



DPU-S Series Printer Driver Operations Manual

Target Devices

- ◆ DPU-S245-00A-E
- ◆ DPU-S245-01A-E
- ◆ DPU-S445-00A-E
- ◆ DPU-S445-01A-E

Target Printer Drivers

- ◆ SII DPU-S245
- ◆ SII DPU-S445
- ◆ SII DPU-S445 Reduce

Seiko Instruments Inc.

Copyright © Seiko Instruments Inc. 2008-2010

All rights reserved.

The information contained herein is subject to change without notice.
Seiko Instruments shall not be liable for any damage or losses incurred by the use
of this manual or the products described in this manual, or cost to recover damage
or loss.

SII  is a registered trademark of Seiko Instruments Inc.

Microsoft and Windows is a registered trademark of Microsoft Corporation
in the U.S.A. and other countries.

Table of contents

CHAPTER 1	INTRODUCTION.....	1
1.1	OVERVIEW	1
1.2	OPERATING DESCRIPTION	1
1.3	OPERATING SYSTEM ABBREVIATIONS.....	1
1.4	PRINTER FOLDER REPRESENTATION	1
1.5	OTHER REPRESENTATIONS	2
1.6	SYSTEM REQUIREMENTS	2
CHAPTER 2	INSTALLATION.....	3
2.1	OVERVIEW	3
2.2	DRIVER MODEL	3
2.3	STARTING THE INSTALLATION PROGRAM	3
2.4	STANDARD INSTALL (SERIAL CONNECTIONS).....	4
2.5	PLUG AND PLAY INSTALL (USB CONNECTION)	4
2.6	NOTES	5
CHAPTER 3	PRINTING PREFERENCES	6
3.1	OVERVIEW	6
3.2	PRINTING PREFERENCES WINDOW	6
3.3	ADVANCED OPTIONS.....	6
CHAPTER 4	SETTING PROPERTIES.....	8
4.1	OVERVIEW	8
4.2	PROPERTIES WINDOW	8
4.3	NOTES	8
CHAPTER 5	PAPER SETUP	9
5.1	OVERVIEW	9
5.2	DRIVER MODELS AND PAPER SIZES	9
5.3	MARGIN SIZES.....	9
5.4	HOW TO ADD CUSTOM PAPER SIZE	10
5.5	NOTES	10
CHAPTER 6	COMMUNICATION LIBRARY	11
6.1	OVERVIEW	11
6.2	FUNCTIONS	12
6.3	PRINTER STATUS DATA	21
6.4	RETURN VALUES (ERROR CODES).....	22
6.5	SAMPLE PROGRAM	23
6.6	NOTES	23
CHAPTER 7	OTHER NOTES	24
CHAPTER 8	DISCLAIMER	25
CHAPTER 9	REVISION HISTORY	26

Chapter 1 Introduction

1.1 Overview

This document provides the specifications, functions, and operating instructions of software for Microsoft Windows provided by Seiko Instruments Inc. (hereinafter referred to as “SII”) for SII thermal printers.

1.2 Operating Description

Operating instructions and screenshots described in this document are explained assuming that the operating system uses standard settings during the installation. The operating instructions and screenshots may be different if the operating system settings have been changed.

1.3 Operating System Abbreviations

Operating systems described in this document use the following abbreviations:

- Microsoft Windows => Windows
- Microsoft Windows 7 => Windows 7
- Microsoft Windows Vista => Windows Vista
- Microsoft Windows XP => Windows XP

1.4 Printer Folder Representation

[The printer folder] described in this document means the folder displayed for the following operations:

For Windows 7

[Start] => [Devices and Printers] folder

For Windows Vista

[Start] => [Control Panel] => [Hardware and Sound] => [Printer] => [Printers] folder

For Windows XP

[Start] => [Control Panel] => [Printers and Faxes] => [Printers and Faxes] folder

1.5 Other Representations

The terms below used in this document have the following meanings:

- **Printer Technical Reference** => [DPU-Sx45 SERIES THERMAL PRINTER TECHNICAL REFERENCE]
- **Auto Status Response** => A status data retrieved by executing a command of SII thermal printer [Automatic Status Response].

1.6 System Requirements

System requirements for the printer driver are as follows:

Item	Specifications
Supported Host Computer	PC-AT Compatible Machines (DOS/V Machines)
Supported Operating Systems	■ Windows XP ■ Windows Vista ■ Windows 7 (Only 32-bit operating systems are supported.)
Communication Methods	■ USB Communication ■ Serial Communication (RS-232C) The communication by a virtual COM port on the Bluetooth connection is not supported.

For settings of printer side, refer to the “Appendix D Condition of Function Settings”.

Chapter 2 Installation

2.1 Overview

The following describes the procedure to install the printer driver.
To install the printer driver, log on to the computer with administrator privileges.

2.2 Driver Model

For appropriate printer driver types, refer to the “Appendix A Driver Model”.

2.3 Starting the Installation program

In the case of USB connection, please do NOT connect a cable to a printer until there are directions of connection permission.

