Brother Print SDK for Android Manual

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Revision History

History	Date	SDK version	Details
1	2015/10/01	3.0.1	Compatible with 60 × 86 paper for QL series. Compatible with the MW MFi series. Added a function to save print data for debugging. Compatible with Android Studio.
2	2015/12/24/	3.0.2	Compatible with the PJ-7xx series. Added precautions for Android 6.0 compatibility.
3	2016/1/29/	3.0.3	Corrected paper information for the PJ series.
4	2016/4/4/	3.0.4	Changed the structure of this manual. Compatible with the RJ-4030Ai, PT-D800W, PT-E800W, PT-E850TKW, PT-P900W,PT-P950NW
5	2016/10/5	3.0.5	Compatible with the RJ-2xxx series.
6	2016/11/30	3.0.6	Compatible with the QL-8xx series, RJ-3xxxAi series

Table of Contents

Introduction

This manual is the user guide and technical reference for the Brother Software Development Kit (SDK) for Android. Using this SDK, your Android application can print to Brother mobile printers.

This manual is intended for software developers who have experience developing Android applications.

Inquiry

For inquiries regarding solutions, contact Brother's offices in your country.

1. Overview

1.1. Folder Configuration

The SDK is distributed in an archive file (.zip) that contains the following folders.

Brother (PDF) Print SDK for Android Directory	End-User License Agreement and redistributable file lists.		
	.\Apk		SDK Demo application package file. Includes the SDK library.
	.\libs	armebi	SDK object libraries (JAR and SO files).
	.\Samples		Project and source files for the SDK Demo sample application.

1.2. Recommended developer's environment

Development environment	JDK8 (recommended) Android Studio v2.1.1 or later * For installation instructions, please check each software provider's website.
Programming Language	Java
Package	com.brother.ptouch.sdk

1.3. Compatible operating systems

* Android 4.0.3 or later

* Printing cannot be guaranteed on all Android devices due to manufacturer-specific differences between them.

* USB-based printing is possible only on devices with hardware support for USB host mode.

1.4. Supported printers

The supported printers and compatible functions are as follows.

Model name	Print function			P-touch Template Transfer/print functions			P-touch Template Retrieve list/delete functions		
	Wi-Fi	Bluetooth	USB	Wi-Fi	Bluetooth	USB	Wi-Fi	Bluetooth	USB
PJ-522	–	–	○	–	–	–	–	–	–
PJ-523	–	–	○	–	–	–	–	–	–
PJ-520	–	–	○	–	–	–	–	–	–
PJ-560	–	○	○	–	–	–	–	–	–
PJ-562	–	○	○	–	–	–	–	–	–
PJ-563	–	○	○	–	–	–	–	–	–
PJ-622	–	–	○	–	–	–	–	–	–
PJ-623	–	–	○	–	–	○	–	–	○
PJ-662	–	○	○	–	–	–	–	–	–
PJ-663	–	○	○	–	○	○	–	–	○
PJ-722	–	–	○	–	–	○	–	–	○
PJ-723	–	–	○	–	–	○	–	–	○
PJ-762	–	○	○	–	○	○	–	○	○
PJ-763	–	○	○	–	○	○	–	○	○
PJ-763MFi	–	○	○	–	○	○	–	○	○
PJ-773	○	–	○	○	–	○	○	–	○
MW-140BT	–	○	○	–	–	–	–	–	–
MW-145BT	–	○	○	–	○	○	–	○	○
MW-260	–	○	○	–	○	○	–	○	○
MW-145MFi	–	○	○	–	○	○	–	○	○
MW-260MFi	–	○	○	–	○	○	–	○	○
RJ-4030	–	○	○	–	○	○	–	○ * Note 1	○
RJ-4030Ai	–	○	○	–	○	○	–	○	○
RJ-4040	○	–	○	○	–	○	–	–	○
RJ-3050	○	○	○	○	○	○	○ * Note 2	○ * Note 2	○

RJ-3150	○	○	○	○	○	○	○ * Note 2	○ * Note 2	○
RJ-3050Ai	○	○	○	○	○	○	○	○	○
RJ-3150Ai	○	○	○	○	○	○	○	○	○
RJ-2030	–	○	○	–	○	○	–	○	○
RJ-2050	○	○	○	○	○	○	○	○	○
RJ-2140	○	–	○	○	–	○	○	–	○
RJ-2150	○	○	○	○	○	○	○	○	○
TD-2020	–	–	○	–	–	○	–	–	○
TD-2120N	○	○	○	○	○	○	○	○ * Note 2	○
TD-2130N	○	○	○	○	○	○	○	○ * Note 2	○
TD-4000	–	–	○	–	–	○	–	–	○
TD-4100N	○	–	○	–	–	○	–	–	○
QL-710W	○	–	○	–	–	–	–	–	–
QL-720NW	○	–	○	○	–	○	○	–	○
QL-800	–	–	○	–	–	–	–	–	–
QL-810W	○	–	○	○	–	○	○	–	○
QL-820NWB	○	○	○	○	○	○	○	○	○
PT-E550W	○	–	○	–	–	–	–	–	–
PT-P750W	○	–	○	–	–	–	–	–	–
PT-D800W	○	–	○	–	–	–	–	–	–
PT-E800W	○	–	○	–	–	–	–	–	–
PT-E850TKW	○	–	○	–	–	–	–	–	–
PT-P900W	○	–	○	○	–	○	○	–	○
PT-P950NW	○	–	○	○	–	○	○	–	○

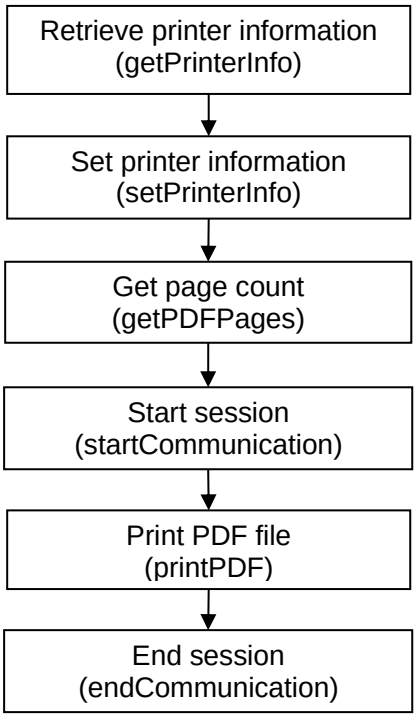
* Note 1: Operates with firmware ver. 1.2.2 or later.

* Note 2: Operates with firmware ver. 1.1.0 or later.

