



CITIZEN OPOS DRIVER 1.8 Setup Guide

'07/12/21 Ver. 1.00

CITIZEN SYSTEMS JAPAN CO.,LTD.

Revision Record

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07/12/21	V1.00	New issue

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1. Operating Environment

Operating System

This driver supports the following Windows operating systems

- Windows 2000
- Windows XP

Object Models

Object models of this product and the corresponding interface are as shown below.

For details of each model, refer to the Printer User's Guide.

Series of Model	Object Model	Interface	Printer Functions
CBM-1000II	CBM-1000TypeII	Serial, Parallel, USB	Standard
	CBM-1000TypeII- L	Serial, Parallel, USB	Blackmark paper and label paper are supported.
CT-S300	CT-S300	Serial, Parallel, USB	Standard (Paper with blackmark on front side is supported.)
	CT-S300-M1/M2	Serial, Parallel, USB	Paper with blackmark on back side is supported.
CT-S310	CT-S310	Serial, Parallel, USB	Standard (Paper with blackmark on front side is supported.)
	CT-S310-M1/M2	Serial, Parallel, USB	Paper with blackmark on back side is supported.
CT-S2000	CT-S2000	Serial, Parallel, USB	Standard
	CT-S2000-M	Serial, Parallel, USB	Blackmark paper is supported
	CT-S2000-L	Serial, Parallel, USB	Label paper is supported.
CT-S4000	CT-S4000	Serial, Parallel, USB	Standard (Paper with blackmark on front side is supported.)
	CT-S4000-M	Serial, Parallel, USB	Paper with blackmark on back side is supported.
	CT-S4000-L	Serial, Parallel, USB	Label paper is supported.
CD-S500	CD-S500	Serial, Parallel, USB	Standard type (Without cutting feature)
	CD-S501	Serial, Parallel, USB	With cutting feature
	CD-S503	Serial, Parallel, USB	Rewinder equipped (With cutting feature)

USB Interface Connection

Before using this product with USB interface connection, it is necessary to install Windows driver.

* This product is designed to operate on the USB interface port (Virtual printer port for USB) specified on Windows driver.

Parallel Interface Connection

If the terminal and the printer are connected together through parallel interface, the installation wizard requesting you to install printer driver each time you start the terminal may start. To prevent this installation wizard from starting install Windows driver.

Installing Windows Driver

Windows drivers corresponding to individual models are as shown below. For the method of Windows driver installation, refer to "Windows Driver Guide" supplied with Windows driver.

Object Model	Windows Driver Name	Printer Function
CBM-1000TypeII	CITIZEN CBM1000 Type II	Standard
CBM-1000TypeII- L	CITIZEN CBM1000 Type II Label	Blackmark paper and label paper are supported.
CT-S300	CITIZEN CT-S300	Standard (Paper with blackmark on front side is supported.)
CT-S300-M1/M2	CITIZEN CT-S300 Black Mark	Paper with blackmark on back side is supported.
CT-S310	CITIZEN CT-S300	Standard (Paper with blackmark on front side is supported.)
CT-S310-M1/M2	CITIZEN CT-S310 Black Mark	Paper with blackmark on back side is supported.
CT-S2000	CITIZEN CT-S2000	Standard
CT-S2000-M	CITIZEN CT-S2000	Blackmark paper is supported.
CT-S2000-L	CITIZEN CT-S2000	Label paper is supported.
CT-S4000	CITIZEN CT-S4000	Standard (Paper with blackmark on front side is supported.)
CT-S4000-M	CITIZEN CT-S4000	Paper with blackmark on back side is supported.
CT-S4000-L	CITIZEN CT-S4000 Label	Label paper is supported.
CD-S500	CITIZEN CD-S500	Standard type (Without cutting feature)
CD-S501	CITIZEN CD-S501/503	With cutting feature
CD-S503	CITIZEN CD-S500/503	Rewinder equipped (With cutting feature)

Windows driver includes two types: a driver with status function (language monitor) that allows checking of printer status and a driver without status function. When using this driver, **be sure to install the Windows driver without status function.**

* Use of this driver together with Windows driver having status function is not permitted.