Starting the installation program (InstDrv.exe).

Choose the installation type according to the connection port.

- In case of install printer driver, select [Install or Setup].
- In case of USB connection, select [Uses usb port.] and **proceed to “2.5 Plug and Play Install (USB connection)”**
- In case of serial connections, select [Uses serial port.].
- In case of update the printer driver, select [Update],
- If select [Uninstall], the printer drivers will be deleted.

The next operation of installation is different by interface type.

2.4 Standard Install (Serial connections)

2.4.1 Specify printer model

A screen to specify a driver model name and a port name is displayed.

Choose driver model and ports.

Driver will be installed.

2.4.2 Completion of the installation

With the above installation is completion.

Display the printer folder, and confirm that a printer is registered definitely.

2.5 Plug and Play Install (USB connection)

The case of USB connection, printer driver will be installed by the Plug and Play installation.

2.5.1 Message of cable connecting

If the message of cable connecting is shown, connect printer with the USB cable.

2.5.2 Completion of the installation by plug and play

For Windows 7

When the printer is recognized, printer driver will be installed by Plug and Play automatically.

For Windows Vista

1. Select [Finish installing software (recommended)] in the [Device Software Installation]
2. Click [Continue] in the [User Account Control] window.

For Windows XP

1. When the printer is recognized, the host will display the [Found New Hardware Wizard] window.
2. Select [No, not this time] and then click [Next>].
3. Select [Install the software automatically (Recommended)] and then click [Next>].

Display the printer folder, and confirm that a printer is registered definitely.

2.6 Notes

- For serial communication, match the printer's serial communication settings with the host settings. Please refer to "Chapter 4 Setting Properties" or instructions on how to configure those settings.
- When the printer is connected to a different USB port on the computer, the host will recognize it as another printer, and again require for printer driver installation. When reconnecting the USB cable after installation, reconnect it to the same USB port that was connected during installation.
- For second or subsequent installations, you may be asked where the printer driver files are located again. Specify the location of the printer driver files again.
- The [Windows Security] or [Windows Logo Test] warning may be displayed during installation, but proceed with the installation.



Warning dialog in Windows 7



Warning dialog in Windows XP

Chapter 3 Printing Preferences

3.1 Overview

Settings for paper size and printing control can be set from the [Printing Preferences] window.

3.2 Printing Preferences Window

To display the [Printing Preferences] window, follow the steps below.

1. Right-click a printer icon in the printer folder to display the sub-menu.
2. Click [Printing Preferences...] from a displayed sub-menu.

3.3 Advanced Options

Detailed printing preferences can be changed from the [Advanced Options] window.

To display the [Advanced Options] window, follow the steps below.

1. Display [3.2 Printing Preferences Window] -mentioned [Printing Preferences] window.
2. Click [Advanced...] in the lower right of the [Printing Preferences] window to display the [Advanced Options] window.

3.3.1 Paper Size

Select the paper size to use for printing.

New paper sizes can be added from the [Print Server Properties].

For more details, refer to “5.4 How to Add Custom Paper Size”.

3.3.2 Print Density

Select the print density level.

3.3.3 Form Discharge

Select the form discharge operation after printing.

- Enable : Form is discharged to for length of selected paper.
- Disable : Form is not discharged after printing regardless of the selected paper length.

* When using marked paper, be sure to select [Disable].

3.3.4 Print Mode

Select the print processing mode (Page mode Priority and Standard mode).

- Page Mode Priority : A paper size that can print with the page mode is printed with the page mode. In other cases, printed with standard mode.
- Standard Mode : Print operation is conducted only in Standard mode.

* For the reduce-type model, Page mode is always used. Item of print mode is not displayed




3.3.5 Function Settings

Function settings stored in printer memory can be displayed or changed.

Please operate this function in the condition that the printer is ready for printing.

For more details about function settings, refer to **Printer Technical Reference**.

Concrete instructions for changing the function settings are as follows:

1. Click [Function Settings] => [Setup...] to display the current function settings.
2. Double-clicking the displayed item enters the edit mode.
3. After completing the setting change, click [Apply] to write the settings to the printer.
4. If you want to save the current settings on the list to a file, click .
5. If you want to restore the saved data from the file in which the settings were saved, click .
6. If you want to exit, click the  button.

Chapter 4 Setting Properties

4.1 Overview

Printer driver settings can be set from the [Properties] window.

4.2 Properties Window

To display the [Properties] window, follow the steps below.

1. Right-click a printer icon in the printer folder to display the sub-menu.
2. Click [Properties] from a displayed the sub-menu.
(In case of Windows 7, select [Printer properties].)

4.3 Notes

The following explains of each seat of the printer driver setting-related notes.

4.3.1 Ports Tab

- Select the [Enable bidirectional support] check box.
- When using the serial port, clicking [Configure Port...] will display the COM Properties window.
Configure the settings in accordance with the printer's communication settings.