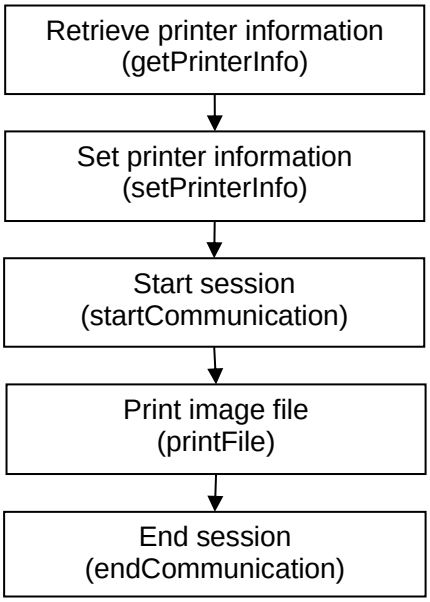
2. Process Flow

Outline of the general flow of printing and other processes

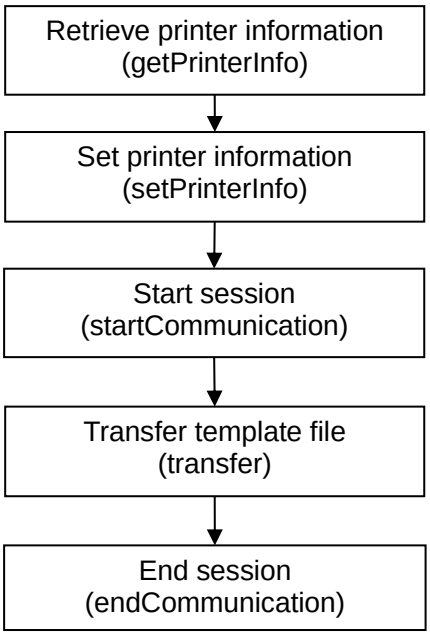
2.1. Printing a PDF File



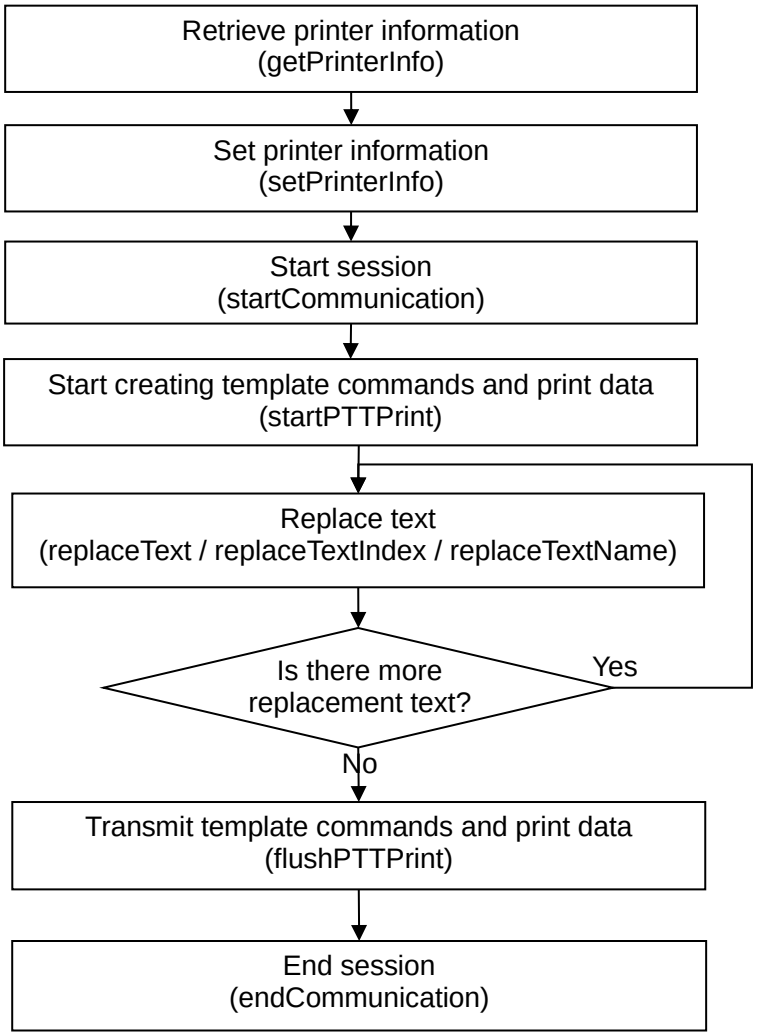
2.2. Printing an Image File



2.3. Transferring a P-touch Template file



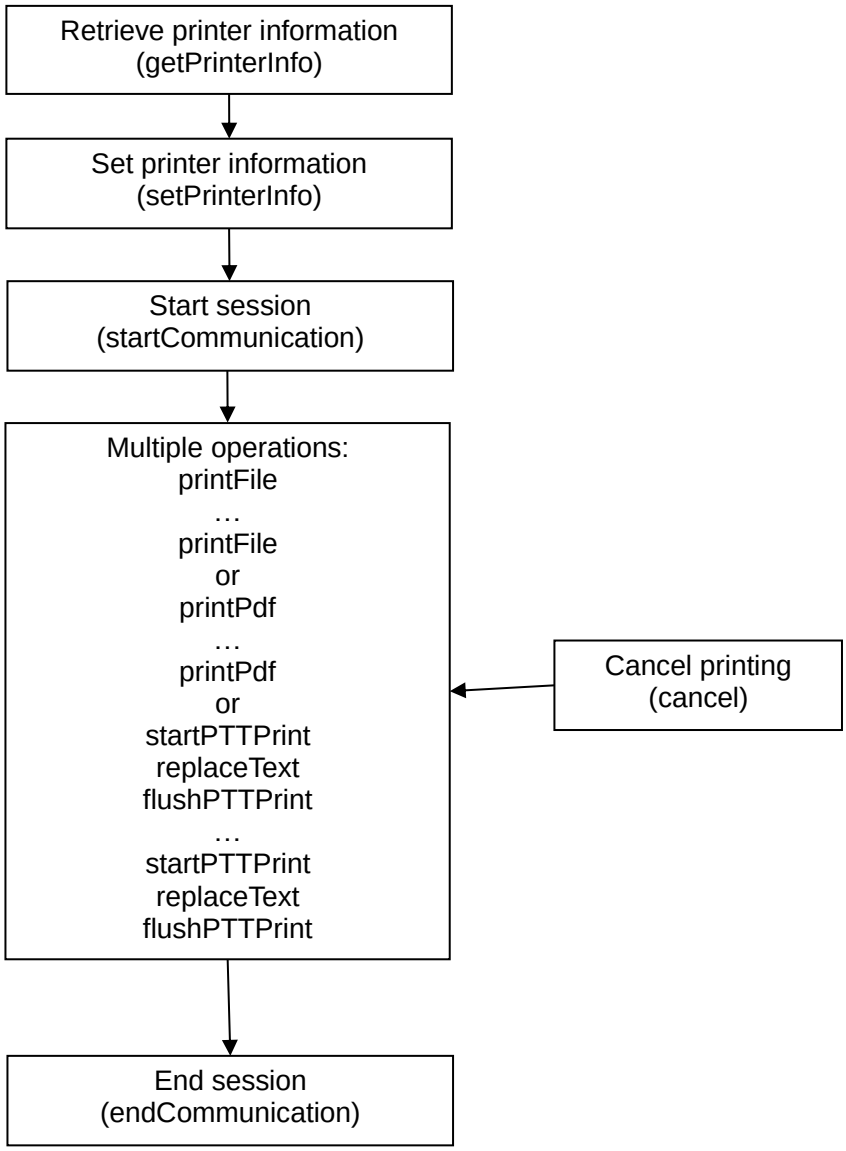
2.4. Printing a P-touch Template



Please refer to the P-touch Template Manual / Command Reference.

To download a copy, visit Brother Solutions Center and navigate to the Manual page for your printer model.

2.5. Printing Multiple Items; Cancel Printing



3. API Reference

The classes that can be used with this SDK are as follows.

Class name	Description
com.brother.ptouch.sdk.Printer	This class performs the various functions, such as retrieving various information for the printer, printing and transferring templates.
com.brother.ptouch.sdk.PrinterInfo	This class manages the settings necessary for performing functions, such as printer name, paper size and print settings.
com.brother.ptouch.sdk.PrinterStatus	This class stores the status of the printer that is connected.
com.brother.ptouch.sdk.NetPrinter	This class stores information retrieved from the printer while it is connected by Wi-Fi.
com.brother.ptouch.sdk.LabelParam	This class stores paper information set by the user.
com.brother.ptouch.sdk.LabelInfo	This class stores information about the paper loaded in the printer that is connected.
com.brother.ptouch.sdk.TemplateInfo	This class stores template information.

3.1. com.brother.ptouch.sdk.Printer class

3.1.1. Public Methods

Setting and getting methods, session control methods		
Type	Function name	Description
LabelParam	getLabelParam()	Returns information about the size of the selected media.
NetPrinter[]	getNetPrinters(String modelName)	Returns information (model name, node name, serial number, IP address and MAC address) about the printers of a given model that are connected to the Wi-Fi access point.
NetPrinter []	getNetPrinters(String[] modelNameList)	Returns information about any printers of the listed models that are connected to the Wi-Fi access point.
PrinterInfo	getPrinterInfo()	Returns the current printer information.
PrinterStatus	getPrinterStatus() *	Retrieves the status of the selected printer.
boolean	setPrinterInfo(PrinterInfo printerInfo)	Sets printer information.
LabelInfo	getLabelInfo() *	Retrieves label information from the selected

		printer.
void	setBluetooth(BluetoothAdapter bluetoothAdapter)	Passes the Bluetooth adapter to the library .
void	setMessageHandle(Handler handler, int MsgType)	Passes a message handler to the library. Required if you want to use the messages from the library.
UsbDevice	getUsbDevice(UsbManager usbManager)	Gets a connected USB device.
boolean	startCommunication()	Starts a session to print or transfer item. Must be paired with endCommunication().
boolean	endCommunication()	Ends the session that was started with startCommunication().
boolean	cancel()	Cancel printing. Invalid while sending data.

Methods for printing files and image objects		
Type	Function name	Description
int	getPDFFilePages(String filepath)	Returns page count of the pdf file.
int	getPDFPages(String filepath)	Returns page count of the pdf file.
PrinterStatus	printPDFFile(String filepath, int pagenum) *	Prints a selected page of the pdf file.
PrinterStatus	printPDF(String filepath, int pagenum) *	Prints a selected page of the pdf file.
PrinterStatus	printFile(String filepath) *	Prints a file (Image file: bmp, jpg, png, Print file: prn).
PrinterStatus	printImage(Bitmap object) *	Prints the image object.

Methods for printing and transferring P-touch Templates		
Type	Function name	Description
boolean	startPTTPrint(int key, String encode)	Starts creating the command and print data for P-touch Template.
boolean	replaceText(String data)	Replaces the next replaceable text in P-touch Template.
boolean	replaceTextIndex(String	Replaces text in P-touch Template (specified

	data, int index)	by object number).
boolean	replaceTextName(String data, String objName)	Replaces text in P-touch Template (specified by object name).
PrinterStatus	flushPTTPrint() *	Transmits command and print data for a P-touch Template.
PrinterStatus	transfer(String filepath) *	Transfers a template file (*.pdz, *.blf) to the printer.
PrinterStatus	removeTemplate(List<Integer> keyList) *	Removes templates from the printer.
PrinterStatus	getTemplateList(List<TemplateInfo> tmplList) *	Gets a list of the templates on the printer.

* Do not call these functions from multiple threads at the same time.

3.1.2. Detailed specifications for methods

The details for each method are provided below.

3.1.2.1. Functions for settings

- LabelParam getLabelParam()

[Description]

Returns information about the size of QL, PT, TD and RJ media.

Call after setPrinterInfo().

[Parameters]

None

[Returned value]

Label information

- NetPrinter[] getNetPrinters(String modelName)

[Description]

Returns information (model name, node name, serial no., IP address, MAC address) about the printers of the given model that are connected to the Wi-Fi access point.

[Parameters]

modelName: Printer model name.

[Returned value]

Net printer list

- NetPrinter[] getNetPrinters(String[] modelNameList)

[Description]

Returns information (model name, node name, serial no., IP address, MAC address) about any printers of the listed models that are connected to the Wi-Fi access point.

[Parameters]

modelName[]: A list of printer model names.

[Returned value]

Net printer list

- PrinterInfo getPrinterInfo()

[Description]

Returns the printer information which is currently set.

[Parameters]

None

[Returned value]

Printer information

- PrinterStatus getPrinterStatus()

[Description]

Returns status read from the currently selected printer.

[Parameters]

None

[Returned value]

Printer status

- boolean setPrinterInfo(PrinterInfo printerInfo)

[Description]

Sets the printer information collected in a PrinterInfo object.

[Parameters]

printerInfo: Printer information object

[Returned value]

true: Success

false: Failure

- LabelInfo getLabelInfo()

[Description]

Retrieves label information (size, background color, print color) from the selected

printer (QL and PT only).

[Parameters]

None

[Returned value]

Label information

- void setBluetooth(BluetoothAdapter bluetoothAdapter)

[Description]

Passes the Bluetooth adapter to the library (Bluetooth only).

[Parameters]

bluetoothAdapter: Bluetooth adapter

[Returned value]

None

- void setMessageHandle(Handler handler, int MsgType)

[Description]

Passes a message handler to the library. This is required if you want to use the messages from the library.

[Parameters]

Handler: Message handler

MsgType: Identifies the messages

[Returned value]

None

- UsbDevice getUsbDevice(UsbManager usbManager)

[Description]

Gets a connected USB device.

[Parameters]

usbManager: android.hardware.usb.UsbManager

[Returned value]

UsbDevice: UsbDevice of a connected Brother printer.

Null if no supported Brother printer is connected.

- boolean startCommunication()

[Description]

Starts a session to print or transfer items. It is a function that needs to be called before executing the following functions.

getLabelInfo()
getPrinterStatus()
printPDFFile(String filepath, int pagenum)
printPDF(String filepath, int pagenum)
printFile(String filepath)
printImage(Bitmap object)
flushPTTPrint()
transfer(String filepath)
removeTemplate(List<Integer> keyList)
getTemplateList(List<TemplateInfo> tmplList)

Must be paired with endCommunication().

[Parameters]

None

[Returned value]

Always true.

- boolean endCommunication()

[Description]

Ends the session that was started with startCommunication().

[Parameters]

None

[Returned value]

Always true.

3.1.2.2. Functions for printing image data/files

- boolean cancel()

[Description]

Cancel printing. Invalid while sending data.

[Parameters]

None

[Returned value]

Always true.

- int getPDFFilePages(String filepath)

[Description]

Using the standard Android API, returns the page count of the selected pdf file. Android 5.0 or later.

[Parameters]

filepath: File path

[Returned value]

Page count

- int getPDFPages(String filepath)

[Description]

Returns the page count of the selected pdf file. Android 6.0 or later not supported.

