

Epson TM Print Assistant for Android User's Manual

Overview

System Configuration

Application Development

Sample Programs

Application Guide

Precautions

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Safety Precautions

Meaning of Symbols

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

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

Usage Limitations

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

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

About this Manual

Purpose of this Manual

This manual provides the information necessary to develop systems using Epson TM Print Assistant.

Organization of this Manual

This manual is organized into the following chapters.

- Chapter 1 [Overview](#)
- Chapter 2 [System Configuration](#)
- Chapter 3 [Application Development](#)
- Chapter 4 [Sample Programs](#)
- Chapter 5 [Application Guide](#)

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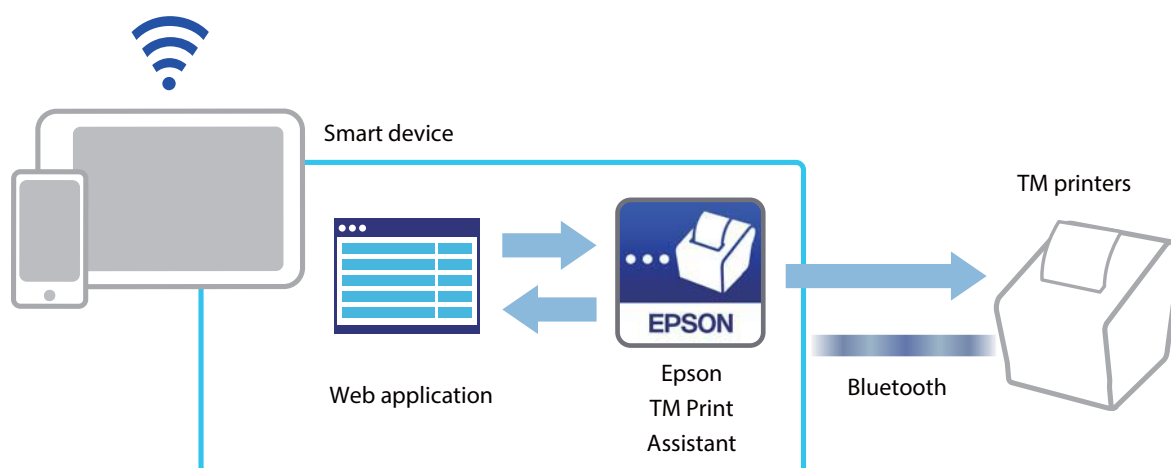
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Overview

Epson TM Print Assistant is a native application which relays print data between an application and a TM printer. Using Epson TM Print Assistant, you can connect your smart device and TM printer via Bluetooth and print data from a web application with URL scheme support.

The URL scheme uses queries defined by Epson TM Print Assistant.



Connection via network also supported.

Epson TM Print Assistant

Epson TM Print Assistant sends received print data to a TM printer connected with a smart device. You can use the Epson TM Print Assistant functions to easily connect a smart device and TM printer.

Search for “Epson TM Print Assistant” on Google Play and download it. When you get update notification from Google Play, check it and update Epson TM Print Assistant.

Operating Environment

Refer to README file for the OSes, smart devices, Web browsers, and TM printers supported by Epson TM Print Assistant.

Downloadable Content

Packages

Epson TM Print Assistant packages include the following files.

Filename	Description
TM_Print_Assistant_Android_Sample.ja.zip	Sample programs for Android (Japanese).
TM_Print_Assistant_Android_Sample.en.zip	Sample programs for Android (English).
README.ja.txt	This is the Japanese README file.
README.en.txt	This is the English README file.
TM_Print_Assistant_Android_um_ja_revx.pdf	This is the Japanese user manual.
TM_Print_Assistant_Android_um_en_revx.pdf	This is the English user manual.

Related Manuals

❑ ePOS-Print XML User's Manual

❑ Technical Reference Guide of each TM printer

For customers in North America, go to the following web site:

www.epson.com/support/

For customers in other countries, go to the following web site:

www.epson-biz.com/

System Configuration

This chapter explains how to configure a system using Epson TM Print Assistant.

System Configuration Flow

1. Setting Up Devices

Install the TM printer and configure your smart device.
Refer to the manual provided.