4.3.2 Security Tab

- Users denied access privileges in [Print] disables the printing function.
- Users denied access privileges in [Manage Printers] cannot use some functions using bidirectional communication.
But, this tab is not displayed by default in Windows XP standard display setting.
Only for Professional Edition in Windows XP, the following operation can change to displayed setting.
[Printers and Faxes] => [Tools] => [Folder Options...] => [View] => [Use simple file sharing (Recommended)] exclude a check.

Chapter 5 Paper Setup

5.1 Overview

The following explains the paper supported by the printer driver.

There are two types of usable paper sizes: the default size automatically installed (hereinafter referred to as “Standard paper size”) and sizes that users can add (hereinafter referred to as “Custom paper size”).

To add custom paper size, refer to “5.4 How to Add Custom Paper Size”.

5.2 Driver Models and Paper Sizes

Usable paper sizes vary depending on each Driver Model.

About usable paper sizes in each Driver Model, refer to “Appendix B Paper” – “(1) Paper Sizes”.

5.3 Margin Sizes

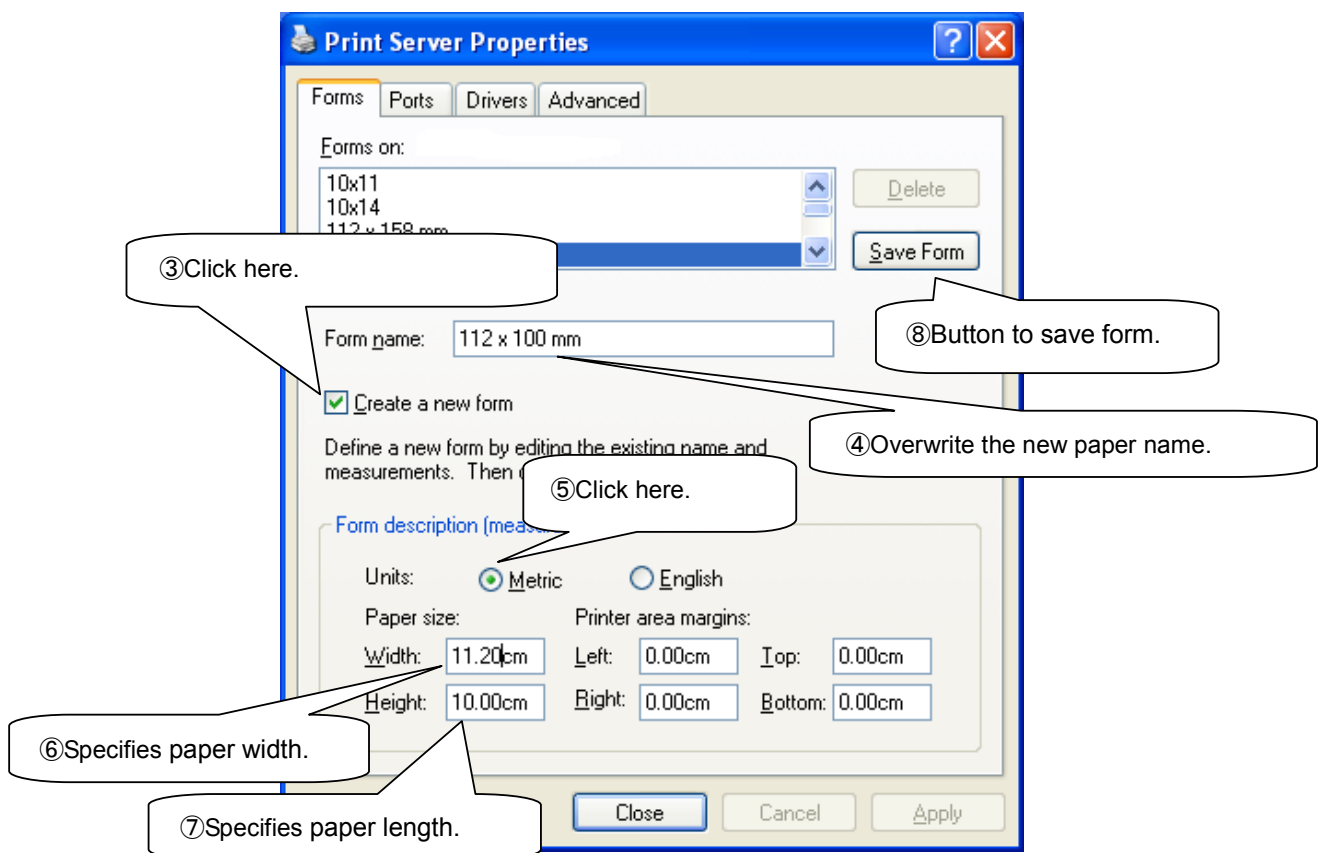
The print margin is set for the paper when printing. Margin sizes may be different between the computer screen and the paper. For details about the print margin, refer to “Appendix B Paper” – “(2) Margin Sizes”.