[Parameters]

filepath: File path

[Returned value]

Page count

- PrinterStatus printPDFFile(String filepath, int pagenum)

[Description]

Using the standard Android API, prints a selected page of the pdf file. Android 5.0 or later.

[Parameters]

filepath: File path

pagenum: Page number

[Returned value]

Printer status

- PrinterStatus printPDF (String filepath, int pagenum)

[Description]

Prints a selected page of the pdf file. Android 6.0 or later not supported.

[Parameters]

filepath: File path

pagenum: Page number

[Returned value]

Printer status

- PrinterStatus printFile (String filepath)

[Description]

Prints the selected file (Image file: jpg, png, bmp, Print file: prn).

[Parameters]

filepath: File path

[Returned value]

Printer status

[Note]

To send P-touch Template commands or ESC/P commands as a prn file, a status request command must be added at the end of the file.

- PrinterStatus printImage(Bitmap object)

[Description]

Prints a bitmap object

[Parameters]

object: Bitmap object

[Returned value]

Printer status

3.1.2.3. P-touch Template transfer/printing functions

- boolean startPTTPrint(int key, String encode)

[Description]

Start creating the command and print data string for a P-touch Template.

Specify a template and the character encoding.

Please refer to 2.4.Printing a P-touch Template.

This function assumes the default P-touch Template settings. Your application may not be able to print if the printer's settings differ from the defaults. If necessary, use the P-touch Template Setting Tool to configure the printer.

[Parameters]

key: Key number assigned to the Template.

encode: "SJIS" for printer models with Japanese fonts.

"GB18030" for printer models with Chinese fonts.

null all other printer models.

[Returned value]

true: Success

false: Failure

- boolean replaceText(String data)

[Description]

Replaces the next replaceable text in a P-touch Template.

Text strings are replaced in order of small object number.

[Parameters]

data: Replacement text

[Returned value]

true: Success

false: Failure

- boolean replaceTextIndex(String data, int index)

[Description]

Replaces the text in an object of a P-touch Template, specified by its object number.

[Argument]

data: Replacement text.

index: Object number of the object in which to replace the text.

model	Object number
MW-145BT/MW-260 MW-145MFi/MW-260MFi PT-P9xx QL series	1 – 50
PJ-663	1 – 200
TD and RJ series	1 – 99
PJ-7xx	1 – 255

[Return value]

true: Success

false: Failure

- boolean replaceTextName(String data, String objName)

[Description]

Replaces the text in an object of a P-touch Template, specified by the object's name.

[Parameters]

data: Replacing text.

objectName: Object name of the object in which to replace the text.

[Returned value]

true: Success

false: Failure

- PrinterStatus flushPTTPrint()

[Description]

Transmits command and print data used to print a P-touch Template.

[Parameters]

None

[Returned value]

Printer status

- PrinterStatus transfer(String filePath)

[Description]

Transfers a P-touch Template file (*.pdz) to the currently-selected printer. The template file (*.pdz, *.blf) is created by P-touch Transfer Manager, a Windows application. For Bluetooth and USB transfers, use pdz files. For Wi-Fi, use blf files.

[Parameters]

filePath: Template file path.

[Returned value]

Printer status

- PrinterStatus removeTemplate(List<Integer> keyList)

[Description]

Removes templates from the printer.

[Parameters]

keyList: List of template IDs to be removed.

[Returned value]

Printer status

[Note]

This method may fail with some printers and interfaces. Refer to 1.4. Supported printers.

- PrinterStatus getTemplateList(List<TemplateInfo> tmplList)

[Description]

Gets a list of the templates that have been downloaded to the currently-selected

printer.

[Parameters]

tmplList: List to hold the acquired template information.

[Returned value]

Printer status

If there are no templates on the printer, the PrinterStatus.ErrorCode is set to ERROR_TEMPLATE_NOT_EXIST.

[Note]

This method may fail with some printers and interfaces, or if the number of templates is too large. Refer to 1.4. Supported printers.

3.2. com.brother.ptouch.sdk.PrinterInfo class

The member variables are listed below.

Fields common to all printer models		
Type	Variable name	Description
Model	printerModel	Printer model
Port	port	Interface (USB, Bluetooth, or Network)
String	ipAddress	IP address
String	macAddress	MAC address
Orientation	Orientation	Paper orientation for image printing *This option is ignored for PDF printing
Int	numberofCopies	Number of copies to print
PrintMode	printMode	Print mode (scaling) for image printing
double	scaleValue	Scale value when printMode is set to [SCALE]
Halftone	halftone	Method of changing to monochrome
int	thresholdingValue	Threshold value when halftone is set to [Threshold] Value range: 0 to 255, 255 if larger value requested. Default: 127
Align	align	Horizontal alignment for image printing *This option is ignored for PDF printing.
VAlign	valign	Vertical alignment for image printing *This option is ignored for PDF printing.
Margin	margin	Margins for image printing
boolean	skipStatusCheck	Controls the pre-print status check.

		true: skip status check, false: do not skip
CheckPrintEnd	checkPrintEnd	Controls per-page waits for print-complete status. Multiple-page printing may not finish properly with some settings.
String	savePrnPath	Designates where to save print-to-file data. Specify an absolute path name. If savePrnPath is null, data is printed. Otherwise, data is saved without being printed. If the destination folder does not exist, the print method will return an error.
boolean	overwrite	Enables overwriting files saved in savePrnPath. When you print multiple pages, set this to false. true: overwrite, false: append
boolean	enabledTethering	Uses the Android device for tethering.
boolean	trimTapeAfterData	Cuts the rear margin.

Fields differing between printers		
Type	Variable name	Description
PaperSize	paperSize	Paper size
String	customPaper	Custom paper file folder path (TD/RJ)
int	labelNameIndex	Label identifier: set from one of the label type enums defined in the LabelInfo class (QL/PT)
boolean	pjCarbon	Sets carbon paper (2-ply) mode for PocketJet printers true: enabled, false: disabled
int	pjDensity	Sets density for PocketJet printer Value range: 0 (light) to 10 (dark) Default value: 5
PjFeedmode	pjFeedmode	Sets paper feed mode for PocketJet printers
int	pjSpeed	Adjusts speed for PJ-7xx printers Value range: 0 (fast) to 3 (slow), 3 if a larger value is requested

		Default: 2
Align	paperPosition	Horizontal alignment of custom paper, determines where user must load paper Valid only when custom paper is used with PJ series
int	customPaperWidth	Sets the width of custom paper (PocketJet only) Value range: 0 to 2464 dots in multiples of 8
int	customPaperLength	Sets the length of custom paper (PocketJet only) Value range: 200 to 65535 dots
int	customFeed	Sets the length of paper fed after end-of-page Applies only to PocketJet printers with pjFeedMode set to PJ_FEED_MODE_FIXEDPAGE Value range: 0 to 65535 dots (raster lines) Leading minus sign is ignored
PjRollCase	rollPrinterCase	Specifies the PJ-7xx roll case configuration
int	rjDensity	Adjusts print density (RJ/TD) Value range: -5 (light) to 5 (dark)
boolean	rotate180	Rotates output 180 degrees (TD-2xxx and RJ-3xxx)
boolean	peelMode	Using label peeler (only for RJ-3150 and TD with peeler)
boolean	isAutoCut	Enable auto-cut mode (QL/PT/TD-4xxx) true: auto-cut enabled
boolean	isCutAtEnd	Enable end-cut mode (QL/PT/TD-4xxx) true: end-cut enabled
boolean	isSpecialTape	Enable special tape mode (PT) Cancels cut options true: special tape mode enabled
boolean	isHalfCut	Enable half-cut mode (PT) true: half-cut enabled
boolean	mode9	Enable mode9 data compression (PJ-7xx) true: compression enabled
PrintQuality	printQuality	Specifies the print quality

Details of Member Variables The details for each member variable are provided below.

3.2.1.1. Fields shared with each printer

- **Model printerModel**

[Description]

Model name of printer. For details, refer to 1.4. Supported printers..

- **Port port**

[Description]

Interface (USB, Bluetooth, or Network). For details, refer to 1.4. Supported printers.

- **String ipAddress**
- **String macAddress**

[Description]

The printerInfo member variables ipAddress and macAddress are used to tell the printing library which printer to try to connect to. The library searches for a printer that has an IP address and/or MAC address that matches the values in the member variables.

With Bluetooth	
Search the list of paired printers for one with a matching MAC address in PrinterInfo.macAddress. If there is no matching printer, it results in a “no printer found” error.	
With a Wi-Fi connection	
Set both MAC and IP addresses	Search the printers connected to the Wi-Fi access point for one with matching MAC and IP addresses. If there is no matching printer, it results in ERROR_NO_MATCH_ADDRESS.
Set IP address but not MAC address	Search the connected printers for one with a matching IP address.
Set MAC address but not IP address	Search the connected printers for one with a matching MAC address.
Do not set either MAC or IP address	Results in ERROR_NO_ADDRESS.

Set address: write address string to PrinterInfo.macAddress and/or PrinterInfo.ipAddress.

Do not set address: set PrinterInfo.macAddress and/or PrinterInfo.ipAddress to an empty

(zero- length) String. The SDK initializes each of these fields to an empty String.

- **Orientation orientation**

[Description]

Paper orientation to use when printing an image

enum Orientation	
PORTRAIT	Portrait
LANDSCAPE	Landscape

Ignored when printing a PDF document

- **int numberofCopies**

[Description]

Number of copies printed

- **PrintMode printMode**

[Description]

Print mode to use when printing an image

The print mode specifies how the image should be scaled

Note: large images may require more memory than your Android app is allowed, which may cause the printing library to throw an OutOfMemoryError.

enum PrintMode	
ORIGINAL	Dot by dot: no scaling *May cause insufficient memory error when the image is large.
FIT_TO_PAGE	Fit to paper size. Reduces or enlarges image to print as large as possible. Does not change aspect ratio. *May cause insufficient memory error the image is large.
SCALE	Get the scale factor from the scaleValue field *May cause insufficient memory error if the scaled image is larger than the size and margins of the paper.

- **Halftone halftone**

[Description]

Method of changing a color or grayscale image to monochrome

enum Halftone	
THRESHOLD	Threshold

PATTERNDITHER	Pattern dither
ERRORDIFFUSION	Error diffusion

- **int thresholdingValue**

[Description]

Simple binary threshold. The settings range is 0 to 255, and the default value is "127". In addition, a value more than 255 will be treated as "255".

- **Align align**

[Description]

Horizontal alignment to use when printing an image

enum Align	
LEFT	Aligns to the left
CENTER	Aligns to the center
RIGHT	Aligns to the right

*Ignored when printing a PDF document.