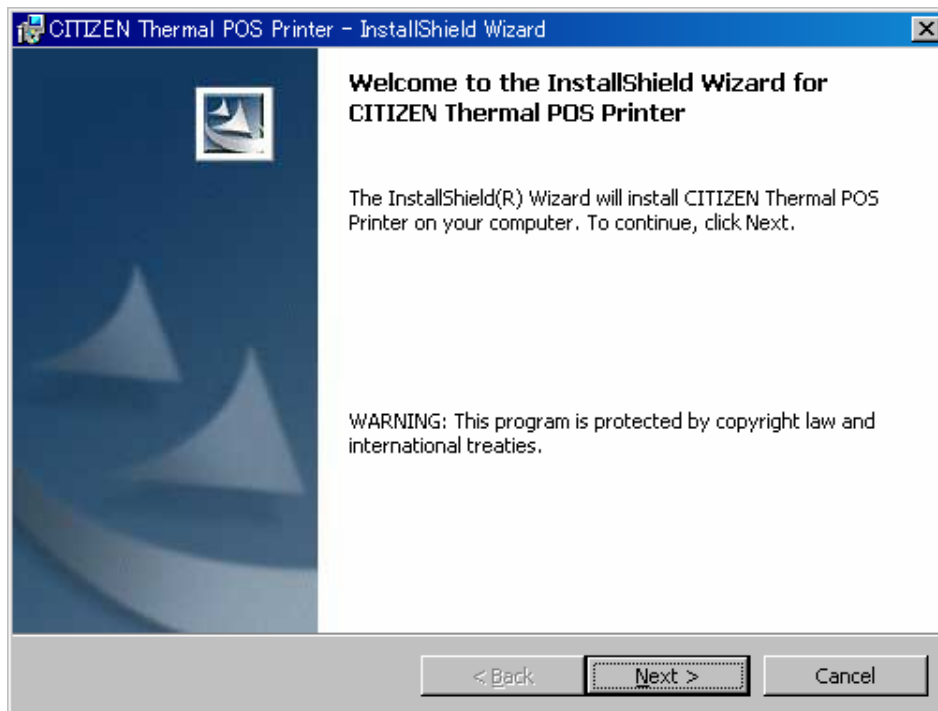
2. Installation

The installation procedure for this product is described below.
Before installation, shut down all applications in operation.

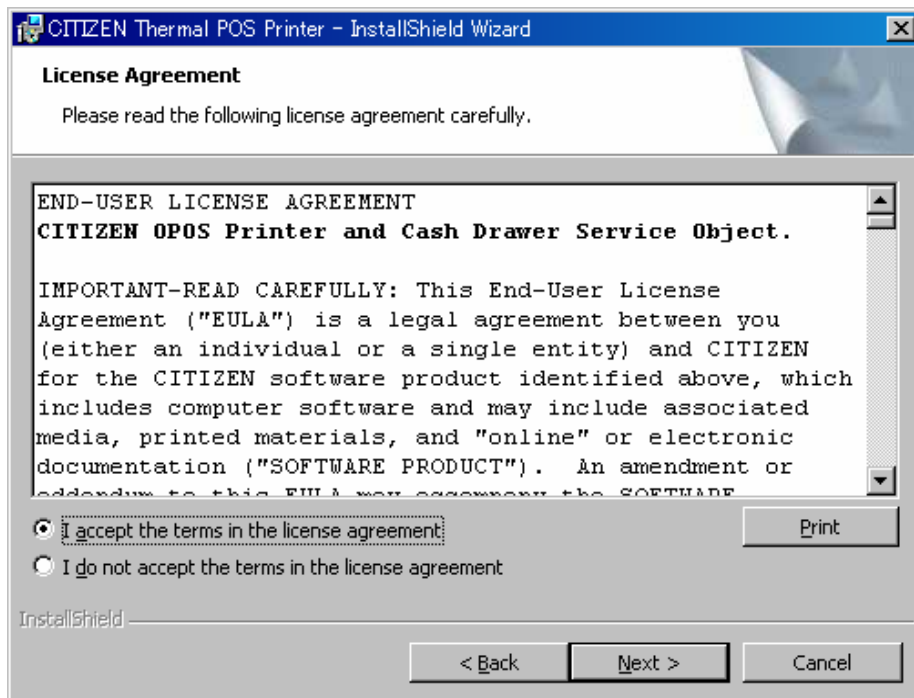
- 1) Run Setup.exe (installer).
After starting, follow the installation procedure in accordance with the dialog.



