

Windows SDK for BLE User's Manual

Oct 11, 2022 Rev1.0.0

This manual provides the design guidelines you need to build Windows applications using the Windows SDK for BLE.



History of revision of this manual

Revision	Date	Description of revision
Rev1.0.0	Oct 11, 2022	Release of 1st edition

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1. Introduction

The Windows SDK for BLE is an easy-to-use support library for printing receipts via BLE communication from Windows applications to Sanei printers.

When using the SDK in this manual, we explain how the required software works by referring to the example of building a sample application.

Class library file SaneiBleLibrary.dll

1.1. Development environment

Target OS: Windows10 or later
Application Development Environment.: Visual Studio

1.2. Supported Products

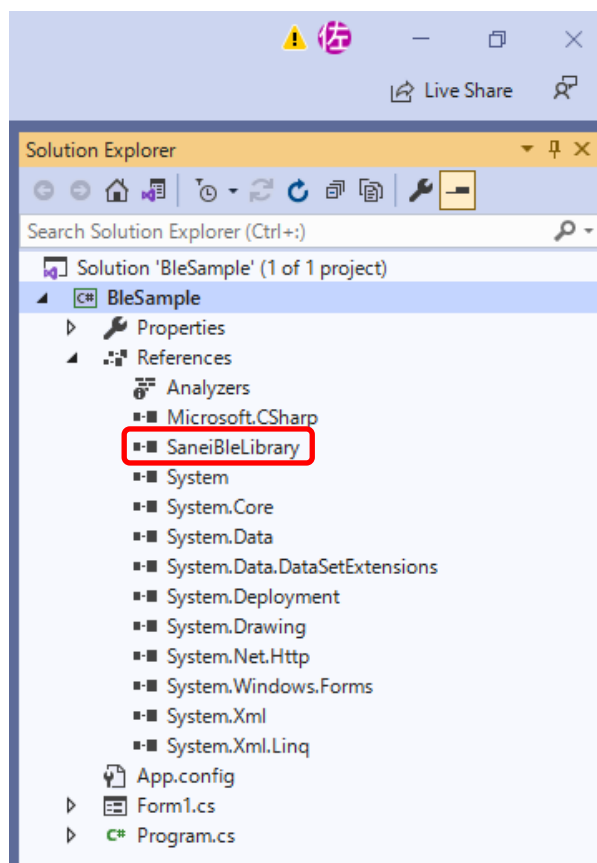
Supported Products	Firmware	Supported interface
SM4-21	V1.03 or later	BLE
SM4-31	V1.03 or later	BLE

1.3. How to Implement the Class Library

(1) Add the following DLLs to the application project folder.

SaneiBleLibrary.dll Library of this SDK

(2) Add " SaneiBleLibrary.dll " to the solution references.



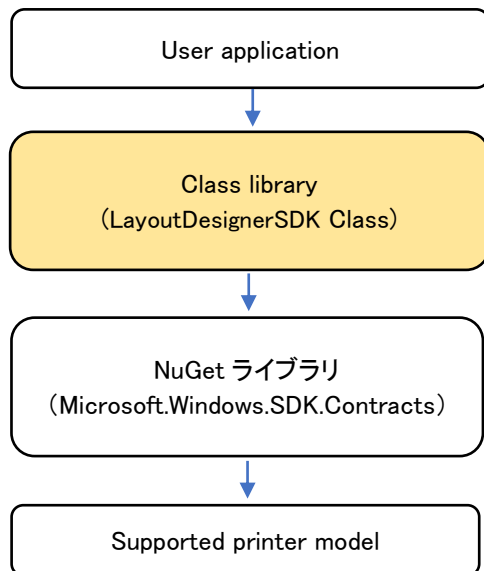
(3) Declare the SDK class in the source code.

```
1  using System;
2  using System.Collections.Generic;
3  using System.ComponentModel;
4  using System.Data;
5  using System.Drawing;
6  using System.Linq;
7  using System.Text;
8  using System.Threading.Tasks;
9  using System.Windows.Forms;
10
11 namespace BleSample
12 {
13     public partial class Form1 : Form
14     {
15         SaneiBleLibrary.BleApi api = null;
16
17         public Form1()
18         {
19             InitializeComponent();
20         }
21
22         //Connect
23         private void button1_Click(object sender, EventArgs e)
24         {
25             string str = textBox1.Text;
26             ulong address = Convert.ToUInt64(str, 16);
27
28             api = new SaneiBleLibrary.BleApi();
29             api.BleOpen(address, 20000);
30         }
31     }
```

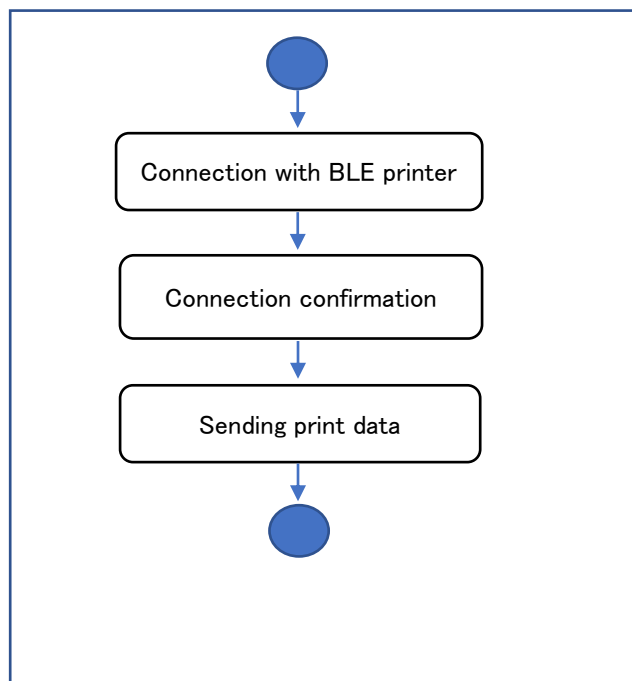
2. SaneiBleLibrary class

The overall configuration using the SaneiBleLibrary class and the process until printing are shown below.