A larger paper width than the actual paper size available for the printer such as “A4” and “Letter” can be selected, but large margins are shown to the right and left on the computer (screen).

5.4 How to Add Custom Paper Size

The following explains the procedure for adding a custom paper size.

- ① Click [Server Properties] from the [File] menu of the printer folder.
(Only Windows XP and Windows Vista.).
- ② Display the [Forms] tab in the [Print Server Properties] window.
- ③ Click the [Create a new form] check box.
- ④ Overwrite the custom paper size name in the [Form name] field over the standard paper size name.
- ⑤ Click the [Metric] radio button.
- ⑥ Specifies the width for the custom paper size in the [Width] field of the [Form description (measurements)].
- ⑦ Specifies the length for the custom paper size in the [Height] field of the [Form description (measurements)].
- ⑧ Finally, click [Save Form] to complete the procedure for adding a custom paper size.



5.5 Notes

- The printable area is different from the paper size.
- If the paper size is set with margins of "0" the fixed margin size is used.
- Be sure to use [Metric] for [Units] in the [Form description (measurements)].
- Of the paper sizes listed in the [Forms] tab, those that correspond to the sizes specified in the "Appendix B Paper" – "(1) Paper Sizes" will be available for the printer driver.
- In case of Windows 7, to display the [Server Properties] window, follow the steps below.
 1. Click the intended printer icon in the printer folder.
 2. Click [Print server properties] displayed to toolbar in the printer folder upper part.

Chapter 6 Communication Library

For using Communication Library, some setting condition of the function setting must be set to the specified values. Refer to the “Appendix D Condition of Function Settings”.

6.1 Overview

The printer driver has a dynamic link library (hereinafter referred to as "DLL") for developers to control the printer directly.

6.1.1 Functions

DLL provides the following functions for application software to be developed.

- Transmitting data to the printer
- Receiving data from the printer
- Executing a printer reset

DLL is installed together with the printer driver and functions with the driver.

DLL can control the printer directly and makes the software development independent of the port type possible.

6.1.2 Library File

DLL file name is as follows:

SII_DPUS_API.DLL (A legacy file name [SII_DPUS445_API.DLL] can be used.)

6.1.3 File Storage Location

The DLL file is installed in the system folder of Windows.

Except in special circumstances, you do not have to set the path to the folder where the DLL file is stored.

[DLL Installed folder]

%WINDIR%\System32

%WINDIR% means a Windows folder (e.g., c:\Windows).

6.2 Functions

6.2.1 List of DLL Functions

The following explains the functions of the DLL files.
For more details, refer to the attached sample program.

Function Name	Function Overview
OpenSiiPrinterA OpenSiiPrinterW	Create a printer object and retrieve ID
CloseSiiPrinter	Close the printer object and disable ID
GetSiiPrinterAutoStatus	Retrieve <i>Auto Status Response</i>
SetSiiPrinterCallbackStatus	Set the callback function that will be called by change of <i>Auto Status Response</i>
SetSiiPrinterData	Send data to the printer
GetSiiPrinterDataA GetSiiPrinterDataW	Retrieve response data from the printer
SetSiiPrinterReset	Hardware reset the printer

- **About the function name which have the parameter of string style.**

A suffix of “W” or “A” for some function names means that the function name needed to be called varies depending on whether to use MBCS (multi-byte code) or Unicode as an parameter to be set with strings. For example, to call OpenSiiPrinter function, use OpenSiiPrinterA for MBCS and OpenSiiPrinterW for Unicode.

Please note that a suffix of “W” or “A” is omitted in the following function explanations.

6.2.2 Details of DLL Functions

The following is detailed specification of each function.

Common Specifications of All Functions

Return value

Returns an error code ($\neq 0$) for any failure of the function and Zero ($= 0$) in case of success.

Remarks

For the error code, refer to “6.4 Return Values (Error Codes)”.

OpenSiiPrinter

Creates a printer object and retrieves ID.

DWORD **OpenSiiPrinter** (
 LPCTSTR *pszName*,
 LPDWORD *pdwSessionId*)

Parameters

pszName

Pointer to a null terminated string that specifies the name of the printer.

pdwSessionId

Pointer to a variable that receives ID to the specified.

Remarks

If the ID obtained from this function is not in use, close ID by calling the **CloseSiiPrinter** function.

The function will succeed regardless of the connection state between the printer and the computer.

If the connection destination of the printer driver is an unsupported port, the function will fail.

CloseSiiPrinter

Closes the printer object and disables ID.

DWORD **CloseSiiPrinter** (
 DWORD *dwSessionId*)

Parameters

dwSessionId

ID retrieved with the **OpenSiiPrinter** function.

Remarks

ID of the printer object is disabled.

Auto Status Response monitoring with the **SetSiiPrinterCallbackStatus** function is stopped.

GetSiiPrinterAutoStatus

Retrieves a current ***Auto Status Response***.