2. Installing and Setting Up Epson TM Print Assistant

Install Epson TM Print Assistant on your smart device and connect the smart device and TM printer.
Refer to [Epson TM Print Assistant](#) for downloading Epson TM Print Assistant.
Refer to [Connecting to TM Printer](#) for connecting your smart device and TM printer.



3. Setting Up Application

Set up the application to use it on your smart device.
Refer to [Application Development](#) for application development.



4. Operation Test

Use the application to perform test printing on the TM printer.
Use the provided sample program for the operation test.
Refer to [Sample Programs](#) for more information.

Connecting to TM Printer

The following procedure uses Bluetooth connection.

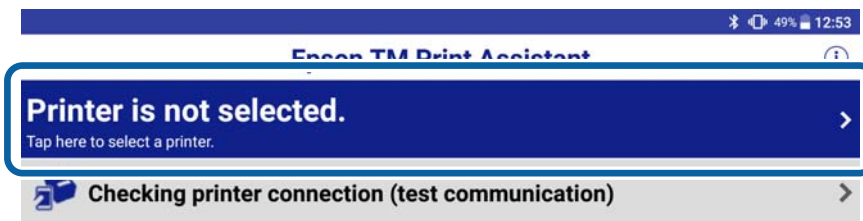
- 1 Enable Bluetooth connection on your smart device and TM printer.



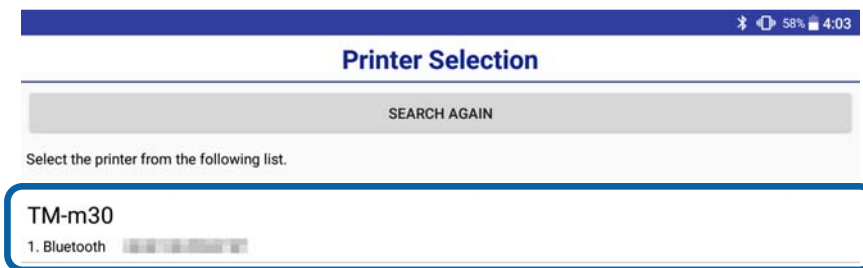
Refer to the Technical Reference Guide of the TM printer for Bluetooth connection setting of the TM printer.

- 2 Launch Epson TM Print Assistant.

- 3 Tap [Printer is not selected.].

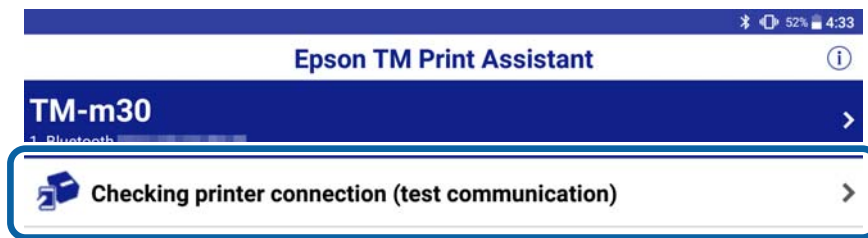


- 4 Choose the TM printer to use from the list.



Note that other Bluetooth devices than the TM printer are also shown in the list.

- 5** Tap [Checking printer connection (test communication)].

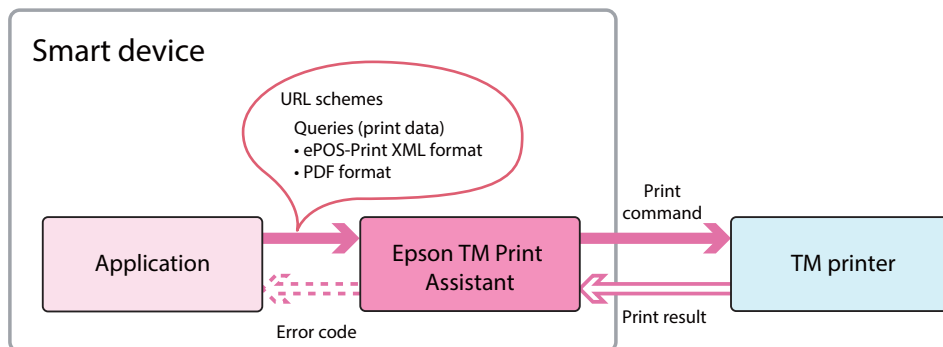


- 6** When the test communication succeeds, the TM printer is ready for printing.