- **VAlign valign**

[Description]

Vertical alignment to use when printing an image

enum VAlign	
TOP	Aligns to the top
MIDDLE	Aligns to the center
BOTTOM	Aligns to the bottom

*Ignored when printing a PDF document.

- **Margin margin**

[Description]

Sets the paper margins to use when printing an image

Field		
Int	left	Left margin (dots) *Effective only when Align is LEFT
Int	top	Top margin (dots) *Effective only when VAlign is TOP

*Set to 0 when PrintMode is FIT_TO_PAGE.

- **boolean skipStatusCheck**

[Description]

Sets whether or not to check status before printing.

true: Performed

false: Not performed

- **CheckPrintEnd checkPrintEnd**

[Description]

Specifies whether or not to check print-complete status after printing each page

enum CheckPrintEnd	
CPE_NO_CHECK	Do not confirm print completion for any page
CPE_SKIP_LAST	Skips confirmation of only the last page
CPE_CHECK	Confirms print completion of every page

- **String savePrnPath**

[Description]

Sets the path to the location where print data will be saved. If a space or "null" is specified, printing is performed. If a path name is entered, the data is saved without being printed. If a folder in the path does not exist, an error occurs. The path is specified as an absolute path.

- **boolean overwrite**

[Description]

Sets whether the file at savePrnPath will be overwritten or appended.

true: Overwritten

false Appended

- **boolean enabledTethering**

[Description]

Uses to tether the Android device to printer via Wi-Fi connection. This enables getNetPrinters.

Follow the instructions below:

1. Enable the tethering function of the Android device.
2. Set the AP of the printer connection to the Android device.

true: Available

false: Not available

・**boolean trimTapeAfterData**

[Description]

Trims the blank space at the end of the data after the image is changed to binary/ternary.

true: Available

false: Not available

3.2.1.2. Fields differing between printers

・ **PaperSize paperSize**

[Description]

Sets the paper size used with PJ and MW printers. The members for "enum PaperSize" are listed below.

enum PaperSize	
CUSTOM	CUSTOM
A7	A7
A6	A6
A4	A4
A5	A5
A5_LANDSCAPE	A5 (portrait)
LETTER	Letter
LEGAL	Legal

・ **String customPaper**

[Description]

Sets the custom paper size used with an RJ or TD printer.

・ **int labelNameIndex**

[Description]

Sets the label size used with an RJ or QL printer.

・ **boolean pjCarbon**

[Description]

Sets the copy paper mode for a PJ printer.

true: Copy paper

false: Non-copy paper

- **int pjDensity**

[Description]

Specifies the density for a PJ printer. The settings range is 0 (light) to 10 (dark). The default value is 5.

- **PjFeedmode pjFeedmode**

[Description]

Sets paper feed mode of a PocketJet printer

enum PjFeedMode	
PJ_FEED_MODE_FREE	No feed (Roll paper)
PJ_FEED_MODE_FIXEDPAGE	Fixed page size feed (Roll paper)
PJ_FEED_MODE_ENDOFPAGE	A page feed (Cut-sheet paper)
PJ_FEED_MODE_ENDOFPAGERETRACT	A page feed (Roll paper with mark) Letter size only

- **int pjSpeed**

[Description]

Specifies the speed for a printer of the PJ-7xx series. The settings range is 0 (high speed) to 3 (low speed). The default value is 2.

* Note: A value more than 3 will be treated as “3”.

- Align paperPosition

[Description]

Sets the feed position for custom paper. For the settings, refer to “Align align”.

* Note: Valid only when custom paper is used with a PJ series printer.

- **int customPaperWidth**

[Description]

Specifies the width of custom paper for a PJ printer. The setting is specified as a multiple of 8 with a maximum of 2,464 dots. In addition, the paper feed position is

the leftmost LTR line.

- **int customPaperLength**

[Description]

Specifies the length of custom paper for a PJ printer. The maximum is 65,535 dots, and the minimum is 200 dots.

- **int customFeed**

[Description]

Specifies the length of the custom feed amount for a PJ printer. The maximum is (65,535 dots – print length).

* Note: Valid only when PJ_FEED_MODE_FIXEDPAGE is specified.

- **PjRollCase rollPrinterCase**

[Description]

Specifies the PJ-7xx roll case configuration

Tells the printer how far to feed the paper to position it for tearing off

enum PjRollCase	
PJ_ROLLCASE_OFF	OFF (No roll case used)
PJ_ROLLCASE_WITHOUT_ANTI_CURL	ON (without Anti Curl)
PJ_ROLLCASE_ON	ON (with Anti Curl)

- **int rjDensity**

[Description]

Specifies the density adjustment for the RJ/TD-2000 series.

The settings range is –5 (light) to 5 (dark). The default value is 0.

- **boolean rotate180**

[Description]

Sets whether or not to rotate the print image 180 degrees.

true: Performed

false: Not performed

- **boolean peelMode**

[Description]

Sets the peeler mode. Valid only with a TD equipped with a label peeler or the RJ-3150.

true: Performed

false: Not performed

- **boolean isAutoCut**

[Description]

Specifies the auto cut setting. Valid only with the QL/PT/TD-4000 series.

true: Performs an auto cut.

false: Does not perform an auto cut.

- **boolean isCutAtEnd**

[Description]

Specifies the cut at end setting. Valid only with the QL/PT/TD-4000 series.

true: Cuts at the end.

false: Does not cut at the end.

- **boolean isSpecialTape**

[Description]

Specifies special tape. Valid only with the PT series. In addition, when special tape is used, the cutting options become invalid.

true: Special tape is used.

false: Special tape is not used.

- **boolean isHalfCut**

[Description]

Specifies the half cut setting. Valid only with the PT series.

true: Performs a half cut.

false: Does not perform a half cut.

- **boolean mode9**

[Description]

Sets whether or not to apply Mode 9 compression.

true: Enabled

false: Disabled

・**PrintQuality printQuality**

[Description]

Specifies the print quality

enum PrintQuality	
LOW RESOLUTION	Prints with the half resolution in the print direction.
NORMAL	Normal
DOUBLE_SPEED	Prints with the double resolution in the print direction.
HIGH RESOLUTION	Prints with the double resolution in the print direction.

	QL-710W	QL-720NW	QL-800	QL-810W	QL-820W	PT-E550W	PT-P750W	PT-E850TKW	PT-D800W	PT-E800W	PT-P900W	PT-P950NW
LOW RESOLUTION								○	○	○	○	○
NORMAL	○	○	○	○	○	○	○	○	○	○	○	○
DOUBLE_SPEED	○	○	○	○	○							
HIGH Resolution	○	○	○	○	○	○	○	○	○	○	○	○

The value is set NORMAL when HS (heat-shrink), Tube or other parameter is selected.

3.2.1.3. Messages

・**Msg**

[Description]

The library sends the following messages while printing.

If desired, you may use these messages to monitor the progress of the printing process.

enum Msg	
MESSAGE_START_COMMUNICATION	Communication starting
MESSAGE_START_CONNECT	Socket connection started
MESSAGE_END_CONNECTED	Socket connection successful
MESSAGE_START_GET_OUTPUT_STREAM	Opening an output stream
MESSAGE_END_GET_OUTPUT_STREAM	Output stream opened
MESSAGE_START_GET_INPUT_STREAM	Opening an input stream
MESSAGE_END_GET_INPUT_STREA	Input stream opened

M	
MESSAGE_START_SEND_STATUS_REQUEST	Start transmitting status request
MESSAGE_END_SEND_STATUS_REQUEST	Status request transmitted
MESSAGE_START_READ_PRINTER_STATUS	Start receiving printer status
MESSAGE_END_READ_PRINTER_STATUS	Printer status received
MESSAGE_START_CREATE_DATA	Start creating data
MESSAGE_END_CREATE_DATA	Data creation finished
MESSAGE_START_SEND_DATA	Start transmitting data
MESSAGE_END_SEND_DATA	Data transmission complete
MESSAGE_START_SEND_TEMPLATE	Start transmitting template file
MESSAGE_END_SEND_TEMPLATE	Template file transmission complete
MESSAGE_START_SOCKET_CLOSE	Start socket disconnection
MESSAGE_END_SOCKET_CLOSE	Socket disconnected
MESSAGE_PRINT_COMPLETE	Print success
MESSAGE_PRINT_ERROR	An error occurred
MESSAGE_PAPER_EMPTY	Paper empty
MESSAGE_END_COMMUNICATION	Communication finished
MESSAGE_START_COOLING	Cooling start
MESSAGE_END_COOLING	Cooling end
MESSAGE_WAIT_PEEL	Wait for label to get through peeler
MESSAGE_START_UPDATE_BLUETOOTH_SETTING,	Start Bluetooth settings update
MESSAGE_END_UPDATE_BLUETOOTH_SETTING,	Bluetooth settings update complete
MESSAGE_START_GET_BLUETOOTH_SETTING,	Start getting Bluetooth setting
MESSAGE_END_GET_BLUETOOTH_SETTING,	Bluetooth settings retrieval complete
MESSAGE_START_GET_TEMPLATE_LIST,	Start getting the template list

MESSAGE_END_GET_TEMPLATE_LIST	Template list retrieval complete
MESSAGE_START_REMOVE_TEMPLATE_LIST,	Start templates removal process
MESSAGE_END_REMOVE_TEMPLATE_LIST	Template removal complete
MESSAGE_CANCEL	Cancel

*For more details, please refer to the source code of the sample application.