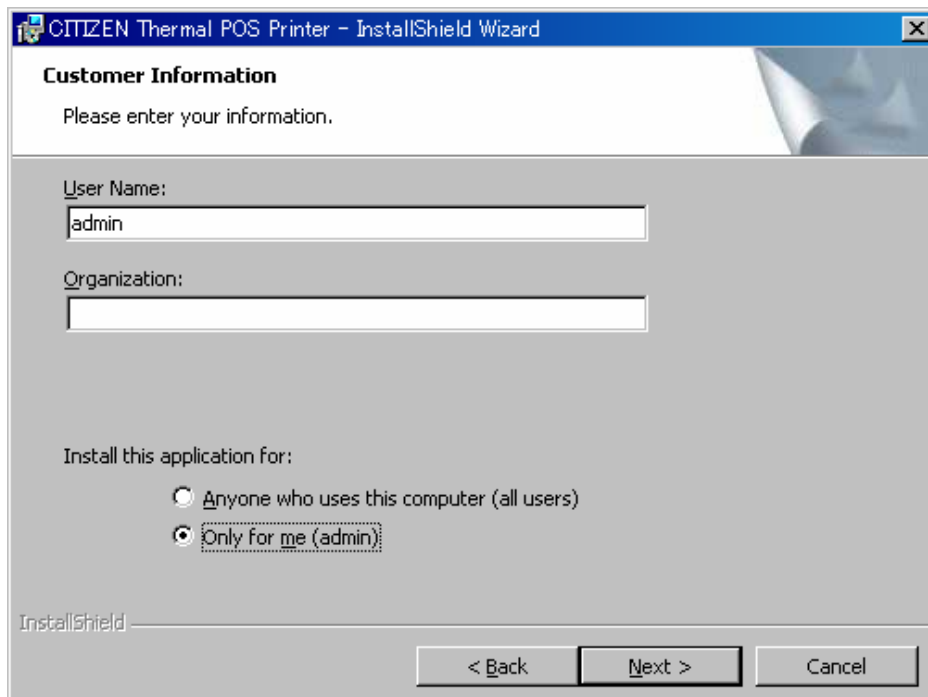
- 2) Installation wizard starts. Click [Next].



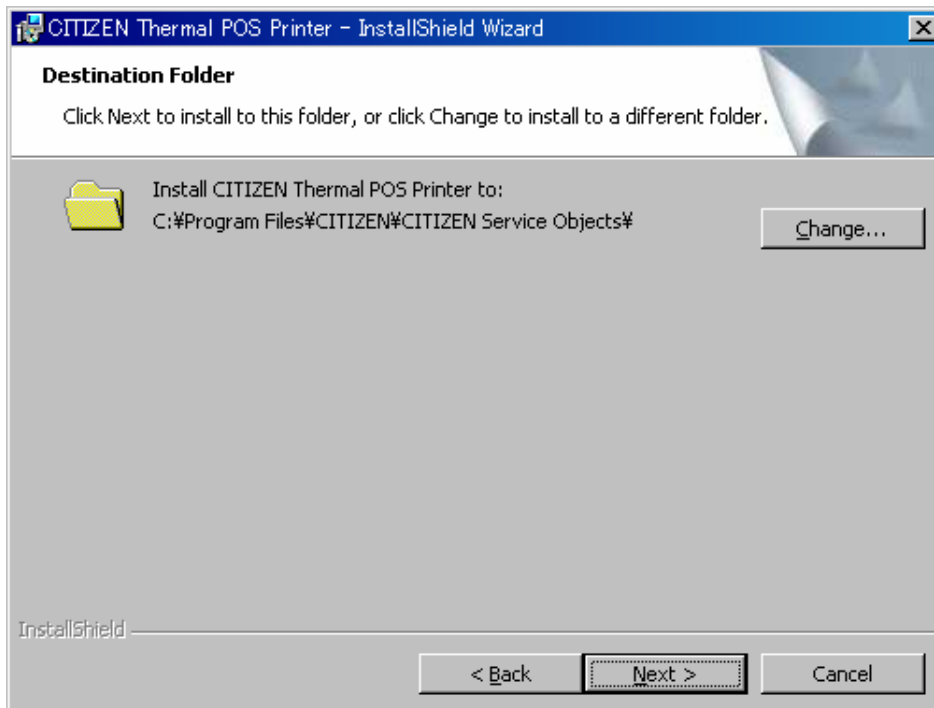
- 3) "License Agreement" window is displayed.
If you agree with the product license agreement, select "I accept the terms in the license agreement." and click [Next]. If you do not agree with the product license agreement, select "I do not accept the terms in the license agreement." and click [Next] to exit the wizard.