● Overall configuration



● Process up to printing to BLE printer



Sample code image:

```
//BLE open.
ret = api.BleOpen(address,20000);
//Open failure?
if (ret == false)
{
    return;
}

//Connect check
while(!api.ConnectCheck(10)) {
    Sleep(1000);
}

//Printing.
api.BleWrite(text);
```

3. API details

The function list for the SaneiBleLibrary class is as follows:

API	機能
BleOpen	Connect to the BLE printer with the specified BT address.
BleClose	Disconnect from BLE printer.
BleWrite	Send print data, etc. to the BLE printer.
BleRead	Read printer status etc. from BLE printer.
ConnectCheck	Check if the BLE printer is connected.
PowerOn	Turn on the BLE printer.
PowerOff	Turn off the BLE printer.
PowerCheck	Check the power status of the BLE printer.
BatteryCheck	Get the battery level of the BLE printer.

3.1. BleOpen

Connect to the BLE printer with the specified BT address.

Declaration:

```
bool SaneiBleLibrary.BleApi.BleOpen(ulong address, int delay)
```

Argument:

ulong	address	BT Address
int	delay	Time to wait until connecting with BLE

Return value:

true	Normal end
false	Error

Remarks:

The unit of delay is milliseconds.

3.2. BleClose

Disconnect from BLE printer.

Declaration:

```
bool SaneiBleLibrary.BleApi.BleClose()
```

Argument: None

Return value:

true	Normal end
false	Error

Remarks:

Must be connected to BLE.

3.3. BleWrite

Send print data, etc. to the BLE printer.

Declaration:

```
bool SaneiBleLibrary.BleApi.BleWrite(byte[] data)
```

Argument:

byte[]	data	Write data
--------	------	------------

Return value:

true	Normal end
false	Error

Remarks:

Must be connected to BLE.

3.4. BleWrite

Send print data etc. to the BLE printer with a data offset.

Declaration:

```
bool SaneiBleLibrary.BleApi.BleWrite(byte[] data, int off, int length)
```

Argument:

byte[]	data	Write data
int	off	Data offset
int	length	Write size

Return value:

true	Normal end
false	Error

Remarks:

Must be connected to BLE.

3.5. BleRead

Read printer status etc. from BLE printer.

Declaration:

```
bool SaneiBleLibrary.BleApi.BleRead(ref byte[] data)
```

Argument:

byte[]	data	Reading area
--------	------	--------------

Return value:

true	Normal end
false	Error

Remarks:

Must be connected to BLE.

3.6. BleRead

Read printer status etc. from BLE printer with data offset.

Declaration:

```
bool SaneiBleLibrary.BleApi.BleRead(ref byte[] data, int off, int length)
```

Argument:

byte[]	data	Reading area
int	off	Data offset
int	length	Read size

Return value:

true	Normal end
false	Error

Remarks:

Must be connected to BLE.

3.7. ConnectCheck

Check the connection to the BLE printer.

Declaration:

```
bool SaneiBleLibrary.BleApi.ConnectCheck(int count)
```

Argument:

int	count	Number of confirmations
-----	-------	-------------------------

Return value:

true	Normal end
false	Error

Remarks:

There is a 100 millisecond delay for each confirmation.

3.8. PowerOn

Turn on the BLE printer.

Declaration:

```
bool SaneiBleLibrary.BleApi.PowerOn(string name)
```

Argument:

string	name	BT name
--------	------	---------

Return value:

true	Normal end
false	Error

Remarks:

Must be connected to BLE.

The BT name specified in the argument must be the same as the BT name of the target BLE printer.

3.9. PowerOff

Turn off the power to the BLE printer.

Declaration:

```
bool SaneiBleLibrary.BleApi.PowerOff()
```

Argument: None

Return value:

true	Normal end
false	Error

Remarks:

Must be connected to BLE.

3.10. PowerCheck

Check the power status of the BLE printer.

Declaration:

```
bool SaneiBleLibrary.BleApi.PowerCheck(int count)
```

Argument:

int	count	Number of confirmations
-----	-------	-------------------------

Return value:

true	Normal end
false	Error

Remarks:

Must be connected to BLE.

There is a 100 millisecond delay for each confirmation.

3.11. BatteryCheck

Obtain the BLE printer battery level.

Declaration:

```
bool SaneiBleLibrary.BleApi.BatteryCheck(ref int capa)
```

Argument:

int	capa	Battery level
-----	------	---------------

Return value:

true	Normal end
false	Error

Remarks:

Must be connected to BLE.

APPENDIX SAMPLE PROGRAMS

A sample program for printing QR codes is included in the SDK.

Please refer to the usage of API.



Sample application screen

How to run the sample application

1. Launch the sample application.
2. Enter the BT Address.
The BT Address must be 12 hexadecimal digits.
ex: eba792de16c6
3. Click on the "Connect" button.
4. Wait for the BLE icon to appear on the printer display.
5. Click the "Print" button.
6. If the printer operates normally, the following print will appear.



Print image