3.2.1.4. Chart of printers compatible with each parameter

Model name	paperSize	customPaper	pjCarbon	pjDensity	pjFeedmode	pjSpeed	paperPosition	customPaperWid	customPaperLen	customFeed	rollPrinterCase	mode9	rjDensity	rotate180	peelMode
MW-140BT	○														
MW-145BT	○														
MW-260	○														
MW-145MFi	○											○	○		
MW-260MFi	○											○	○		
PJ-522	○		○	○	○		○	○	○	○					
PJ-523	○		○	○	○		○	○	○	○					
PJ-520	○		○	○	○		○	○	○	○					
PJ-560	○		○	○	○		○	○	○	○					
PJ-562	○		○	○	○		○	○	○	○					
PJ-563	○		○	○	○		○	○	○	○					
PJ-622	○		○	○	○		○	○	○	○		○			
PJ-623	○		○	○	○		○	○	○	○		○			
PJ-662	○		○	○	○		○	○	○	○		○			
PJ-663	○		○	○	○		○	○	○	○		○			
PJ-722	○		○	○	○	○	○	○	○	○	○	○			
PJ-723	○		○	○	○	○	○	○	○	○	○	○			
PJ-762	○		○	○	○	○	○	○	○	○	○	○			
PJ-763	○		○	○	○	○	○	○	○	○	○	○			
PJ-763MFi	○		○	○	○	○	○	○	○	○	○	○			
PJ-773	○		○	○	○	○	○	○	○	○	○	○			

RJ-4030		○											○		
RJ-4030Ai		○										○	○		
RJ-4040		○											○		
RJ-3050		○											○	○	
RJ-3150		○											○	○	○
RJ-3050Ai		○										○	○	○	
RJ-3150Ai		○										○	○	○	○
RJ-2030		○										○	○	○	
RJ-2050		○										○	○	○	
RJ-2140		○										○	○	○	
RJ-2150		○										○	○	○	
TD-2020		○											○	○	○
TD-2120N		○											○	○	○
TD-2130N		○											○	○	○
TD-4000		○											○		
TD-4100N		○											○		
QL-710W															
QL-720NW															
QL-800															
QL-810W															
QL-820NWB															
PT-E550W															
PT-P750W															
PT-E850TKW															
PT-D800W															
PT-E800W															
PT-P900W															
PT-P950NW															

Model Name	labelNameIndex	isAutoCut	isCutAtEnd	isSpecialTape	isHalfCut	printQuality
MW-140BT						

MW-145BT						
MW-260						
MW-145MFi						
MW-260MFi						
PJ-522						
PJ-523						
PJ-520						
PJ-560						
PJ-562						
PJ-563						
PJ-622						
PJ-623						
PJ-662						
PJ-663						
PJ-722						
PJ-723						
PJ-762						
PJ-763						
PJ-763MFi						
PJ-773						
RJ-4030						
RJ-4030Ai						
RJ-4040						
RJ-3050						
RJ-3150						
RJ-3050Ai						
RJ-3150Ai						
RJ-2030						
RJ-2050						
RJ-2140						
RJ-2150						
TD-2020						
TD-2120N						
TD-2130N						
TD-4000		○	○			

TD-4100N		○	○			
QL-710W	○	○	○			○
QL-720NW	○	○	○			○
QL-800	○	○	○			○
QL-810W	○	○	○			○
QL-820NWB	○	○	○			○
PT-E550W	○	○	○	○	○	○
PT-P750W	○	○	○	○	○	○
PT_E850TKW	○	○	○	○	○	○
PT_D800W	○	○	○	○	○	○
PT_E800W	○	○	○	○	○	○
PT_P900W	○	○	○	○	○	○
PT_P950NW	○	○	○	○	○	○

3.3. com.brother.ptouch.sdk.PrinterStatus class

The member variables are listed below.

Fields		
Type	**Variable Name**	**Details**
ErrorCode	errorCode	Error code
int	batteryLevel	Battery level

3.3.1. Detailed specifications for member variables

The details for each member variable are provided below.

- **ErrorCode errorCode**

[Description]

Error codes: The members for “enum ErrorCode” are listed below.

enum ErrorCode	
ERROR_NONE	No errors
ERROR_NOT_SAME_MODEL	Found a different printer model than expected
ERROR_BROTHER_PRINTER_NOT_FOUND	Cannot find a Brother printer
ERROR_PAPER_EMPTY	Paper empty
ERROR_BATTERY_EMPTY	Battery weak

ERROR_COMMUNICATION_ERROR	Failed to retrieve printer status
ERROR_OVERHEAT	Print-head overheated
ERROR_PAPER_JAM	Paper jam
ERROR_HIGH_VOLTAGE_ADAPTER	High-voltage adapter
ERROR_CHANGE_CASSETTE	Paper cassette change while printing
ERROR_FEED_OR_CASSETTE_EMPTY	Feed error or paper cassette empty
ERROR_SYSTEM_ERROR	System error
ERROR_NO_CASSETTE	No paper-cassette
ERROR_WRONG_CASSETTE_DIRECT	Paper-cassette loaded incorrectly
ERROR_CREATE_SOCKET_FAILED	Failed to create socket
ERROR_CONNECT_SOCKET_FAILED	Failed to connect *1
ERROR_GET_OUTPUT_STREAM_FAILED	Failed to open output stream
ERROR_GET_INPUT_STREAM_FAILED	Failed to open input stream
ERROR_CLOSE_SOCKET_FAILED	Failed to close socket
ERROR_OUT_OF_MEMORY	Insufficient memory *2
ERROR_SET_OVER_MARGIN	Image size exceeds margin setting *3
ERROR_NO_SD_CARD	No SD card
ERROR_FILE_NOT_SUPPORTED	Unsupported file type
ERROR_EVALUATION_TIMEUP	PDF library trial period expired
ERROR_WRONG_CUSTOM_INFO	Wrong information in custom paper setting file
ERROR_NO_ADDRESS	IP and/or MAC address not set
ERROR_NO_MATCH_ADDRESS	No printer found with the expected IP and/or MAC address
ERROR_FILE_NOT_FOUND	File does not exist
ERROR_TEMPLATE_FILE_NOT_MATCH_MODEL	Printer model in template file does not match selected printer
ERROR_TEMPLATE_NOT_TRANS_MODEL	Selected printer model does not support Template transfer
ERROR_COVER_OPEN	Cover is open (RJ/TD/PT-E550W)
ERROR_WRONG_LABEL	Wrong media type
ERROR_PORT_NOT_SUPPORTED	Unsupported interface

ERROR_WRONG_TEMPLATE_KEY	No file exists with the specified template key
ERROR_CANCEL	Printing has been cancelled
ERROR_TEMPLATE_NOT_PRINT_MODEL	Selected printer model does not support Template printing
ERROR_BUSY	Busy (PT series/RJ-3xxx/TD-4xxx)
ERROR_PRINTER_SETTING_NOT_SUPPORTED	Selected printer does not support device setting
ERROR_INTERNAL_ERROR	Internal error
ERROR_INVALID_PARAMETER	Invalid parameter value
ERROR_TEMPLATE_NOT_CONTROL_MODEL	Print model does not support template list or remove operation
ERROR_TEMPLATE_NOT_EXIST	Template not found in selected printer
ERROR_BUFFER_FULL	Buffer full
ERROR_TUBE_EMPTY	Tube empty
ERROR_TUBE_RIBBON_EMPTY	Tube ribbon empty
ERROR_OS_VERSION_NOT_SUPPORTED	Unsupported OS version
ERROR_RESOLUTION_MODE	Error: High-resolution / draft printing error You can not use the high-resolution / high-speed printing. Change the print settings to a standard or use the AC adapter.
ERROR_POWER_CABLE_UNPLUGGING	Error: AC adapter or disconnect error Do not disconnect and reconnect the AC adapter during printing.
ERROR_BATTERY_TROUBLE	Error: battery error Replace to a new battery or use a proper AC adapter.
ERROR_UNSUPPORTED_MEDIA	Error: unsupported media error To continue printing, attach a corresponding cassette properly.
ERROR_TUBE_CUTTER	Error: tube cutter error Tube cutter of the P-touch does not work.
ERROR_UNSUPPORTED_TWO_COLOR	Error: monochromatic medium error Paper set inside is not compatible with two-color printing.

ERROR_UNSUPPORTED_MONO_COLOR	Error: 2-color medium error Paper set inside is not compatible with monochrome printing.

*1 For MW-140BT and MW-260, disabling the PIN code may resolve this error.

*2 If this occurs when printing an image, reduce the image size.

*3 If this occurs when printing an image, reduce margins and/or image size until the image fits.

- **int batteryLevel**

[Description]

Battery level: The values that can be retrieved differ depending on the printer.

Printer	Details
MW-140BT TD-4xxx QL-7xx series QL-800	-1: Not supported.
MW-260 MW-260MFi	-1: Failed to retrieve battery level 0 (empty) - 100 (full)
MW-145BT MW-145MFi	-1: Failed to retrieve battery level 1: Battery weak 2: Battery medium 3: Battery full
PJ series (except PJ-7xx)	-1: Failed to retrieve battery level 0: Connected to AC adapter or fully-charged lithium-ion battery 1: Battery weak 2: Battery medium 3: Battery full
RJ series PT series PJ-7xx TD-2xxx QL-810W/820NWB	-1: Failed to retrieve battery level 4: Connected to AC adapter 3: Battery needs charging 2: Battery weak 1: Battery medium 0: Battery full

3.4. com.brother.ptouch.sdk.NetPrinter class

The member variables are listed below.

Fields		
Type	Variable name	Description
String	modelName	Model name
String	serNo	Serial number
String	ipAddress	IP address
String	macAddress	MAC address Use ":" (colon) as delimiter. Format: 01:23:45:67:89:AB
String	nodeName	Node name

3.5. com.brother.ptouch.sdk.LabelParam class

The member variables are listed below.

Member variables		
Type	Variable name	Description
float	paperWidth	Label width (mm)
float	paperLength	Label length (mm)
int	imageAreaWidth	Label print area width (dots)
int	imageAreaLength	Label print area length (dots)

3.6. com.brother.ptouch.sdk.LabelInfo class

The member variables are listed below.

Member variables		
Type	Variable name	Description
int	labelNameIndex	Label index number
LabelColor	labelColor	Label background color
LabelColor	labelFontColor	Label text color (specifically for PT) (read only)

3.6.1. Detailed specifications for member variables

The details for each member variable are provided below.

- **int labelNameIndex**

[Description]

Specifies the label index number. Specify an enum index number for each label type.

The enum members for the printers are listed below.

- **QL-7xx series/QL-8xx series**

enum QL-700	
W17H54	17 mm × 54 mm
W17H87	17 mm × 87 mm
W23H23	23 mm × 23 mm
W29H42	29 mm × 42 mm
W29H90	29 mm × 90 mm
W38H90	38 mm × 90 mm
W39H48	39 mm × 48 mm
W52H29	52 mm × 29 mm
W62H29	62 mm × 29 mm
W62H100	62 mm × 100 mm
W12	12 mm
W29	29 mm
W38	38 mm
W50	50 mm
W54	54 mm
W62	62 mm
W60H86	60 mm × 86 mm
W54H29	54mm ×29mm, QL-8xx series only
W62RB	Black/Red 62mm, QL-8xx series only

・PT series

enum PT	
W3_5	3.5 mm
W6	6 mm
W9	9 mm
W12	12 mm
W18	18 mm
W24	24 mm
HS_W6	Heat-shrink 5.8 mm
HS_W9	Heat-shrink 8.8 mm
HS_W12	Heat-shrink 11.7 mm
HS_W18	Heat-shrink 17.7 mm
HS_W24	Heat-shrink 23.6 mm
W36	36 mm, PT-E8/D8/P9 only

R6_5	6.5-mm-diameter tube, PT-E850TKW only
R6_0	6.0-mm-diameter tube, PT-E850TKW only
R5_0	5.0-mm-diameter tube, PT-E850TKW only
R4_0	4.0-mm-diameter tube, PT-E850TKW only
R3_5	3.5-mm-diameter tube, PT-E850TKW only
R3_0	3.0-mm-diameter tube, PT-E850TKW only
R2_5	2.5-mm-diameter tube, PT-E850TKW only
FLE_W21H45	FLe label 21 mm × 45 mm, PT-E8/D8/P9 only

- **LabelColor labelColor**

[Description]

Retrieves the label background color. This can only be used with PT printers and is read only.