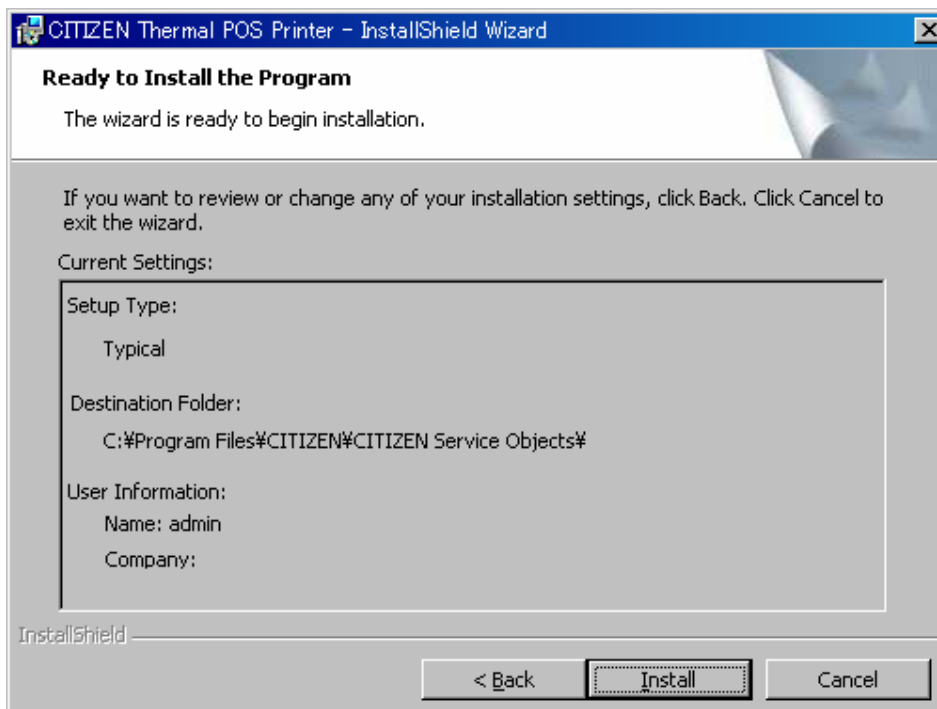
- 4) "Customer Information" wizard is displayed.
Enter "User Name" and "Organization". If more than one user uses this computer, select "Anyone who uses this computer" and if only you use this computer, select "Only for me" and click [Next].



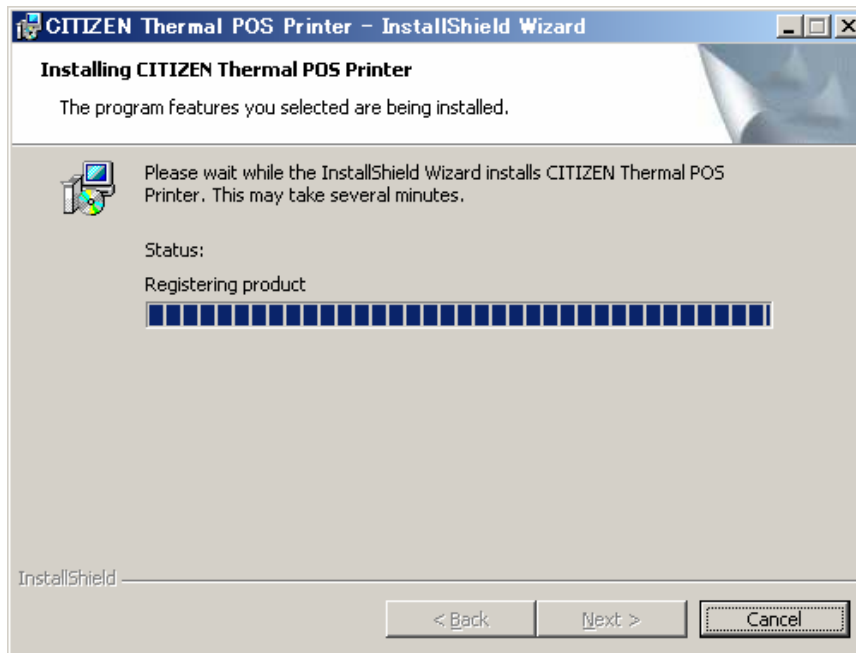
- 5) "Destination Folder" window is displayed.
Specify the folder to install. If you use a default folder, click [Next]. If you want to change the folder, click [Change] and specify the folder you want to install.



