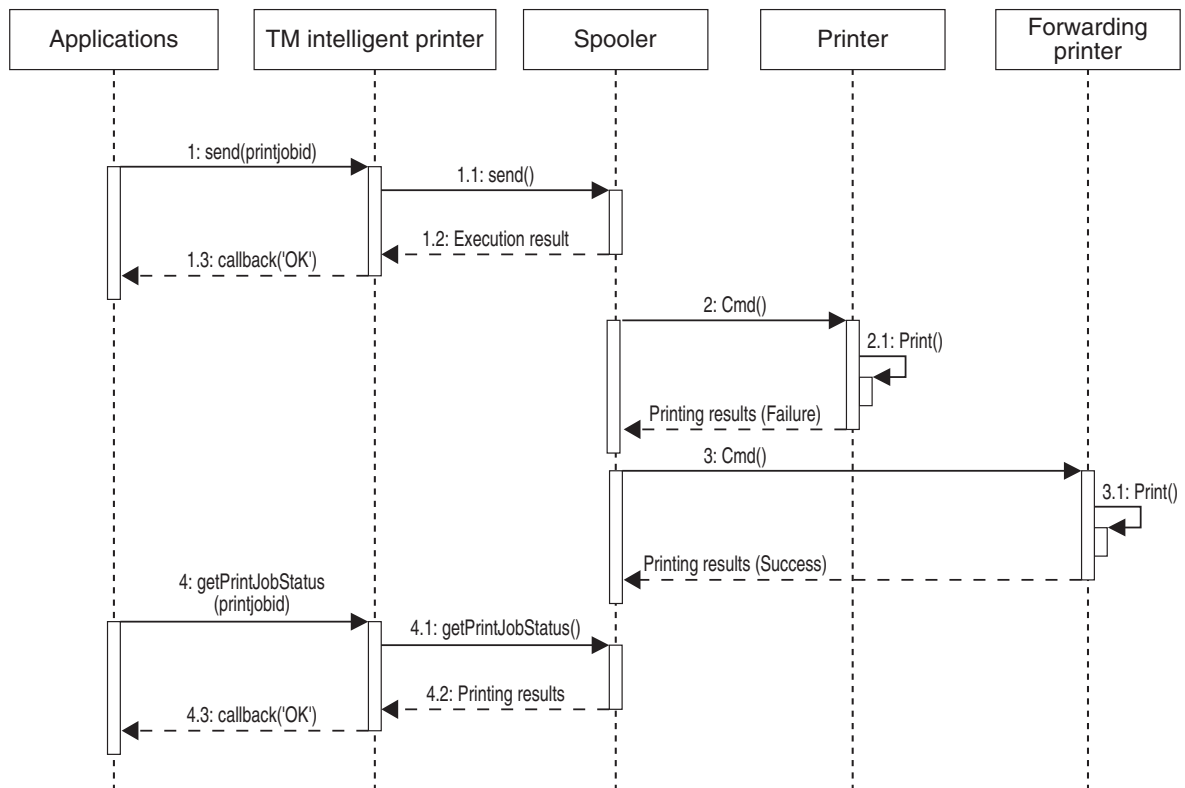
When disabling the spooler function, if a request is sent to the TM-DT software and TM-i firmware from the application, printing is done immediately and a response is returned to the application after print operation completes.



When enabling the spooler function, if a request is sent to the TM-DT software and TM-i firmware from the application, the print data is queued in line and a response is returned to the application before print operation completes.



At this point, if the output destination printer cannot print, the TM-DT software and TM-i firmware do not return errors to the application. Enabling forward printing will allow the printing task to be completed on a substitute printer with the application acquiring the printing results afterward. Refer to the following sequence diagram.



#### ❑ Programming Example

Enabling the spooler function returns a response that contains the print job ID.

When the application does not specify the print job ID, the TM-DT software or TM-i firmware assigns the print job ID.

The print job status is represented in the print job ID that is contained in the retrieved response.

```

var printjobid = '';

function sendJob() {
    printer.addText('Hello, World!\n');
    printer.addCut();
    printer.onreceive = function (res) {
        if (res.success) {
            printjobid = res.printjobid;
        }
    }
    printer.onerror = function (err) { alert(err.status); };
    printer.send();
}

function getJobStatus() {
    if (printjobid.length > 0) {
        printer.onreceive = function (res) { alert(res.success); };
        printer.onerror = function (err) { alert(err.status); };
        printer.getPrintJobStatus(printjobid);
    }
}
  
```

# Developing Applications that Frequently Update or Transition Web Pages

Applications created with Epson ePOS SDK for JavaScript must terminate connections with devices and then reestablish these connections every time a Web page is updated or a transition is made. Therefore print start and display may get slower when TM Intelligent Printers are controlled.

The time taken by the connection process can be reduced by enabling ePOS-Print options.

## Enabling ePOS-Print options

The ePOS-Print options are configured with the [connect method](#) option parameters.

Example: Enabling ePOS-Print options.

```
connect("192.168.192.168", "8008", callback, {"eposprint" : true});
```

## Limitations

Enabling ePOS-Print options disables the following functions of TM Intelligent Printers.

- ☐ Peripheral devices that can be used with TM intelligent printers.
- ☐ TM Intelligent Printers unique functions



- ePOS-Print Options do not effect the control of TM printer.
- Following is the list of Objects that can be used.
  - \* [ePOSDevice object](#) (Only the APIs that can be used with TM printer)
  - \* [Display object](#)
  - \* [Printer object](#)

# Appendix

## Open Source Licensing

This product contains the following open-source libraries:

### *MIT Licensed*

Socket.IO.js build:0.8.7, development.

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