DWORD GetSiiPrinterAutoStatus (
 DWORD *dwSessionId* ,
 LPDWORD *pdwStatus*)

Parameters

dwSessionId

ID retrieved with the **OpenSiiPrinter** function.

pdwStatus

Pointer to a variable to receives ***Auto Status Response***.

Remarks

This function retrieves current ***Auto Status Response***.

Detecting disconnection with printer retrieves 0 as the current ***Auto Status Response***.

For more details about the data of ***Auto Status Response*** that can be retrieved, refer to “6.3 Printer Status Data”.

SetSiiPrinterCallbackStatus

Sets the callback function that is called by change in **Auto Status Response**.

```
DWORD SetSiiPrinterCallbackStatus (  
    DWORD dwSessionId,  
    INT (CALLBACK EXPORT *lpfnCallBackStatus) (DWORD dwStatus ))
```

Parameters

dwSessionId

ID retrieved with the **OpenSiiPrinter** function.

lpfnCallBackStatus

Function pointer of the callback function.

dwStatus

A variable to receive **Auto Status Response** with the callback function.

Remarks

If there is a change of **Auto Status Response** then the registered callback function is called.

This function is stop calling with callback by calling the **CloseSiiPrinter** function or **GetSiiPrinterAutoStatus** function.

At first, the callback-function registered by this function will be only once called with the current **Auto Status Response**.

For more details about **Auto Status Response** returned by this function, refer to “6.3 Printer Status Data”.

Even when receiving **Auto Status Response** from the printer if no difference with **Auto Status Response** is found then callback function is not called.

If there is a change of connection state with the printer then the callback function is called.

The detection of disconnection returns 0 as the current **Auto Status Response**. And the detection of re-connection returns the actual **Auto Status Response**.

Synchronization between **Auto Status Response** change and function call timing is not assured.

If calling this function again in a state where the callback function has already been registered using this function, previously registered function information will be disabled. If specifying null to *lpfnCallBackStatus*, **Auto Status Response** monitoring will be interrupted.

The return value of the callback function is ignored.

SetSiiPrinterData

Writes data to the printer.

DWORD SetSiiPrinterData (
 DWORD *dwSessionId*,
 LPBYTE *pCmd*,
 DWORD *cbCmd*,
 LPDWORD *pcWritten*)

Parameters

dwSessionId

ID retrieved with the **OpenSiiPrinter** function.

pCmd

Pointer to an array that stores printer data.

cbCmd

Specifies the array size in bytes.

pcWritten

Pointer to a variable that receives the number of bytes of data that were written to the printer. If it is not necessary, null can be specified.

Remarks

The control of the function is not returned until the end of transmission or timeout.

The timeout for all ports is set to a time which is specified as timeout of the system (LPT port). Timeout of a system (LPT port) is set by the following.

1. Select the printer port (LPTx) from the port sheet in the property dialog explained in "Chapter 4 Setting Properties".
2. A value of timeout is shown by clicking [Configure port...] button, and input new value of timeout.

or

1. A value of timeout is able to change by editing a value of "TransmissionRetryTimeout" existing in the HKEY_LOCAL_MACHINE folder on registry by using registry editor (regedit.exe).

Be careful that target port is not changed by this operation.

The value of timeout can not be set less than 5 second.

The measuring of timeout becomes effective from the stopped state of data transmission.

Actual timeout may be longer than specified time.

To validate setting must restart your computer.

If a command to disable **Auto Status Response** is included in data to be output, the subsequent **Auto Status Response** may not be retrieved properly.

When the data is sent by multiple times, the command for **Auto Status Response** may interrupt in between each data blocks. In particular, when it outputs data (ex. image data) that the interrupt of other data is not forgiven on the way, please output all data by one time.

If the data size written to the printer is not same to the sizes specified by *cbCmd*, then this function will work as the following.

- If *pcWritten* set null, this function returns an error code.
- In other cases, the data size written is set in the variable specified by *pcWritten*, and this function returns a success code.

GetSiiPrinterData

Retrieves response data from the printer.

```
DWORD GetSiiPrinterData (  
    DWORD dwSessionId,  
    LPTSTR pValueName,  
    LPBYTE pData,  
    DWORD cbData,  
    LPDWORD pcbNeeded)
```

Parameters

dwSessionId

ID retrieved with the **OpenSiiPrinter** function.

pValueName

Response command string that identifies data to be retrieved.

pData

Pointer to a variable that stores response data.

cbData

Number of data bytes that indicates the array size.

pcbNeeded

Pointer to a variable that receives a necessary buffer size or the number of actually received bytes.

Remarks

This function retrieves a command response data from the printer by specifying to *pValueName* a command string listed in “Appendix C Response Command String”. For command response, refer to **Printer Technical Reference**.

If you want to retrieve the response data size, calling the function while setting “0” to *cbData* stores the size to a variable specified by *pcbNeeded*. If there is no data to be returned, zero is stored.

Specifying “GET_RAW_DATA_AUTO_STATUS” to *pValueName* retrieves the history of **Auto Status Response**. If the retrieved **Auto Status Response** is same as last **Auto Status Response** then it will be ignored. And if disconnection is detected, **Auto Status Response** is retrieved as all zero.