The members for “enum LabelColor” used as background colors are listed below.

“enum LabelColor” used as background colors	
WHITE	White
OTHERS	Others
RED	Red
BLUE	Blue
YELLOW	Yellow
GREEN	Green
BLACK	Black
CLEAR	Clear (except with white ink)
CLEAR_WHITE	Clear (white text)
MATTE_WHITE	White (matte)
MATTE_CLEAR	Clear (matte)
MATTE_SILVER	Silver (matte)
SATIN_GOLD	Gold (satin)
SATIN_SILVER	Silver (satin)
BLUE_WHITE	Blue (white text)
RED_WHITE	Red (white text)
FLUORESCENT_ORANGE	Fluorescent orange
FLUORESCENT_YELLOW	Fluorescent yellow
BERRY_PINK	Berry pink
LIGHT_GRAY	Light gray

LIME_GREEN	Lime green
FABRIC_YELLOW	Yellow (fabric)
FABRIC_PINK	Pink (fabric)
FABRIC_BLUE	Blue (fabric)
TUBE_WHITE	White (tube)
SELF_WHITE	White (self-laminating)
FLEXIBLE_WHITE	White (flexible)
FLEXIBLE_YELLOW	Yellow (flexible)
STENCIL	Stencil
CLEANING	Cleaning tape
PASTEL_PURPLE	Pastel purple
NAVY_BLUE	Navy blue(Stain)
WINE_RED	Wine red(Stain)
UNSUPPORT	Unsupported

- **LabelColor labelFontColor**

[Description]

Retrieves the label text color. This can only be used with PT printers and is read only.

The members for “enum LabelColor” used as text colors are listed below.

“enum LabelColor” used as text colors	
WHITE	White
OTHERS	Others
RED	Red
BLUE	Blue
BLACK	Black
GOLD	Gold
FABRIC_BLUE	Blue (fabric)
STENCIL	Stencil
CLEANING	Cleaning tape
UNSUPPORT	Unsupported

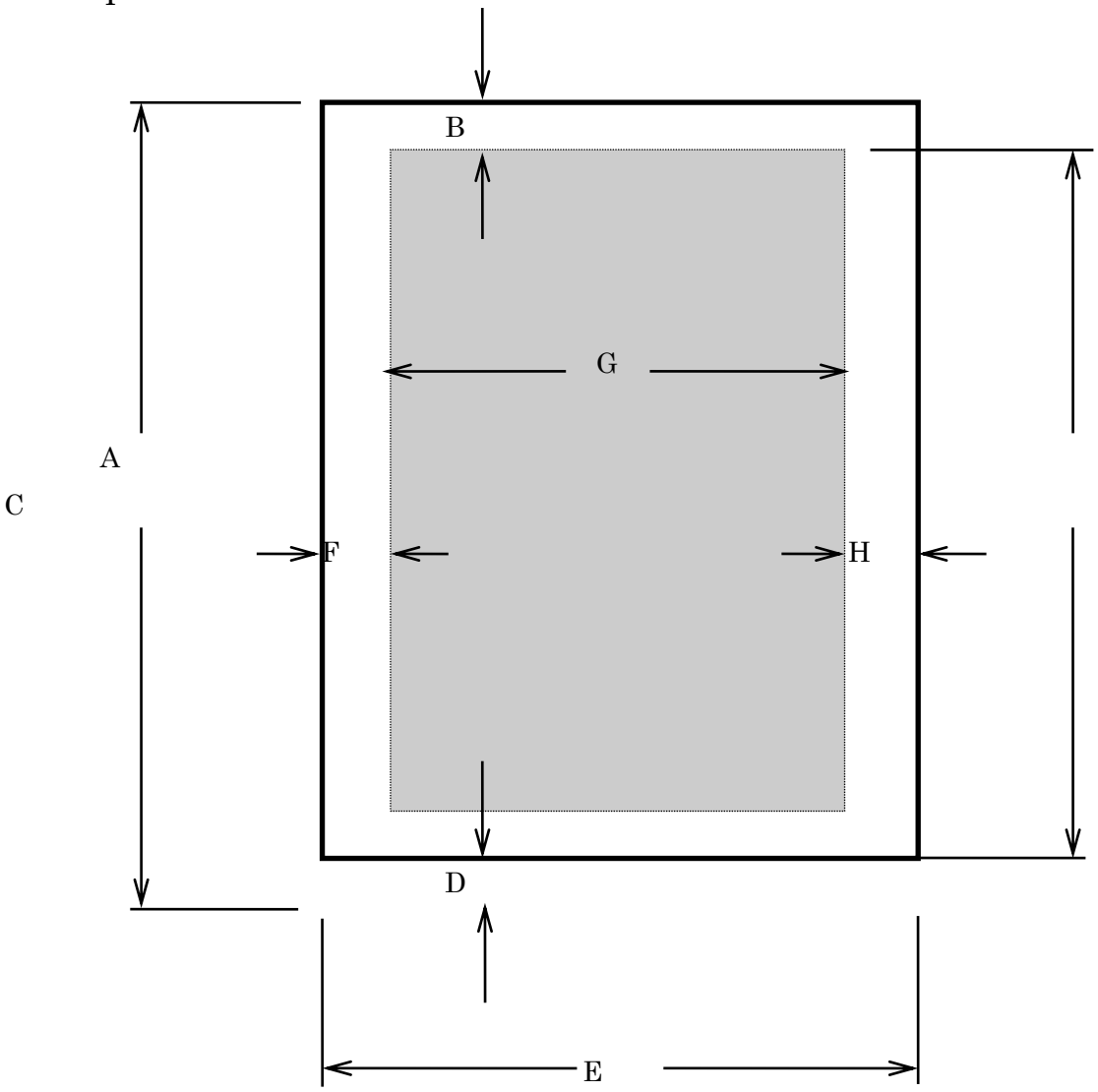
3.7. com.brother.ptouch.sdk.TemplateInfo class

The member variables are listed below.

Member variables		
Type	Variable name	Description

int	key	Number identifying the template saved on the printer
int	fileSize	Template file size
int	checksum	Template file check sum
Date	modifiedDate	Date template file was last modified
String	fileName	Template file name

4. Paper Information



A: Length
B: Top margin
C: Print area length
D: Bottom margin
E: Width
F: Left margin
G: Print area width
H: Right margin

4.1. PJ series

4.1.1. PJ-723, PJ-763, PJ-763MFi, PJ-773, PJ-663, PJ-560, PJ-563 (300 dpi model)

Paper	A	B	C	D	E	F	G	H
A4	297.0 mm 3507 dots	2.5 mm 30 dots PJ-500 6.8 mm	279.4 mm 3300 dots	15.0 mm 177 dots PJ-500 10.8 mm	210.0 mm 2480 dots	3.4 mm 40 dots	203.2 mm 2400 dots	3.4 mm 40 dots

		80 dots		127 dots				
Legal	355.6 mm 4200 dots	2.5 mm 30 dots PJ-500 6.8 mm 80 dots	347.1 mm 4100 dots	5.9 mm 70 dots PJ-500 1.7 mm 20 dots	215.9 mm 2550 dots	3.6 mm 43 dots	208.6 mm 2464 dots	3.6 mm 43 dots
Letter	279.4 mm 3300 dots	2.5 mm 30 dots PJ-500 6.8 mm 80 dots	270.9 mm 3200 dots	5.9 mm 70 dots PJ-500 1.7 mm 20 dots	215.9 mm 2550 dots	3.6 mm 43 dots	208.6 mm 2464 dots	3.6 mm 43 dots
A5	210.0 mm 2480 dots	2.5 mm 30 dots PJ-500 6.8 mm 80 dots	193.8 mm 2289 dots	13.6 mm 161 dots PJ-500 9.4 mm 111 dots	148.0 mm 1748 dots	3.4 mm 40 dots	141.2 mm 1668 dots	3.4 mm 40 dots
A5 (portrait)	148.0 mm 1748 dots	2.5 mm 30 dots PJ-500 6.8 mm 80 dots	130.2 mm 1538 dots	15.2 mm 180 dots PJ-500 11.0 mm 130 dots	210.0 mm 2480 dots	3.4 mm 40 dots	203.2 mm 2400 dots	43.4 mm 40 dots

4.1.2. PJ-723, PJ-763, PJ-763MFi, PJ-773, PJ-663 (300 dpi model): Roll paper with marks

Paper	A	B	C	D	E	F	G	H
Letter	279.4 mm 3300 dots	11.9 mm 140 dots	251.4 mm 2970 dots	16.1 mm 190 dots	215.9 mm 2550 dots	3.6 mm 43 dots	208.6 mm 2464 dots	3.6 mm 43 dots

4.1.3. PJ-722, PJ-762, PJ-662, PJ-562 (200 dpi model)

Paper	A	B	C	D	E	F	G	H
A4	297.0 mm 2338 dots	2.5mm 20 dots PJ-500 6.8 mm 54 dots	279.4mm 2200 dots	15.0 mm 118 dots PJ-500 10.8 mm 84 dots	210.0 mm 1654 dots	3.4 mm 27 dots	203.2 mm 1600 dots	3.4 mm 27 dots
Legal	355.6 mm 2800 dots	2.5 mm 20 dots	347.1 mm 2733 dots	6.0 mm 47 dots	215.9 mm 1700 dots	4.3 mm 34 dots	207.2 mm 1632 dots	4.3 mm 34 dots

		PJ-500 6.8 mm 54 dots		PJ-500 1.7 mm 13 dots				
Letter	279.4 mm 2200 dots	2.5 mm 20 dots PJ-500 6.8 mm 54 dots	270.9 mm 2133 dots	6.0 mm 47 dots PJ-500 1.7 mm 13 dots	215.9 mm 1700 dots	4.3 mm 34 dots	207.2 mm 1632 dots	4.3 mm 34 dots
A5	210.0 mm 1654 dots	2.5 mm 20 dots PJ-500 6.8 mm 54 dots	193.8 mm 1526 dots	13.6 mm 107 dots PJ-500 9.3 mm 73 dots	148.0 mm 1165 dots	3.4 mm 27 dots	141.0 mm 1111 dots	3.4 mm 27 dots
A5 (portrait)	148.0 mm 1166 dots	2.5 mm 20 dots PJ-500 6.8 mm 54 dots	131.0 mm 1032 dots	14.5 mm 114 dots PJ-500 10.2 mm 80 dots	210.0 mm 1654 dots	3.4 mm 27 dots	203.2 mm 1600 dots	3.4 mm 27 dots

4.1.4. PJ-722, PJ-762, PJ-662 (200 dpi model): Roll paper with marks

Paper	A	B	C	D	E	F	G	H
Letter	279.4 mm 2200 dots	10.9 mm 86 dots	251.5 mm 1980 dots	17.0 mm 134 dots	215.9 mm 1700 dots	4.3 mm 34 dots	207.2 mm 1632 dots	4.3 mm 34 dots

4.2. MW series

4.2.1. MW-260, MW-260MFi

Paper	A	B	C	D	E	F	G	H
A6	148 mm 1748 dots	3.75 mm 44 dots	140.5 mm 1660 dots	3.75 mm 44 dots	105 mm 1240 dots	3.75 mm 44 dots	97.5 mm 1152 dots	3.75 mm 44 dots

4.2.2. MW-140BT/MW-145BT/MW-145MFi

Paper	A	B	C	D	E	F	G	H
A7	105 mm	2.5 mm	99.9 mm	2.5 mm	74 mm	2.5 mm	69.1 mm	2.5 mm

	1240 dots	30 dots	1180 dots	30 dots	874 dots	29 dots	816 dots	29 dots

5. Sample App

5.1. Overview

An overview of the sample app is provided below.

