

Sanei Utility Printer Driver for SDK

User's guide

**MODEL: SK1-41
SK1-31
SK1-21**

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1. Overview of function of SDK

Sanei Utility Printer Driver for SDK is support class library enabled the software control for API.
This is composed of 1 file mentioned below.

Class Library File: UpdSdk.dll

This SDK consists of mainly six functions as follows.

- SDK version getting function.
- RAW data control function.
- Printer status getting function.
- Printer status manager control function.
- Format setting function.
- Macro setting function.

SDK version getting function

Function name	Function
GetApiVersion	Get SDK version

RAW data control function

Function name	Function
WriteRawData	Write RAW data.

Printer status getting function

Function name	Function
GetPrinterStatus	Get printer status.

Printer status manager control function

Function name	Function
EnableLM	Enable printer status manager.
DisableLM	Disable printer status manager.

Format setting function

Function name	Function
GetDriverFormat	Get format setting data.
SetDriverFormat	Set format setting data.

Macro setting function

Function name	Function
GetMacroData	Get macro data.
SetMacroData	Set macro data.

2. SDK version getting function

int	GetApiVersion()
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Function Get SDK version.

Return Version number

Remark If version number is 1.02, the return value is 102.

3. RAW data control function

bool	WriteRawData(string printer, byte[] pBytes, Int32 dwCount)
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Function	Write RAW data into printer.		
	string	printer	Specify printer handle.
	byte[]	pBytes	Input RAW data.
	Int32	dwCount	Input RAW data length (BYTE).
Return	true	Succeeded	
	false	Failed	

4. Printer status getting function

bool	GetPrinterStatus(string printer, ref int status)		
Function	Get printer status		
	string	printer	Specify the name of printer.
	int	status	Printer status is set.
Return	true	Succeeded	
	false	Failed	
Remark	Refer the chapter “About define” as for the details of status variable.		

5. Printer status manager control function

This control function enables or disables function of printer status manager. Default setting is ENABLED.

Function of printer status manager is monitoring printer error status (as 'no paper') on a PC.

Please see a document "Sanei Utility Printer Driver for Windows, section 4 Status monitor".

If interactive communication between PC and printer by user is driven independently, this function has to be stopped because the communication cannot work.

bool	EnableLM()
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Function Enable printer status manager.

Return	true	Succeeded
	false	Failed

bool	DisableLM()
-------------	--------------------

Function Disable printer status manager.

Return	true	Succeeded
	true	Error occurred

6. Format setting function

This function controls the format setting into the property with SaneiUtilityPrinterDriver. The structure of format is written in Class Library and it is mentioned as follows.

```
public struct UpdDriverFormat
{
    public int    Initialize;        // Initialize
    public int    PaperWidth;        // Paper width
    public int    Density;           // Density
    public int    PaperSetting;      // Paper settings
    public int    ReversePrint;      // Reverse printing
    public int    Compress;          // Compressed printing
    public int    WaterMark;         // Water mark printing
    public int    E_journal;         // Electronic journal
    public int    Autores;           // Auto status response output
    public int    First;             // Logo head printing
    public int    Remote;            // Remote function
    public int    Mail;              // Mail function
    public int    Timeout;           // Time out of retracting function
    public int    Mode;              // Presenter operation mode
}
```

bool	GetDriverFormat(string printer,ref UpdDriverFormat df)
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Function	Get format data and put into the structure.
	string printer Specify the name of printer.
	UpdDriverFormat df Format information is set.
Return	true Succeeded
	false Failed
Remark	Refer the chapter "About define" as for the details of df member.

bool	SetDriverFormat(string printer,ref UpdDriverFormat df)
-------------	---

Function	Set format data of structure.
	string printer Specify the name of printer.
	UpdDriverFormat df Format information is set.
Return	true Succeeded
	false Failed
Remark	Refer the chapter "About define" as for the details of df member.

7. Macro setting function

This function controls the macro setting into the property with SaneiUtilityPrinterDriver.
Component of macro data is described as follows:

n	Macro function
---	----------------

Parameter (16 bits)

Macro function (16 bits)

- 0 - Feed
- 1 - Back feed
- 2 - Full cut
- 3 - Partial cut
- 4 - Mark detection
- 5 - Mark redetection
- 6 - Illumination pattern of LED Bezel
- 7 - Logo printing

Macro function	'n' range	Function
0 - Feed	0 to 255	Feed n dots length.
1 - Back feed	0 to 255	Back feed n dots length.
2 - Full cut	0	Execute full cut
3 - Partial cut	0	Execute partial cut
4 - Mark detection	0	Detect mark in next page.
5 - Mark redetection	0	Redetect mark in temporary page.
6 - Pattern of LED Bezel	0 to 3	Set illumination pattern of LED.
7 - Logo Printing	1 to 8	Print registered image pattern as a logo.

bool **GetMacroData(string printer,int type,ref int num,ref int[] data)**

Function Get macro data

string	printer	Specify the name of printer.
int	type	Input an event to execute macro.
		0 – Start document
		1 – Finish document
		2 – Start job
		3 – Finish job
int	num	Size of macro data is set.
int[]	data	Macro data is set.