Specifying “GET_RAW_DATA_EXEC_RESP” to *pValueName* retrieves the history of execution command response (hereinafter called “**Execution Response**”) that was output by **SetSiiPrinterData** function.

Specifying “GET_RAW_DATA_CMD_RESP” to *pValueName* retrieves the history of general command response that was output by **SetSiiPrinterData** function **excluding Auto Status Response** and **Execution Response**.

Each history data is recorded since the calling of **OpenSiiPrinter** function and held until up to 256 bytes.

Command strings listed in “Appendix C Response Command String” cannot be used for the **GetPrinterData** function, which is Win32API function.

If the function fails (the return value is not “0”), contents of all parameters are undefined.

The function fails by setting command to *pValueName*.

SetSiiPrinterReset

Hardware resets the printer.

DWORD SetSiiPrinterReset (
 DWORD *dwSessionId*)

Parameters

dwSessionId

ID retrieved with the **OpenSiiPrinter** function.

Remarks

A success of hardware-reset generates a waiting time of about 500 ms.

This hardware resets using communication lines (without using commands).

Reset using communication lines needs to be enabled in printer function settings.
For more details about printer function settings, refer to ***Printer Technical Reference***.

6.3 Printer Status Data

The following indicates the contents of the data of **Auto Status Response** that is retrieved by the DLL functions.

6.3.1 Overview

- **Auto Status Response** can also be retrieved with the **GetSiiPrinterAutoStatus** function, **SetSiiPrinterCallbackStatus** function and **GetSiiPrinterData** function.
For more details, refer to each function's section.
- **Auto Status Response** is stored to the variable specified by (p)dwStatus which is the parameter of the above function.
- The content of **Auto Status Response** is included up to the identifier bits stored from lowest byte (0-7 bit) of variable.
- If the printer is disconnected, then **Auto Status Response** is expressed as all bits including identifier are 0.

6.3.2 Notes

- Outputting a command that disables a response feature of **Auto Status Response** with the **SetSiiPrinterData** function may result in failure to return **Auto Status Response** properly.
- When the flow control of the serial connection is set to hardware, operation with the DSR terminal fixed to the Mark side is not supported.
- Communication failure with the printer or communication error occurrence may also result in the "disconnect state".
- If the DSR terminal and DTR terminal work together in the case of serial connection, cable disconnection is detected as the "disconnect state" but printer power-off is not.
- Even when the flow control of the serial connection is set to software, connect using a dedicated cable or a cable supporting 9-pin terminals introduced in [Serial Interface Connector Pin Assignment] of **Printer Technical Reference**. Otherwise some of the functions may not operate properly because a serial cable cannot detect the connection state unless at least TXD, RXD, DTR, and DSR terminals are connected to the host and the printer.
- For more details about [Automatic Status Response] printer command, refer to **Printer Technical Reference**.

6.4 Return Values (Error Codes)

If the function succeeds, the return value is Zero (ERROR_SUCCESS). If the function fails, the return value is an error code. The error code is based on the Windows system error code.

For Windows error codes, refer to Microsoft documents (such as SDK System Error Codes).

The error content may be vague or unclear because of using the common codes (Windows error codes). To complement this, the following indicates error names (error codes) and probable causes.

Principal Windows System Error Codes and Probable Causes

Error Name (Error Code)	Probable Causes
ERROR_ACCESS_DENIED(5)	[Deny] is selected in [Print] or [Manage Printers] on the Security tab.
ERROR_BAD_ENVIRONMENT(10)	The DLL version does not match the printer driver.
ERROR_SHARING_VIOLATION(32)	A printer driver module for another model is operating the port.
ERROR_BUSY(170)	The printer is busy.
ERROR_DEVICE_NOT_CONNECTED(1167)	■ The printer is disconnected. ■ The printer is powered off.
ERROR_UNKNOWN_PORT(1796)	An unknown port is specified.
ERROR_UNKNOWN_PRINTER_DRIVER(1797)	An unknown printer driver is specified.
ERROR_INVALID_PRINTER_STATE(1906)	■ The printer driver is in offline state. ■ Bidirectional support is invalid.
ERROR_DEVICE_NOT_AVAILABLE(4319)	■ The printer is in busy state. ■ Communication is impossible.

6.5 Sample Program

6.5.1 Overview

The sample program as a reference when using DLL for application (Visual C++ version 6.0) is attached.

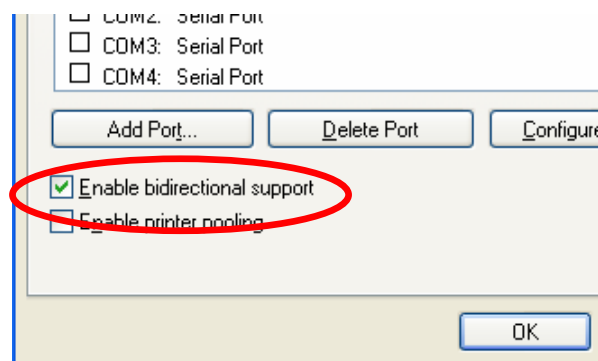
6.5.2 Notes

- SII does not warrant that the sample program is error free nor does SII provide technical support for the program.
- The sample program may be changed without notice.