App name	Brother Print SDK Demo
Operating system	Android operating system 4.0.3 or later
Functions	● Print images (jpg, bmp, png) or send raw files (prn) to the printer ● Print PDF files ● Print using P-touch Templates downloaded to the printer ● Manage (transfer, list, delete) P-touch template files (*.pdz, *.blf) ● Control printer and media configuration
Supported printers	Refer to 1.4.Supported printers.
Acquisition method	Google Play
Usage conditions	● SD card

5.2. Operating Procedure

5.2.1.1. Main Task-Selection Menu

When you start the application, you see a list of tasks you can ask it to perform.

Descriptions are provided below.

Display	Description
Print Image/Prn File	Prints images (jpg, bmp, png) and prn files (Windows PC driver output).
Print Pdf File	Prints PDF files.
Print Template	Prints using P-touch Templates that have been downloaded to the printer.
Manage Templates	Transfers template files to the printer or remove templates from the printer.
Device Settings	Manages model-specific printer settings.

5.2.2. Print Image/Prn File

Descriptions are provided below.

Display	Description
Multiple Select	Check this box if you want to print several files at once. Checking or unchecking this box clears the current file selection(s).
Select File	Browse the file system to select a file to print.
Printer Settings	Select a printer and set printing information
Printer Status	Get status from the selected printer.
Print	Start printing the selected file(s)

5.2.3. Print Pdf File

Descriptions are provided below.

Display	Description
Select	Browse the file system to select a file to print. You must specify whether to print the entire document or a range of pages.
All pages	Check this box to print the entire PDF file. Start Page and End Page are ignored.
Start Page	The first page number of the range to print.
End Page	The last page number of the range to print.
Printer Settings	Select a printer and set printing information.
Print	Start printing the selected page(s).

5.2.4. Print Template

Use the controls on this screen to print using a template that has been previously downloaded to the printer.

The template is identified by a Key, a number that was assigned when the template was downloaded. The template has one or more fields that you may fill with text for printing. The fields are identified by an Index Number and an Object Name that were assigned when the template was created.

Descriptions are provided below.

Display	Description
Template Key	Enter the key that identifies the desired template.
Encoding	Select the printer character encoding (English, Japanese, or Chinese). The radio buttons choose the method of selecting a field to receive the replacement text.
Text	No index or name; the next replaceable field (in index order) receives the text.
Index	An input box appears; enter the index of the selected field.
ObjectName	An input box appears; enter the object name of the selected

	field.
Text	The replacement text to write into the specified field.
Add	Apply the current selections. Template commands and text appear in the Input Data area.
Delete	Delete the last block of template commands and text from the Input Data area.
Next Template	Tap if you want to print another template.
Printer Settings	Select a printer and set printing information.
Print	Transfer the accumulated commands and data to the printer and start.

5.2.5. Transfer Manager

Descriptions are provided below.

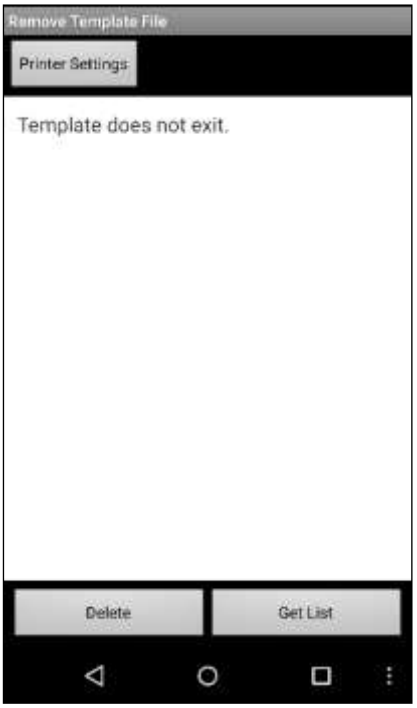
Display	Description
Transfer Template	Transfer template file (*.pdz, *.blf) from Android to the printer.
Remove Template	Get the list of templates and remove templates from the printer.

5.2.6. Transfer Template

Descriptions are provided below.

Display	Description
Select	Browse the file system to select a template file to transfer.
Printer Settings	Select a printer and set printing information.
Transfer	Start the transfer. For USB and Bluetooth, use pdz files. For Wi-Fi, use blf files.

5.2.7. Delete Template



Descriptions are provided below.

Display	Description
Printer Settings	Select a printer and set printing information.
Template Information	Template key number, file name, date modified, and file size.
Get Template List	Get a list of the templates on the printer.
Remove Template	Remove specified templates from the printer.

5.2.8. Printer Settings

Descriptions are provided below.

Display	Description
Printer Model	Selects a printer model from a list of supported Brother models. Selecting a printer model may change other settings on this screen to new default values.
Port	Selects an interface from a list of ports supported by the selected PrinterModel. These may include BLUETOOTH, NET, and USB.
Printer	Selects from a list of printers available on the selected Port.
Paper size	Selects from a list of paper sizes supported by the selected PrinterModel.
Printing orientation	Selects from Portrait or Landscape
Fit to Page:	Selects a scaling option: original size, fit-to-page, or custom scale factor. If the requested image size is larger than the printable area of the paper, the printer will not print it.

Number of copies	Number of copies to print
Half toning	Selects the method of converting an image to monochrome: Threshold, Pattern dither, or Error diffusion.
Threshold of simple binary	Threshold value when Halftone is set to Threshold
Skip status check	Controls the pre-print status check.
Check the print end	Controls when print-complete status checks are performed.
Trim tape after data	Trims the blank space at the end of the data after the image is changed to binary/ternary.
Tethering	Uses the Android device for tethering.
Print quality	Specifies the print quality
IP/MAC address (auto set when you select a printer)	Presents options to set these addresses.
Alignment Settings	Presents options to set alignment and margins.
Horizontal Alignment	Selects the setting for left, center or right alignment.
Left margin	Specifies the X coordinate to start printing.
Vertical alignment	Selects the setting for top, middle or bottom alignment.
Top margin	Specifies the Y coordinate to start printing. value in dots
PJ Settings	Presents options for settings used only with PocketJet printers.
Carbon	Enables “Carbon paper” (2-ply paper) mode
PJ Density	Specifies a print density within the range of 0 to 10.
Feed mode	Selects the feed method when printing finishes, according to the paper type.
Custom Paper Width	Specifies the width of custom paper.
Custom Paper Length	Specifies the length of custom paper.
Feed Paper Setting	Specifies the length feed at end-of-page.
Paper Position	Selects the horizontal feed position of custom

	paper (LEFT, CENTER, RIGHT)
Dash Line Print	Selects whether or not to apply dashed-line print mode
Mode9	Selects whether or not to apply Mode 9 compression.
PJSpeed	Specifies a print speed within the range of 0 to 3 (PJ-7xx)
Printer case	Selects the roll case configuration (PJ-7xx)
RJ/TD Settings	presents options for settings used only with RJ and TD printers.
Custom Setting	Select custom paper setting file.
Rotate 180	Selects whether or not to rotate 180 degrees for printing. (TD/RJ-3xxx/RJ-2xxx)
Density	Specifies a print density within the range of –5 to 5.
PeelMode	Configure printer to use label peeler (TD/RJ-3150)
Cut Settings	Controls cutters on printers that support them.
Auto cutting	Selects whether or not to cut after each label when printing multiple labels (PT/QL).
Cut at end	Selects whether or not to cut after the final label (PT/QL).
Half cut	Selects whether or not to add half cuts to labels. Note: This can only be used with the PT series (PT/QL).
Special tape	Selects whether or not special tape will be used. Note: This can only be used with the PT series (PT).

5.3. How to add custom paper setting files

Use the Custom Label Tool on a Windows PC to create custom paper setting files. Put these files in the “customPaperFileSet” folder in the root folder of the SD memory card.

6. Implementation: how to use the SDK in your application

6.1. Add the library files

1. Copy the jar files in libs folder of the SDK to the libs folder of your application project.
2. Copy the jniLibs folder of the SDK to the main folder of your application project.

The correct location of the library files may be seen in the Samples folder of the SDK.

6.1.1. Notes

1. If you don't need the SDK's PDF printing functions, you should delete the PDF printing library files (MobilePrintLib.jar and libAndrJFPDFEMB.so) from the libs folder.
2. The Brother Print SDK is distributed with an evaluation version of the PDF printing library. It is valid for two months from first use on an Android device. During the evaluation period, PDF pages are printed with a watermark. After the evaluation period, the PDF printing functions become invalid and return the error status code ERROR_EVALUATION_TIMEUP.
   Functions other than PDF printing are not affected by the evaluation period expiration.
3. Another version of the SDK, the Brother PDF Print SDK, is distributed with an unrestricted PDF printing library. This version does not print watermarks and has no expiration date.
4. If the SDK is running on Android 5.0 or later, it uses native Android PDF classes. The PDF printing library files may be deleted.

* Note 4: The Brother PDF Print SDK does not operate on Android 6.0 or later.

6.2. How to use the SDK API

6.2.1. Multi-threading

Functions marked with an asterisk (*) in the API function list communicate with the printer. Do not call any of these functions simultaneously in multiple threads. The printer cannot accept two connection requests at the same time.

6.2.2. Android Permissions in the Manifest

The SDK may require the following Android Permissions in your application's AndroidManifest.xml.

```
<uses-permission
android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
<uses-permission android:name="android.permission.INTERNET" />
```

```
<uses-permission android:name="android.permission.BLUETOOTH" />
<uses-permission android:name="android.permission.BLUETOOTH_ADMIN" />
```

- Use of Wi-Fi communication requires "INTERNET" permission
- Use of Bluetooth communication requires "BLUETOOTH" and "BLUETOOTH_ADMIN"
- Always include "WRITE_EXTERNAL_STORAGE" Permission. The SDK writes temporary files in external storage to avoid throwing OutOfMemoryError.