Application Development

This chapter provides information necessary to develop an application used with a system configured using Epson TM Print Assistant.

Overview



An application invokes Epson TM Print Assistant by the URL scheme and uses queries to transfer print data to it. When Epson TM Print Assistant receives print data, it sends a print command to the TM printer.

The TM printer returns the print result to Epson TM Print Assistant.

When the print result is an error, Epson TM Print Assistant displays an error message according to received status.



You can choose to display the error message in the application or Epson TM Print Assistant depending on the system requirements. Refer to [Application Guide](#) for more information.

Print data can be in one of the following formats:

- ePOS-Print XML format
- PDF format

Specifications

URL Scheme

This section explains the queries used in a URL scheme.

URL encode (RFC3986) is used for the data format in URL schemes.

Syntax

```
[scheme]://[host]/[action]?[action parameters]
```

Parameter

scheme

Specifies "tmprintassistant" as the URL scheme name to invoke Epson TM Print Assistant.

host

Specifies "tmprintassistant.epson.com" as the URL host.

action

Specifies "print" as the identifier of the action executed by Epson TM Print Assistant.

action parameters

Specifies action parameters such as caller application name, print data and its option parameters, and so on.

Specified format: "key1=value1&key2=value2"

Query	Functionality	Description		
		Input condition	Set value	Default
success	URL displayed when Epson TM Print Assistant has terminated normally	Can be omitted	URL encoding format (RFC3986)	-
error	URL displayed when an error has occurred in Epson TM Print Assistant	Can be omitted	URL encoding format (RFC3986)	-
ver	Version number	Required	Integer: 1 (fixed)	-
data-type	Print data type	Required	<ul style="list-style-type: none"> ePOS-Print XML format: eposprintxml PDF format: pdf 	-

Query	Functionality	Description		
		Input condition	Set value	Default
data	Print data	Required	Data type: eposprintxml ^{*1} • Maximum data length: Approximately 200 KB	-
			Data type: pdf • Base64 data format • Maximum data length: Approximately 200 KB (PDF size: Approximately 150KB ^{*2})	-
timeout	Operation timeout period (ms) of Epson TM Print Assistant	Can be omitted	Integer: 10000 to 300000	15000
error-dialog	Error Notification in Epson TM Print Assistant	Can be omitted	• yes • no	yes
reselect	Printer reconfiguration upon communication error	Can be omitted	• yes • no	no
drawer- open	Drawer setting	Can be omitted	• pin2 • pin5 • no	no
cut	Cutter setting	Can be omitted	• feed • no-feed • feed-full-cut ^{*7} • no-feed-full-cut ^{*7} • no	no
fit-to- width ^{*3}	Expanding or reducing the PDF's page in accordance with either of the following: • the paper width specified in paper-width • the printable width specified in printable-width	Can be omitted	• yes • no	no
paper- width ^{*3}	Paper width specification (mm) ^{*4}	Can be omitted	• 58 • 80	80
printable- width ^{*3}	Printable width specification (mm) ^{*5} Use when setting the printable width in detail	Can be omitted	20.0 to 80.0	72
feed- position ^{*6}	Specify the paper feed position for book mark paper	Can be omitted	• cutting • no	no

*1: In JavaScript, special characters can be described using an escape sequence.
When using the ¥ (yen) mark, specify two marks together as ¥¥.

*2: Approximate data size before Base64 conversion

*3: Available when pdf is specified in data-type

*4: When 80mm selected: the width of PDF's page is adjusted to 72 mm.
When 58mm selected: the width is adjusted to 50.8mm.

*5: Configure according to your TM printer's printable width. Refer to the printable width list of TM printers in README for the specifications.

*6: Exclusively for book mark paper

*7: Only TM printers that support full-cut can be used.

Print data

Print data format	Description
ePOS-Print XML	Use XML command of ePOS-Print XML to create ePOS-Print XML format data. Refer to "XML Reference" in the ePOS-Print XML User's Manual for details of XML commands. You can create XML print data using the ePOS-Print Editor supplied with ePOS-Print XML. Refer to ePOS-Print Editor for more information.
PDF	Create PDF data according to your TM printer's printable width. Refer to README for the specifications of your printer's printable width. Otherwise, use fit-to-width/paper-width/printable-width queries. Use the data converted with Base64 for this format.