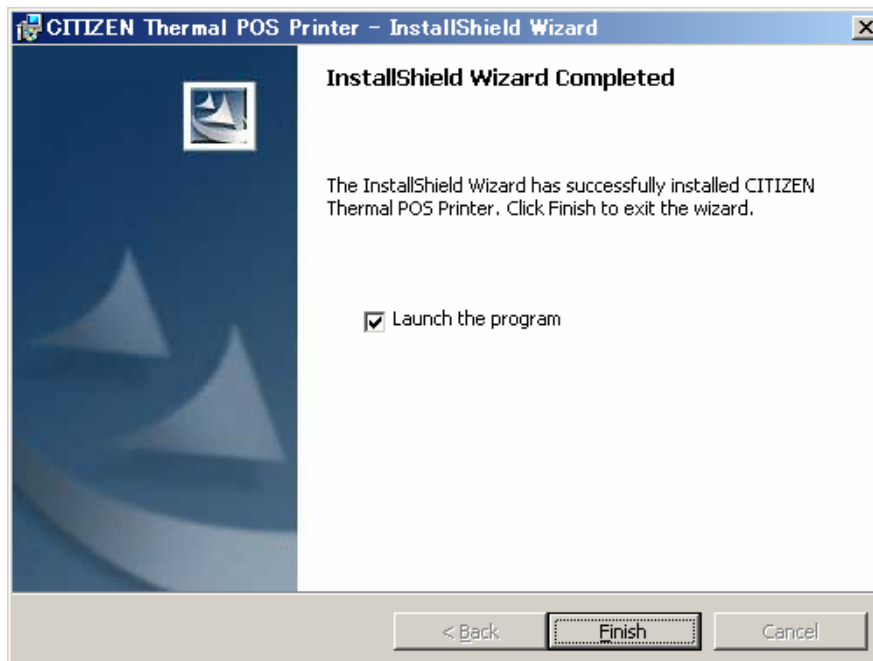
- 6) "Ready to Install the Program" window is displayed.
Click [Install] to start the installation. Click [Cancel] to abort the installation.



- 7) The installation progress status window is displayed.
 (It may take longer time to install depending on the environment or specifications of the terminal.)



- 8) When the installation is successful, "Installation Completed" window is displayed.
 Check "Launch the Program" and click [Finish].



- 9) OPOS driver setting tool Configuration Utility starts.
 For the operating method of this setting tool, detailed description is given in the section "[4. OPOS Driver Setting Tool](#)".

3. Configuration of Installation Files

The following provides the description on the installation files of this product.

"Install Folder"¥CITIZEN¥CITIZENServiceObject

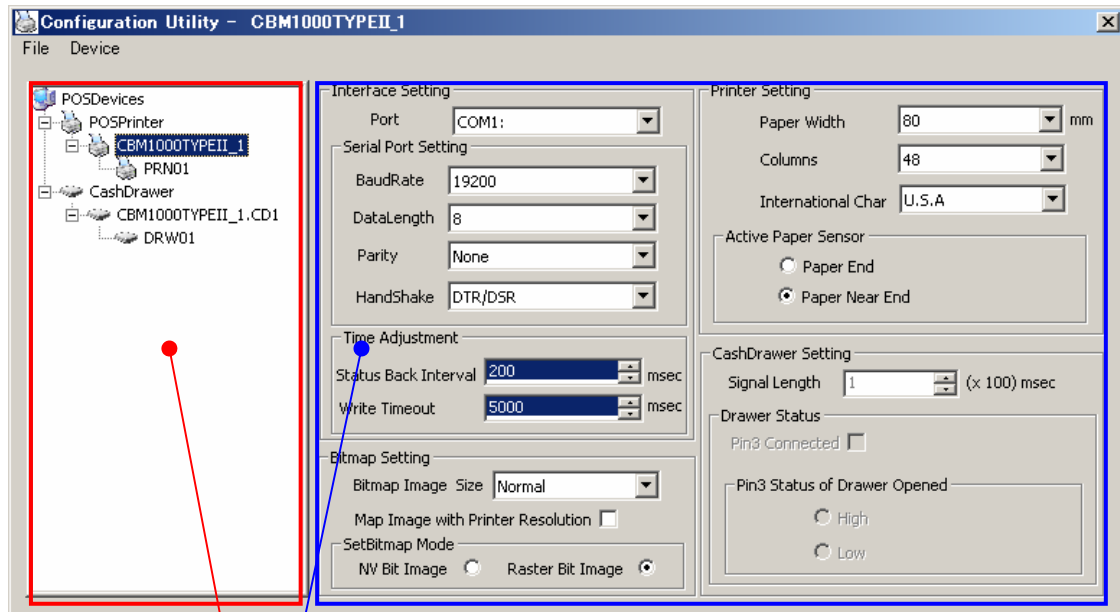
— CBMDSO.DLL	(Dot impact printer service object)
— CBMPortMon.DLL	(Line thermal printer port monitor)
— CBMTSO.DLL	(Line thermal printer service object)
— ConfigurationUtility.EXE	(OPOS driver setting tool)
— DMCBMPortMon.DLL	(Dot impact printer port monitor)
— MFC71.DLL	} (Microsoft Visual C++ MFC library)
— MFC71CHS.DLL	
— MFC71CHT.DLL	
— MFC71DEU.DLL	
— MFC71ENU.DLL	
— MFC71ESP.DLL	
— MFC71FRA.DLL	
— MFC71ITA.DLL	
— MFC71JPN.DLL	
— MFC71KOR.DLL	
— MFC71U.DLL	
— MSVCP71.DLL	
— MSVCR71.DLL	
— OPOSCashDrawer.OCX	(Cash drawer control object)
— OPOSPOSPrinter.OCX	(Printer control object)
— POSTTestApp.EXE	(OPOS driver test tool)
— README.TXT	(Read me text)

4. OPOS Driver Setting Tool

This section provides the description of the method of using Configuration Utility. When this driver is installed, a shortcut icon is registered in the Windows Start Menu.