6.2.3. Sample code for supporting Bluetooth

Import the library classes and Android's BluetoothAdapter:

```
import com.brother.ptouch.sdk.Printer;
import com.brother.ptouch.sdk.PrinterInfo;
import com.brother.ptouch.sdk.PrinterStatus;
import android.bluetooth.BluetoothAdapter;
```

Sample print function:

```
public void print() {
Thread trd = new Thread(new Runnable() {
    @Override
    public void run() {
      String externalStorageDir =
Environment.getExternalStorageDirectory().toString();

      // define printer and printer setting information
      Printer printer = new Printer();
      PrinterInfo printInfo = new PrinterInfo();
      printInfo.printerModel = PrinterInfo.Model.RJ_3150;
      printInfo.port = PrinterInfo.Port.BLUETOOTH;
      printInfo.customPaper = externalStorageDir + "/rj3150_76mm.bin";
      printInfo.macAddress = "00:11:EE:BB:AA:CC";
      printer.setPrinterInfo(printInfo);

      // Pass Bluetooth adapter to the library (Bluetooth only)
    BluetoothAdapter bluetoothAdapter = BluetoothAdapter.getDefaultAdapter();
      printer.setBluetooth(bluetoothAdapter);
```

```
        //print
        String srcPath = externalStorageDir + "/sample.png";
        printer.startCommunication();
        PrinterStatus status = printer.printFile(srcPath);
        printer.endCommunication();
      }
    });
    trd.start();
}
```

6.2.4. Sample code for supporting USB

Import the library classes and Android's USB classes:

```
import com.brother.ptouch.sdk.Printer;
import com.brother.ptouch.sdk.PrinterInfo;
import com.brother.ptouch.sdk.PrinterStatus;
import android.hardware.usb.UsbDevice;
import android.hardware.usb.UsbManager;
import android.app.PendingIntent;
```

Sample print function:

```
public void print {
    Thread trd = new Thread(new Runnable() {
      @Override
      public void run() {
        String externalStorageDir =
Environment.getExternalStorageDirectory().toString();
        //prepare usb connection
        UsbManager usbManager = (UsbManager)
getSystemService(Context.USB_SERVICE);
        UsbDevice usbDevice = myPrint.getUsbDevice(usbManager);
        if (usbDevice == null) {
          return;
        }
        PendingIntent permissionIntent =
```

```
PendingIntent.getBroadcast(getApplicationContext(), 0,
            new Intent(ACTION_USB_PERMISSION), 0);
        registerReceiver(mUsbReceiver, new IntentFilter(ACTION_USB_PERMISSION));

        while (true) {
          if (!usbManager.hasPermission(usbDevice) {
            usbManager.requestPermission(usbDevice, permissionIntent);
          } else {
            break;
          }
          try {
            Thread.sleep(1000);
          } catch (InterruptedException e) {
            e.printStackTrace();
          }
        }

        //print setting
        Printer printer = new Printer();
        PrinterInfo printInfo = new PrinterInfo();
        printInfo.printerModel = PrinterInfo.Model.PJ_763MFi;
        printInfo.port = PrinterInfo.Port.USB;
        printInfo.paperSize = PrinterInfo.PaperSize.A4;
        printer.setPrinterInfo(printInfo);

        //print
        String srcPath = externalStorageDir + "/sample.png";
        printer.startCommunication();
        PrinterStatus status = printer.printFile(srcPath);
        printer.endCommunication();
      }
    });
    trd.start();
}
```

6.2.5. Sample code for supporting Wi-Fi

Import the library classes:

```
import com.brother.ptouch.sdk.Printer;
import com.brother.ptouch.sdk.PrinterInfo;
import com.brother.ptouch.sdk.PrinterStatus;
import com.brother.ptouch.sdk.LabelInfo;
```

Sample print function:

```
public void print() {
    Thread trd = new Thread(new Runnable() {
        @Override
        public void run() {
            String externalStorageDir =
Environment.getExternalStorageDirectory().toString();

            //print setting
            Printer printer = new Printer();
            PrinterInfo printInfo = new PrinterInfo();
            printInfo.printerModel = PrinterInfo.Model.PT_P750W;
            printInfo.port = PrinterInfo.Port.NET;
            printInfo.ipAddress = "172.0.0.1";
            printInfo.labelNameIndex = LabelInfo.PT.W24.ordinal();
            printer.setPrinterInfo(printInfo);

            //PDF print
            String pdfFile = externalStorageDir + "/Test1Page.pdf";
            printer.startCommunication();
            int pages = printer.getPDFFilePages(pdfFile);
            for (int i = 1; i <= pages; i++) {
                PrinterStatus mPrintResult = printer.printPdfFile(pdfFile, i);
                if (mPrintResult.errorCode != PrinterInfo.ErrorCode.ERROR_NONE) {
                    break;
                }
            }
            printer.endCommunication();
        }
```

```
    });
    trd.start();
}
```

For more details, please refer to the source code of the sample application distributed with the SDK, and the Android Developers site.

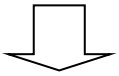
6.3. Migration from Brother Print SDK 2.6

If you have created a project with version 2.6 of the Brother Print SDK, then to migrate to version 3.0 you must make certain changes to your source code. Please refer to the following examples. For more details, check the source code of the sample application distributed with the SDK.

6.3.1. boolean setLabelInfo(LabelInfo)

SDK2.6

```
Printer myPrinter = new Printer();
LabelInfo label = new LabelInfo()
labelInfo.labelNameIndex = 1;
   labelInfo.isAutoCut=true;
   labelInfo.isEndCut=true;
   labelInfo.isHalfCut=true;
   labelInfo.isSpecialTape= false;
                    …
myPrint.setLabelInfo(label)
```



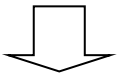
SDK3.0

```
Printer myPrinter = new Printer();
PrinterInfo myPrinterInfo = new PrinterInfo();
   myPrinterInfo.labelNameIndex = 1;
   myPrinterInfo.isAutoCut=true;
   myPrinterInfo.isCutAtEnd=true;
   myPrinterInfo.isHalfCut=true;
   myPrinterInfo.isSpecialTape= false;
                    …
   myPrinter.setPrinterInfo(myPrinterInfo);
```

6.3.2. boolean setCustomPaper(Model printerModel,String filePath)

SDK2.6

```
Printer myPrinter = new Printer();
myPrint.setCustomPaper(Model.RJ_4030,"temp.bin")
                    …
```



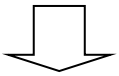
SDK3.0

```
Printer myPrinter = new Printer();
PrinterInfo myPrinterInfo = new PrinterInfo();
                    …
myPrinterInfo.customPaper = "temp.bin";
  myPrinter.setPrinterInfo(myPrinterInfo);
```

6.3.3. int checkLabelInPrinter()

SDK2.6

```
Printer myPrinter = new Printer();
int labelId = myPrint.checkLabelInPrinter()
                    …
```



SDK3.0

```
Printer myPrinter = new Printer();
PrinterInfo myPrinterInfo = new PrinterInfo();
                    …
  myPrinter.setPrinterInfo(myPrinterInfo);
LabelInfo label = myPrinter.getLabelInfo();
                    …
```

7. Restrictions

- The Android OS specification limits the memory available to an application. An attempt to print a large pdf or image file may fail with an OutOfMemoryError. A PDF over 10MB or an image file with horizontal and vertical size of 2000 - 3000 pixels or more may be too large to print, depending on the Android device.
- Some Android devices may be unable to print to an MW-140BT or MW-260. Disabling the printer's Bluetooth PIN code with the printer utility may restore printing capability.
- The P-touch Template printing functions require the default P-touch Template settings. Use the P-touch Template Setting Tool to configure the printer. If a Bluetooth connection is unstable, clear, then select the "Bluetooth" check box in the Bluetooth settings screen, return to the main screen with the return button, and then try starting the application again. Also, turn the printer off, then and on again.

8. Hints and tips

8.1. Dealing with an unstable Bluetooth connection

On Android's Bluetooth setting screen, turn Bluetooth OFF and then ON again.

Exit the SDK Demo application by pressing the [Back] button, then restart the application.

Turn the printer power OFF and then ON again.

8.2. Background and print colors

The background color and print color of a label are displayed with the following RGB values.

Label background color

LabelColor	R	G	B
WHITE	255	255	255
OTHERS	255	254	254
RED	255	62	74
BLUE	102	153	255
YELLOW	255	237	0
GREEN	67	209	173
BLACK	0	0	0
CLEAR	238	251	254
CLEAR_WHITE	225	236	238
MATTE_WHITE	255	255	254
MATTE_CLEAR	238	251	253
MATTE_SILVER	139	139	139
SATIN_GOLD	253	220	119
SATIN_SILVER	138	139	139
BLUE_WHITE	47	78	167
RED_WHITE	196	15	15
FLOURESCENT_ORANGE	255	97	0
FLUORESCENT_YELLOW	215	232	22
BERRY_PINK	242	90	184
LIGHT_GRAY	195	195	195
LIME_GREEN	122	193	67
FABRIC_YELLOW	255	255	179
FABRIC_PINK	255	231	235
FABRIC_BLUE	186	219	255

TUBE_WHITE	255	254	255
SELF_WHITE	254	255	255
FLEXIBLE_WHITE	254	254	255
FLEXIBLE_YELLOW	254	237	0
STENCIL	249	249	249
CLEANING	–	–	–
UNSUPPORT	–	–	–

Label print color

LabelColor	R	G	B
WHITE	255	255	255
OTHERS	0	0	1
RED	255	0	0
BLUE	0	51	255
BLACK	0	0	0
GOLD	242	183	6
FABRIC_BLUE	18	70	136
STENCIL	0	1	0
CLEANING	–	–	–
PASTEL_PURPLE	197	180	227
NAVY_BLUE	44	52	71
WINE_RED	150	0	20
UNSUPPORT	–	–	–

8.3. Android 6 compatibility

Since Android 6.0, Users are allowed to change the application's permissions after installation.
Permission to access Android external storage must be granted to use this application.

8.3.1. Settings in development

Required permissions must be listed in the Manifest file.
Always include android.permission.WRITE_EXTERNAL_STORAGE.
If your application requires Wi-Fi access, include android.permission.INTERNET.
If your application requires Bluetooth, also include android.permission.BLUETOOTH and BLUETOOTH_ADMIN.

8.3.2. How to Display the permission dialog within the application

When a required permission is not allowed, your application can ask the user to grant that permission using a standard Android dialog. Refer to the sample application.

8.3.3. How to set permissions manually after the application installed.

1. Select [Settings].
2. Select the [Apps] or [Application Manager], depending on the device.
3. Select the application.
4. Select [Permissions] and change the permissions as needed.