Example

The following is an example of transferring print data in the ePOS-Print XML format.

When printing is successful, control is returned to the caller application. When an error occurs, Epson TM Print Assistant opens a dialog to report the error.

Replace "%%%" with the IP address of the server.

```
tmprintassistant://tmprintassistant.epson.com/print?
success=http://%%%/success.html&
ver=1&
data-type=eposprintxml&
data=**XMLData**&
error-dialog=yes
```

Execution result

Print result returned by Epson TM Print Assistant.

To display error messages in Epson TM Print Assistant, specify "yes" in the error-dialog query of the print command.

To display error messages in the application, specify the application path in the error query of the print command and program the application to process the code and message queries.



Refer to [Application Guide](#).

Query	Functionality	Description		
		Input condition	Set value	Default
code	Print result error code	-	Refer to Error Code List	-
message	Explanation of print result	-	Refer to Error Code List	-

Example

The following is an example of reporting an error in the application.

The application displays the error code "101" and the error message "Could not communicate with the printer".

Replace "%%%" with the IP address of the server.

```
http://%%%/page.html?code=101&message=Could not communicate with the printer.
```

Error Code List

Error code	Message displayed	
	Cause	Counteraction
101	Could not communicate with the printer.	Check the power and communication status of the printer.
102	Process running time exceeded the specified timeout period.	Check the power and communication status of the printer. If the power and communication status of the printer is OK, adjust the timeout period. If the timeout period cannot be adjusted, consult the application developer.
103	Cover is open.	Close the printer cover.
104	Auto cutter error occurred.	Remove the error cause and power off and then on the printer.
105	Mechanical error occurred.	
106	Unrecoverable error occurred.	Power off and then on the printer. Contact the distributor or Epson Information Center if the problem persists.
107	No paper.	Refill the paper.
108	Printer is too hot to run the process.	Run the process after the error lamp of the printer turns off.
109		
110		
111	Printer battery has run out.	Replace the battery or use the AC adapter.
112	A waiting for paper removal error has occurred.	Remove paper from the printer.
113	A voltage error occurred.	Turn the power supply to the printer off and then on again. If the error recurs, check the power supply status of the printer.
114	A voltage error occurred.	Turn the power supply to the printer off and then on again. If the error recurs, check the power supply status of the printer.
199	Printer communication error occurred.	Check the power and communication status of the printer. Power off and then on the device and try again. Contact the distributor or Epson Information Center if the problem persists.
201	Could not communicate with the printer.	Check the power and communication status of the printer.

Error code	Message displayed	
	Cause	Counteraction
401	Character string specified in the query is invalid.	Transmission data contains an error. Contact the application developer with the following information. query: xxx.
402	Print data is not specified.	
403	PDF data conversion failed.	
404	XML data conversion failed.	
405	Print data exceeded the upper limit.	
406	Process running time exceeded the specified timeout period.	Adjust the timeout period. If the timeout period cannot be adjusted, consult the application developer.
501	Printer is not selected.	Choose the printer in Epson TM Print Assistant.
502	Error occurred within Epson TM Print Assistant.	Power off and then on the device and try again. Contact the distributor or Epson Information Center if the problem persists.
503	Unsupported printer is selected.	Contact the distributor or Epson Information Center.
599	Error occurred within Epson TM Print Assistant.	Power off and then on the device and try again. Contact the distributor or Epson Information Center if the problem persists.