“Start” → “Program” → “CITIZEN” → “CITIZEN Thermal POS Printer” → “Configuration Utility”

Main Screen

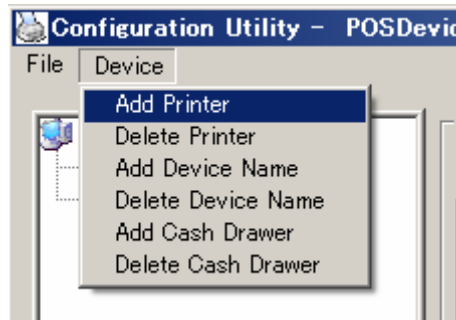


Setting view: Indicates the setting of each device (Direct change of setting is available).

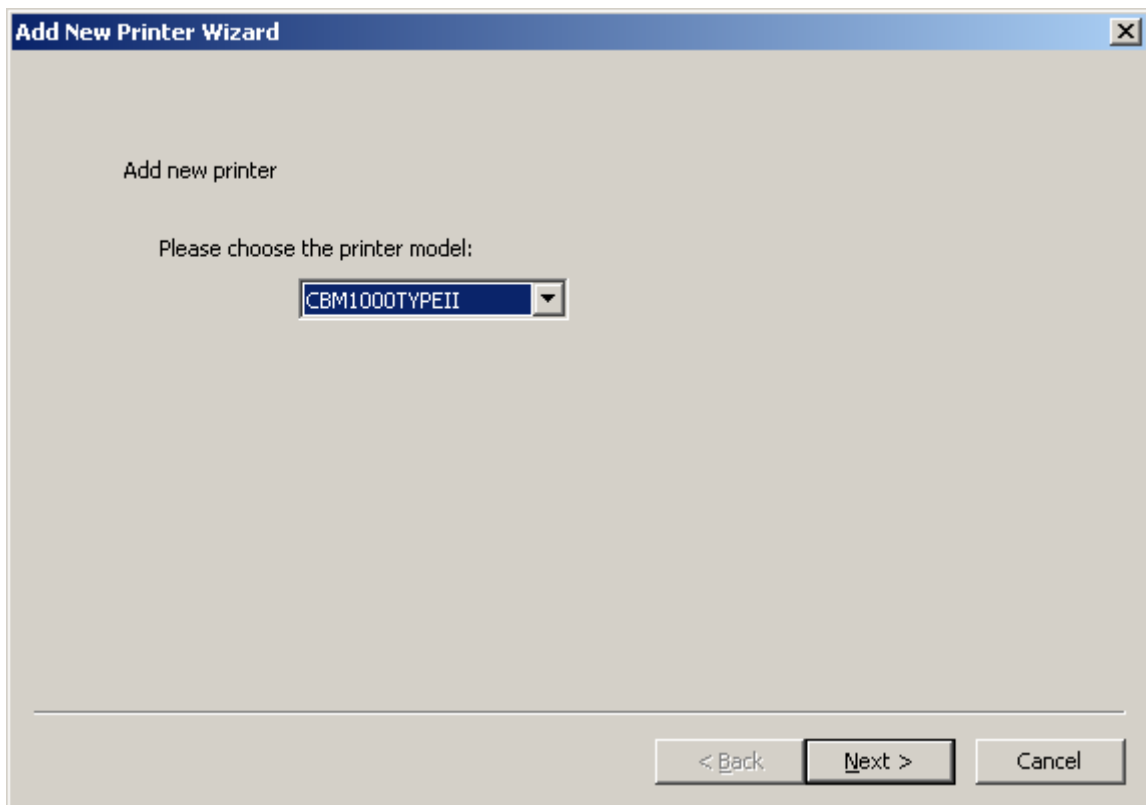
Device view: Tree of physical devices and logical devices is indicated.

4.1 Adding New Printer and Cash Drawer

- 1) Click "Add Printer" from the Device menu.