6.6 Notes

- The circuit assumes that SII products/interface boards are used or the recommended circuit state is kept. Usage for other circuits is not supported.
- All DLL functions are only available for local connection. Network connection via shared printers is not supported.
- When resetting the printer using DLL functions or reset command output, take enough time for the next data output process so that the printer reset is completed. Data output during the reset process may cause data errors.
- If sending the command data which are for the hardware-reset or the invalidation of **Auto Status Response** by the **SetSiiPrinterData** function, then the functions for **Auto Status Response** may be invalidated.
- Using DLL is only available when the bidirectional support is enabled.
To confirm the validity of the bidirectional support, check whether [Enable bidirectional support] is selected at the bottom of the [Ports] tab as explained in “Chapter 4 Setting Properties”.

[Setting Properties] – Bottom of the [Ports] tab



Chapter 7 Other Notes

- Due to the printer mechanism, the actual length of Form Discharge from the printer may be slightly different from the specified Paper Size.
- Printing functions using network connection via shared printers are also supported. However, the features of bidirectional communication (DLL) are only supported for locally connected printers.
- Test print by clicking [Print Test Page] on the [General] tab of the [Properties] window explained in “Chapter 4 Setting Properties” will not properly image a printout on paper for compact printers, but it does not indicate a defect.
- The printer driver does not support printing with the fonts on the printer.
- Printer information retrieved by Windows features, such as the status member of PRINTER_INFO_X structure defined by the Windows Platform SDK, is not supported.
- Do not install other printer drivers to the same port.
- In case of serial connection, match the printer's serial communication settings with the host settings. About the change method, clicking and setting the [Configure Port] after selecting the "COMx : Serial Port" on the [Port] tab of the [Properties] window explained in “Chapter 4 Setting Properties”.
- In case of serial connection, the communication speed of 115200 bps is recommended. Other speed settings may cause unstable print speed and the decline of the quality. As other communication settings, set the bit length to “8 bits” and the flow control to “hardware”.

Chapter 8 Disclaimer

SII has carefully designed this software to ensure that it is trouble-free. However, SII is not liable for any damage or loss caused by or related to the use of this software.

Chapter 9 Revision History

Rev 0 Apr 2008

- ◆ First Edition.

Rev 1 May 2008

- ◆ Modified some formats.

Rev 2 Sep 2008

- ◆ Added a remark to [**SetSiiPrinterData**] in the [6.2.2 Details of DLL Functions].
- ◆ Modified some formats.

Rev 3 Feb 2009

- ◆ Expanded the input range of the custom paper size.
- ◆ Unification of the term (paper name etc).
- ◆ Added a DPU-S245 model.
- ◆ Added a condition of function settings.
- ◆ Correction of errors in this document.

Rev 4 Mar 2009

- ◆ Added a item for condition of function settings on appendix D.

Rev 5 Sep 2009

- ◆ Changed a DLL file name.

Rev 6 Oct 2009

- ◆ Correction of writing errors :
A parameter of SetSiiPrinterCallbackStatus function.
wrong) LPDWORD pdwStatus ⇒ correct) DWORD dwStatus

Rev 7 Sep 2010

- ◆ Added supported operating system (Windows 7) .
- ◆ Correction of errors in this document.

Appendix A Driver Model

Driver models supporting the product are listed below.

Select a printer driver according to applications as installation.

List of Driver Models

Product Name	Driver Model	Description
DPU-S245-00A-E DPU-S245-01A-E	SII DPU-S245	<ul style="list-style-type: none">When the reduction print is not used, please choose this driver model.Usable paper size that registered newly (greatest paper length about 3 meters).
DPU-S445-00A-E DPU-S445-01A-E	SII DPU-S445	
DPU-S445-00A-E DPU-S445-01A-E	SII DPU-S445 Reduce	<ul style="list-style-type: none">Reduce to the size of the printer and print paper size of A4/Letter/A5 Rotated/Cut sheet.Print the paper at about 58% reduction ratio. Usable only fixed form (A4/Letter/A5 Rotated/Cut sheet).

- Specifications other than above are common regardless of driver models.