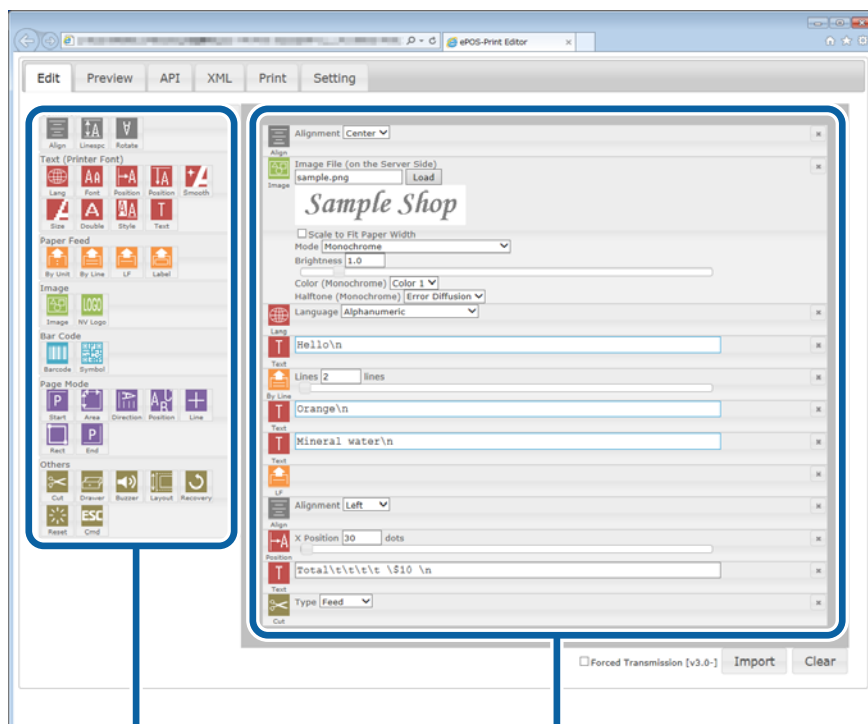
ePOS-Print Editor

You can create ePOS-Print XML print data using the ePOS-Print Editor supplied with ePOS-Print XML.



Refer to the ePOS-Print XML User's Manual for how to use the ePOS-Print Editor.

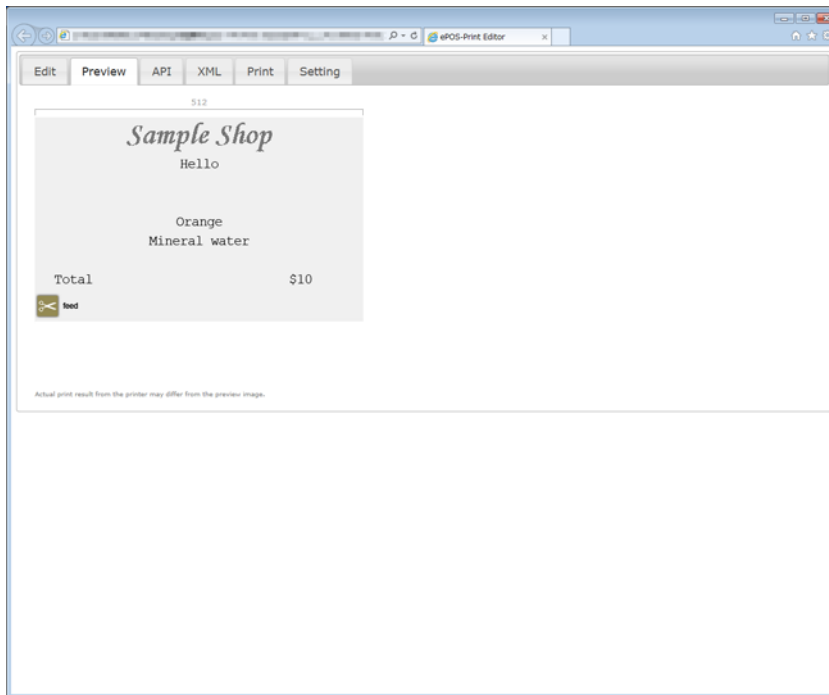
- 1 Unzip the ePOS-Print_Sample_XML_Vx.x.xE.zip file.
- 2 Open index.html in the editor folder in the web browser.
- 3 Click an icon in the Menu area to add an element to the Edit area.