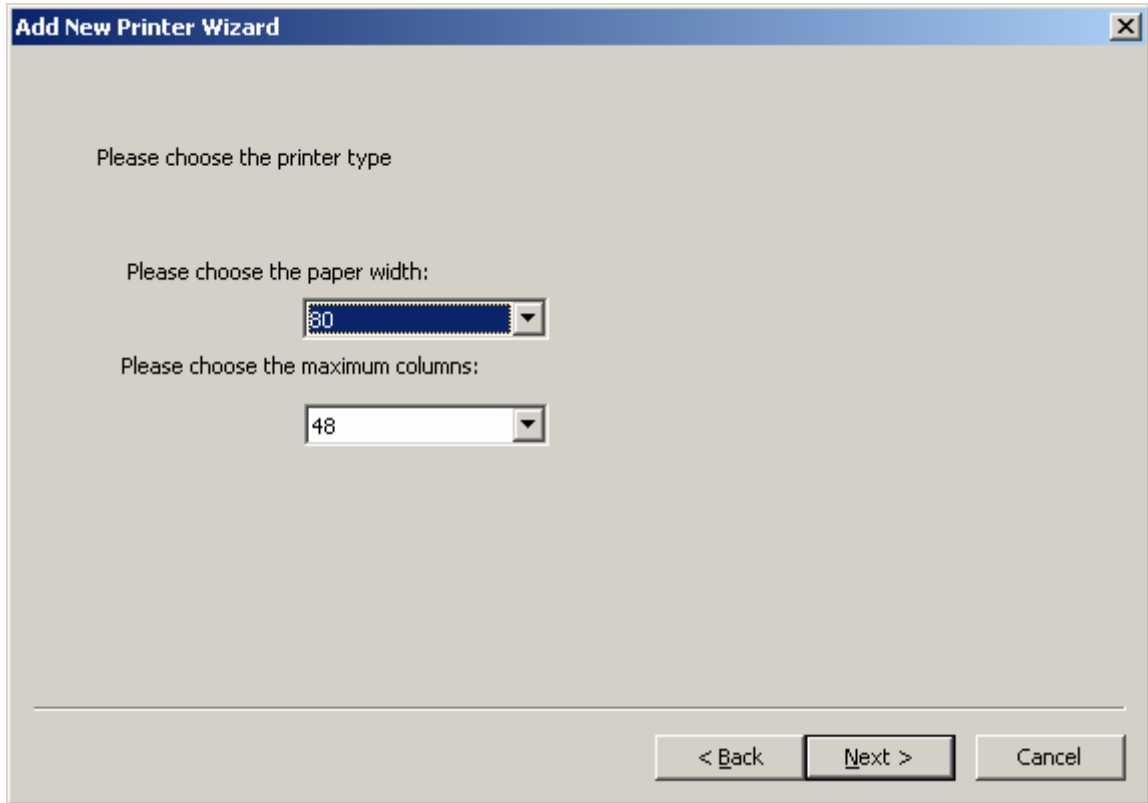


- 2) "Add Printer" wizard starts.
Select the model to add and click [Next].
(Here specify CBM1000TYPEII.)



Set value: CBM1000TYPEII/CT-S300/CT-S310/CT-S2000/CT-S4000/CD-S500
For the function of each printer, refer to the section in "[1 Operating Environment](#)".

- 3) "Choose the printer type" window is displayed.
 Specify the size of paper width used and the maximum number of columns per line referring to the following table.
 This setting is interlocked with the default value of the "RecLineChars/RecLineCharsList" property.
 For details, refer to Application Development Guide of this product.



CBM-1000TypeII Series

Paper Size (mm)		Font A (12*24dot)	Font B (9*24dot)	Max. print columns
80	58	30	40	30
		36	48	36
	42	56	42	
	48	64	48	

CT-S300/CT-S310 Series

Paper Size (mm)		Font A (12*24dot)	Font B (9*24dot)	Font C (8*16dot)	Max. print columns
80	58	30	40	45	30
		32	42	48	32
	42	56	63	42	
	48	64	72	48	

CT-S2000 Series

Paper Size (mm)		Font A (12*24dot)	Font B (9*24dot)	Font C (8*16dot)	Max. print columns
83	80	30	40	45	30
		30	40	45	Not supported
	60	35	46	52	Not supported
		36	48	54	36
	58	36	48	54	36
		42	56	64	42
		48	64	72	48
		53	71	80	53