Return	true	Succeeded
	false	Failed

bool SetMacroData(string printer,int type,int num,int[] data)			
Function	Set macro data		
	string	printer	Specify the name of printer.
	int	type	Input an event to execute macro.
			0 – Start document
			1 – Finish document
			2 – Start job
			3 – Finish job
	int	num	Size of macro data is set.
	int[]	data	Macro data is set.
Return	true	Succeeded	
	false	Failed	

8. About define

Description of define class stored in Class library is mentioned as follows.

Printer status

Name	Meanings
UPD_STATUS_NORMAL	normal
UPD_STATUS_DOOR_OPEN	Cover open
UPD_STATUS_PAPER_END	No paper
UPD_STATUS_NEAR_END	Nearly-end paper
UPD_STATUS_PAPER_FULL	Paper remains bezel or pressenter
UPD_STATUS_OTHER_ERR	Others (Temperature, Cutter, voltage error, etc)
UPD_STATUS_PAPER_JAM	Paper course out

Enabling or Disabling function

Name	Meanings
UPD_DISABLE	Disable function
UPD_ENABLE	Enable function

Paper width

Name	Meanings
UPD_PAPER_58	Paper width: 58mm
UPD_PAPER_60	Paper width: 60mm
UPD_PAPER_80	Paper width: 80mm
UPD_PAPER_83	Paper width: 83mm
UPD_PAPER_112	Paper width: 112mm

Printing density

Name	Meanings
UPD_DENSITY_60	Density: 60%
UPD_DENSITY_80	Density: 80%
UPD_DENSITY_100	Density: 100%
UPD_DENSITY_120	Density: 120%
UPD_DENSITY_140	Density: 140%
UPD_DENSITY_160	Density: 160%

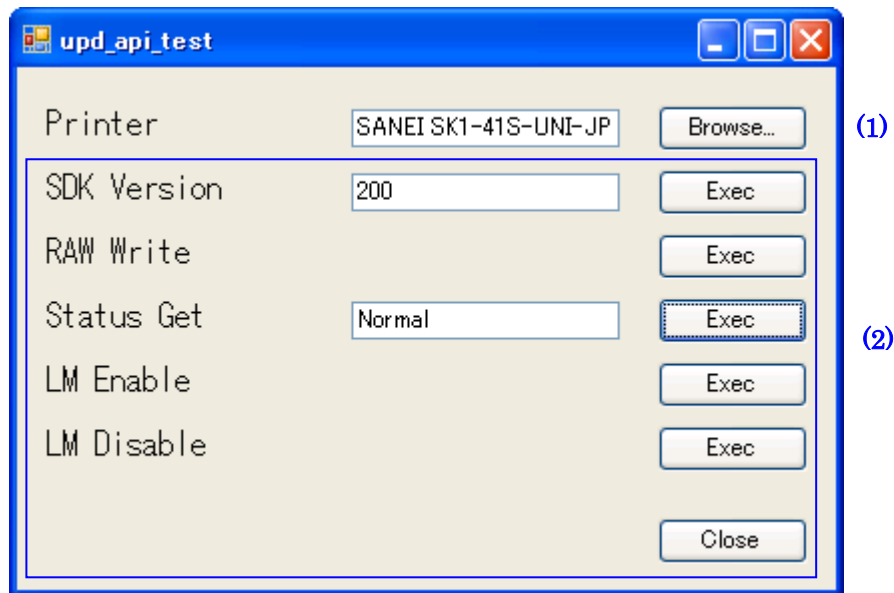
Macro definition

Name	Meanings
MACRO_MAX	Maximum number of registering macro
UPD_MACRO_FEED	Macro to feed
UPD_MACRO_BACKFEED	Macro to back feed
UPD_MACRO_FULLCUT	Macro to full cut
UPD_MACRO_PARTIALCUT	Macro to partial cut
UPD_MACRO_DETECTION	Macro to detect mark in next page
UPD_MACRO_REDETECTION	Macro to redetect mark in temporary page
UPD_MACRO_LEDBEZEL	Macro to set illumination pattern of LED bezel
UPD_MACRO_LOGOPRINT	Macro to print registered image pattern as a logo.

9. Sample program

Sample programs are designed on Visual C#. Application is able to start through the build of project or Clicking icon. Program is recalled API using api in Class Library.