Appendix B Paper

(1) Paper Sizes

Usable paper sizes in each driver model are as follows:

List of Paper Sizes

Driver Model	Paper type	Sizes (Limits)	
SII DPU-S245	Standard paper size	58 × 158 mm 58 × 297 mm A4,A6,Letter	
	Custom paper size	Width	26–58 mm
		Length	30–3276 mm
SII DPU-S445	Standard paper size	112 × 158 mm 112 × 297 mm A4,A6,Letter Cut sheet (112 x 158 mm)	
	Custom paper size	Width	26–112 mm
		Length	30–3276 mm
SII DPU-S445 Reduce	Standard paper size	A4 Letter A5 Rotated Cut sheet (191.2 x 269.8 mm)	

- [Standard paper size] means the paper automatically registered when the printer driver is installed.
- [Custom paper size] means the paper (a size range) that user can be registered newly.
- When using driver model in the case of [DPU-S445 Reduce], can use only [Custom paper size].
- When using driver model in the case of [DPU-Sx45], If selecting a larger paper width than the actual paper size available for printers such as [A4] and [Letter], large margins are shown to the right of the paper on the computer (screen).

(2) Margin Sizes

Print margin sizes on the computer or the printer are as follows:

List of Margin Sizes (unit: mm)

Driver Model	Paper Size	Margin Position	Margin Size	
			Computer Side	Printer Side
SII DPU-S245	All paper	Top Margin	12.5 mm	←
		Bottom Margin	0 mm	←
		Right/Left Margins Total	*1.Paper Width - 48 mm	←
SII DPU-S445	All paper (Except Cut sheet)	Top Margin	12.5 mm	←
		Bottom Margin	0 mm	←
		Right/Left Margins Total	*2.Paper Width - 104 mm	←
	Cut sheet	Top Margin	6 mm	←
		Bottom Margin	15 mm	←
		Right/Left Margins Total	8 mm	←
SII DPU-S445 Reduce	A4 A5 Rotated	Top Margin	21.3 mm	12.5 mm
		Bottom Margin	0 mm	←
		Right/Left Margins Total	32 mm	8 mm
	Letter	Top Margin	21.3 mm	12.5 mm
		Bottom Margin	0 mm	←
		Right/Left Margins Total	38 mm	8 mm
	Cut sheet	Top Margin	10.2 mm	6 mm
		Bottom Margin	25.6 mm	15 mm
		Right/Left Margins Total	13.7 mm	8 mm

*1. The size of the margin at the minimum becomes 5mm.

*2. The size of the margin at the minimum becomes 4mm.

- If the paper size on the computer and the actual size are different, the margin size on the computer is also different from the actual margin size to be output.
- [Computer Side] in [Margin Size] means a margin size for selected paper recognized on the computer.
- [Printer Side] in [Margin Size] means a margin size for paper actually output from the printer.

Appendix C Response Command String

Command strings (*pValueName*) specified as the second parameter of **GetSiiPrinterData** function in DLL are listed below.

For [Printer Command] names, refer to ***Printer Technical Reference***.

List of Command Strings

Supported Command String (<i>pValueName</i>)	Printer Command
GET_RAW_DATA_AUTO_STATUS	History data for <i>Auto Status Response</i>
GET_RAW_DATA_EXEC_RESP	History data for <i>Execution Response</i>
GET_RAW_DATA_CMD_RESP	History data excluding <i>Auto Status Response</i> and <i>Execution Response</i>
AUTO_STATUS_BACK	<i>Auto Status Response</i>
FUNCTION_SET_RESP	Function Setting Response
REMAIN_MEMORY_CAP	Remaining Memory Response
EXT_RAM_CHECKSUM	External RAM Checksum Response
SEND_VP_VOLTAGE	Vp Voltage Response
MAINT_CONT_TRANS_FEED	Maintenance Counter Transmission (Line number of paper feed)
MAINT_CONT_TRANS_HEAD	Maintenance Counter Transmission (Head activation time)
MAINT_CONT_TRANS_DRIVE	Maintenance Counter Transmission (Product drive time)
MAINT_CONT_TRANS_FEED_INTEGR	Maintenance Counter Transmission (Line number of paper feed, integrated value)
MAINT_CONT_TRANS_HEAD_INTEGR	Maintenance Counter Transmission (Head activation time, integrated value)
MAINT_CONT_TRANS_DRIVE_INTEGR	Maintenance Counter Transmission (Product drive time, integrated value)
REMAIN_NV_MEMORY_CAP	Remaining User Area Response
INIT_TEST_PRINT_HEADER	Set default / Set test print header (Reading test print header)
BLUETOOTH_DEVICE_NAME	Set default / Set test print header (Reading Bluetooth device name)
READ_DEFAULT	Set default / Set test print header (Reading default value)

Appendix D Condition of Function Settings

For using the printer driver, the some items of the function setting stored in the memory of the printer needs to be the following settings.

The function setting can be also changed by printer driver to the settings that are unsupported condition by the printer driver. But the unsupported settings may cause a state that the printer driver does not work.

Item Name	Setting Condition
DIP1 – bit8 (Data Control)	1 : Busy
DIP1 – bit4 (Bit Length)	1 : 8 bits
DIP2 – bit8 (Auto Status Output)	0 : Enable
DIP4 – bit2 (CTS Control)	0 : Enable
DIP4 – bit6 (Error)	0 : Unbusy

* [DIP4 – bit6 (Error)] is DPU-S245 model only.