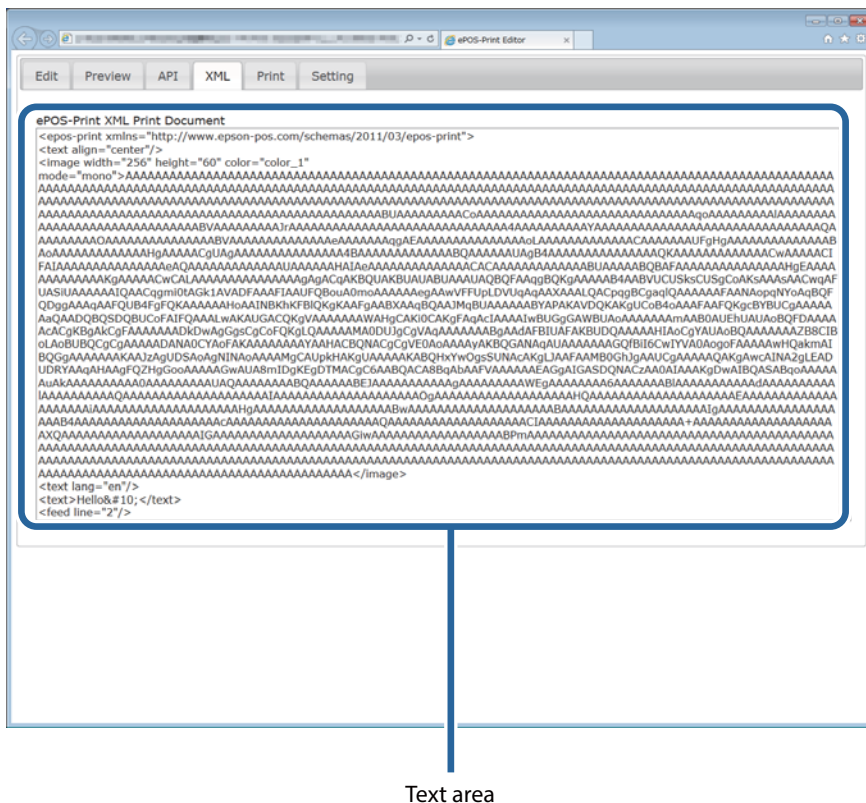
Menu area

Edit area

4 Click the Preview tab to display the preview.



5 XML data can be copied from the text area in the XML tab.



Text area

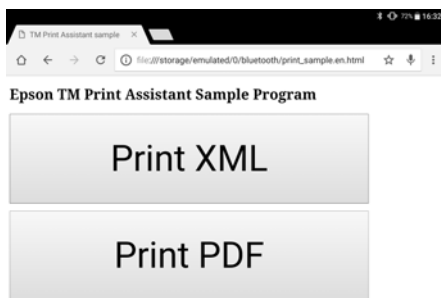
Sample Programs

This chapter explains the sample application programs included in the Epson TM Print Assistant package.

Functionality

The sample programs provide the following functionality.

- Print XML: Prints XML print data created by ePOS-Print XML.
- Print PDF: Prints PDF data.



Operating Environment

Refer to the README file for the operating environment of the sample programs.

Set Up

Preparation

- 1** Install Epson TM Print Assistant on your smart device.
- 2** Launch Epson TM Print Assistant and choose the TM printer to use.
- 3** Tap the [Test communication] button to check connection with the TM printer.

HTML Sample

- 1** Unzip the TM_Print_Assistant_Android_Sample.en.zip file.
- 2** Register print_sample.en.html and receipt.pdf from the unzipped folder to the server.
Change the value of the pdfPath variable of print_sample.en.html according to the actual location of receipt.pdf.
- 3** Launch the web browser on your smart device and access to print_sample.en.html.
Example of access URL) `http://%%%/print_sample.en.html`
Replace “%%%” with the IP address of the server.
- 4** Tap the [Print XML] button or [Print PDF] button to use the sample program.

Application Guide

Error Handling by Web Application

Error Notification by Epson TM Print Assistant

```

<!DOCTYPE html>
<html lang="ja">
<head>
<meta charset="utf-8" />

<!-- Script -->
<script type="text/javascript">

//Print process
function send() {
  //URL displayed when Epson TM Print Assistant has terminated normally
  var success = window.location.href;
  //Version number (fixed value)
  var ver = '1';
  //Print data type
  var datatype = 'eposprintxml';
  //Print data (ePOS-Print XML format)
  var data = '<epos-print xmlns="http://www.epson-pos.com/schemas/2011/03/epos-print">' +
    '<text>Test Print</text><feed/>' +
    '<cut/>' +
    '</epos-print>';
  //Setting to display an error dialog in Epson TM Print Assistant
  var errordialog = 'yes';

  //Transfer destination and data creation
  var urldata = 'tmprintassistant://tmprintassistant.epson.com/print?' +
    'success=' + encodeURIComponent(success) + '&' +
    'ver=' + ver + '&' +
    'data-type=' + datatype + '&' +
    'data=' + encodeURIComponent(data) + '&' +
    'error-dialog=' + errordialog;

  //Data transmission using a URL scheme
  window.location.href = urldata;
}

</script>
</head>
<body>
  <p><button onclick="send()">Print</button></p>
</body>
</html>