Sample application 1: upd_api_test



(1) Select a printer adapted to SaneiUtilityPrinterDriver through clicking Browse (1) button at first.

(2) Function

SDK Version: Display version by Exec button.

Raw Write: Send test print command by Exec button.

Status Get: Display status information by Exec button.

LM Enable: Enable printer status manager by Exec button.

LM Disable: Disable printer status manager by Exec button.

Printer

Format Setting

Initialize

PaperWidth

Density

PaperSetting

ReversePrint

Compress

WaterMark

E-journal

AutoResponse

LogoHeadPrint

Remote

Mail

Timeout

Mode

(1) Select a printer adapted to SaneiUtilityPrinterDrivert through clicking Browse (1) button at first.

(2) Function

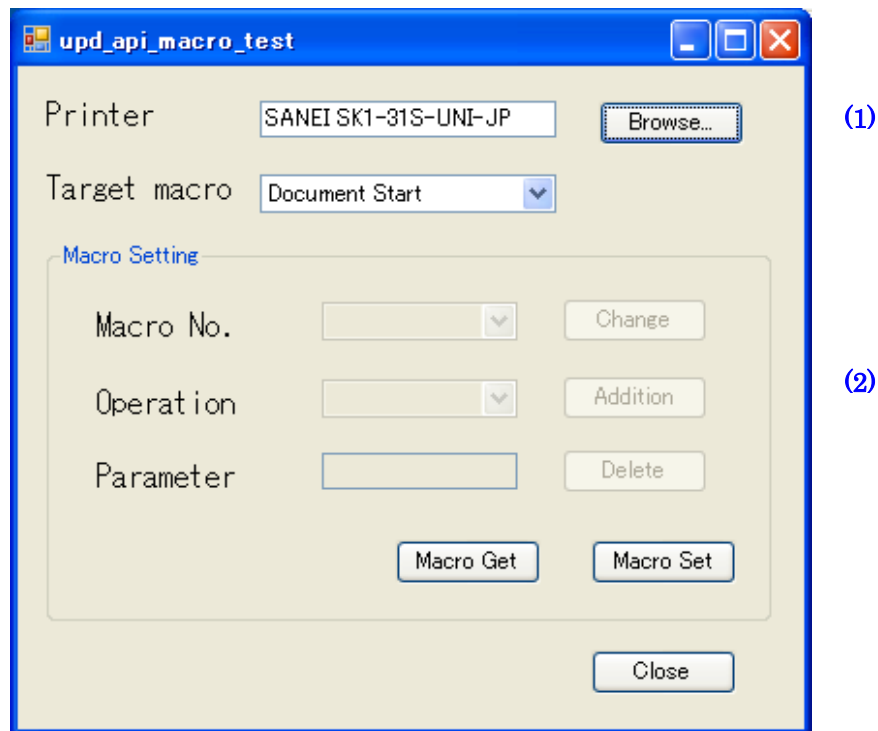
Getting Format: Read and display temporary format by click.

Setting Format: Set format by clicking.

Initialize:	Set enable or disable initialize.
PaperWidth:	Set paper width. (0: 58mm, 1: 60mm, 2: 80mm 3: 83mm 4: 112mm)
Density:	Set density. (0 to 5: 60 to 160%)
PaperSetting:	Set paper length. (0: Flexible length, 1: Fixed length)
ReversePrint:	Set reverse printing. (0: Disable, 1: Enable)
Compress:	Set compressed communication. (0: Disable, 1: Enable)
WaterMark:	Set water mark printing. (0: Disable, 1: Enable)
E-journal:	Set electronic journal. (0: Disable, 1: Enable)
Autores:	Set Auto status response command output.(0: Disable, 1: Enable)

LogoHeadPrint: Set function for printing logo at first.(0: Disable, 1-8: Registered image pattern)
Remote: Set function of remote control. (0: Disable, 1: Enable)
Mail: Set function of mail(0: Disable, 1: Enable)
Timeout: Set the time of "Time Out" for retract function of presenter.(0-61)
Mode: Set presenter operation mode.
(0:DEFAULT 1:CLAMP/RETRACT 2:CLAMP/EJECT
3:CLAMP ONLY 4:CONTINUOUS)

Sample application 3: upd_api_macro_test



(1) Select a printer adapted to SaneiUtilityPrinterDrivert through clicking Browse (1) button at first.

(2) Function

Target macro:	Select a target document.
Macro Get:	Read macro data.
Macro Set:	Write macro data.

Macro No.:	Macro number
Operation:	Macro commands
Parameter:	Parameter

Change:	Change contents of macro number temporarily.
Addition:	Add macro commands and parameters.
Delete:	Delete macro number.