```

Error Notification by Web Application

```

<!DOCTYPE html>
<html lang="ja">
<head>
<meta charset="utf-8" />

<!-- Script -->
<script type="text/javascript">

//Print process
function send() {
    //URL displayed when Epson TM Print Assistant has terminated normally
    var success = window.location.href;
    //URL displayed when an error has occurred in Epson TM Print Assistant
    var error = window.location.href;
    //Version number (fixed value)
    var ver = '1';
    //Print data type
    var datatype = 'eposprintxml';
    //Print data (ePOS-Print XML format)
    var data = '<epos-print xmlns="http://www.epson-pos.com/schemas/2011/03/epos-print">' +
        '<text>Test Print</text><feed/>' +
        '<cut/>' +
        '</epos-print>';

    //Transfer destination and data creation
    var urldata = 'tmprintassistant://tmprintassistant.epson.com/print?' +
        'success=' + encodeURIComponent(success) + '&' +
        'error=' + encodeURIComponent(error) + '&' +
        'ver=' + ver + '&' +
        'data-type=' + datatype + '&' +
        'data=' + encodeURIComponent(data);

    //Data transmission using a URL scheme
    window.location.href = urldata;
}

//Print result process
function init() {
    //Process by web application upon error
    var alertMsg = "";
    var errCode = window.location.search.match(/code=(.*?)(&|$)/);
    var errMsg = window.location.search.match(/message=(.*?)(&|$)/);

    if (errCode[1] && errMsg[1]) {
        alertMsg = 'ERROR CODE : ' + decodeURIComponent(errCode[1]) +
            '\nERROR MESSAGE : ' + decodeURIComponent(errMsg[1]);
        alert(alertMsg);
    }
}
</script>
</head>
<body onload="init()">
    <p><button onclick="send()">Print</button></p>
</body>
</html>

```

Outputting Application Log

When you contact us about an error encountered during application development or system operation, we may ask you to submit us a log file for troubleshooting the error.
Use the log output function of Epson TM Print Assistant to acquire the log file.


 This function is disabled by default.

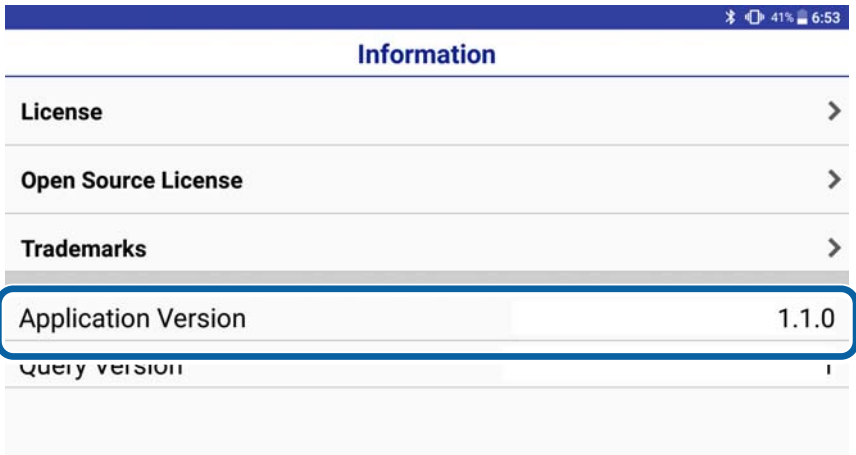
Enabling Log Output Function

- 1 Launch Epson TM Print Assistant.
- 2 Tap ⓘ to open the Information screen.



- 3 Tap [Application Version] 5 times within 2 seconds.

 You must wait for 1 second before tapping 5 times.



The log output function is enabled.
To disable the log output function, tap [Application Version] 5 times again.

Log Output Location

When the log output function is enabled, the log file is output to the following location of the smart device.

Path	Filename
/***/Android/data/com.epson.tmassistant/files/Log/	appLog
/***/Android/data/com.epson.tmassistant/files/Epos2Log/	<ul style="list-style-type: none">• Epos2Log.txt• Epos2Log.zip