CT-S4000 Series

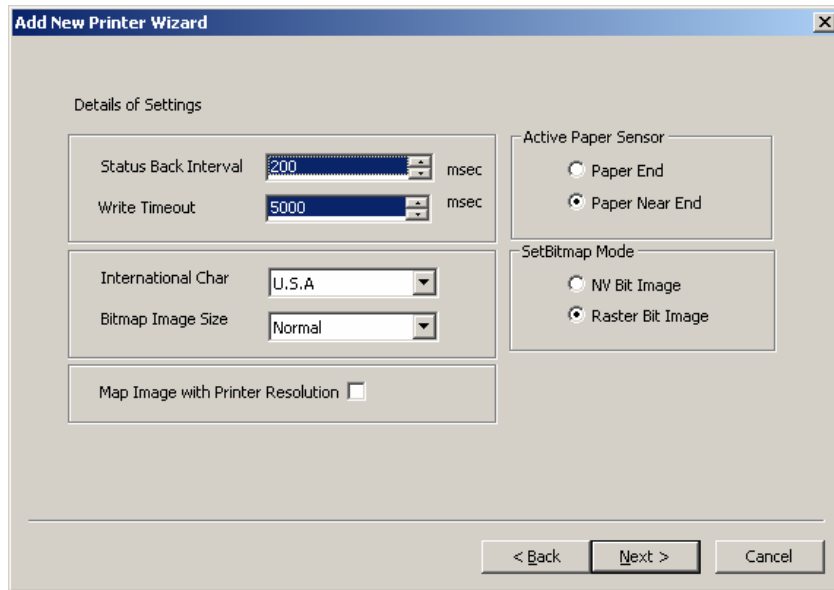
Paper Size (mm)		Font A (12*24dot)	Font B (9*24dot)	Font C (8*16dot)	Max. print columns
112	82.5	42	56	64	42
		48	64	72	48
	80	55	73	82	55
		60	80	90	60
		69	92	104	69

CD-S500 Series

Paper Size (mm)		Font A (9*9dot)	Font B (7*9dot)	Max. print columns
76.2	69.5	25	30	25
		27	33	27
	57.5	30	36	30
		32	40	32
		33	40	33
		35	42	35

After setting the above, click [Next].

- 4) "Details of settings" window is displayed.
Settings of each item are as shown below.



Status Back interval

Sets the polling interval for acquiring printer status.
Setting range: 100 to 900 msec

Write Timeout

Sets the write timeout for output port.
Setting range: 5000 to 100,000 msec

Active Paper Sensor

Specify the paper sensor set to be logically active on the driver.
Set value: Paper End/Paper Near-End
This setting is interlocked with the CapRecEmptySensor property and RecEmpty property.
For details of the above properties, refer to Application Development Guide of this product.

International Char

Specifies a international character table to use.
Set value: U.S.A/France/Germany/U.K./DenmarkI/Sweden/Italy/SpainI/Japan/Norway/DenmarkII/SpainII/ Latin America/Korea

SetBitmap Mode

Specifies the bit image mode of the SetBitmap method. For details of this mode, refer to Application Development Guide of this product.
Set value: NV bit image/Raster bit image

Bitmap image size

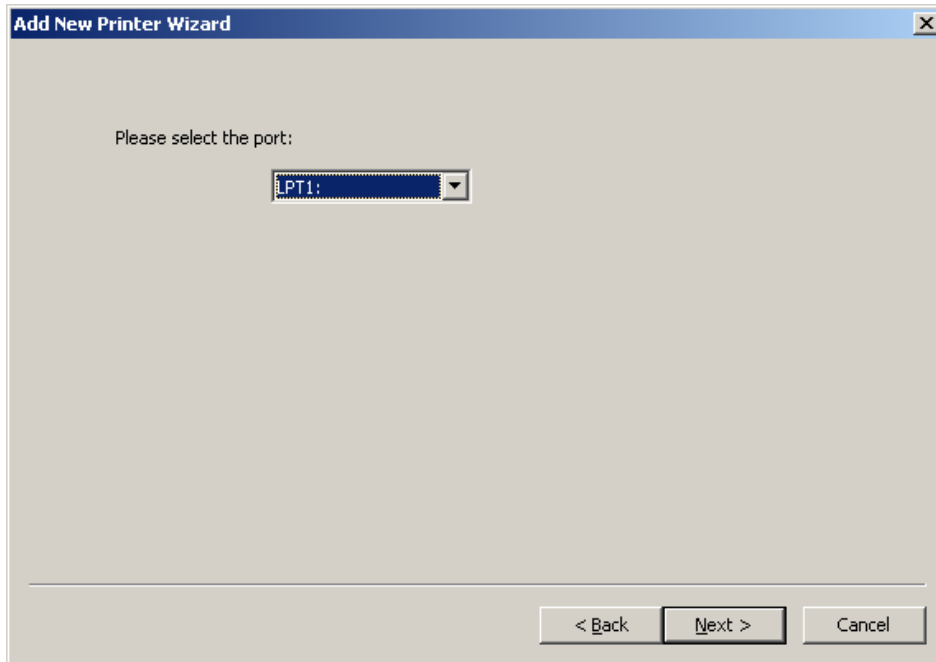
Specifies the rate of print enlargement of the bit image registered in the SetBitmap method.
Set value: Normal/Double-Width/Double-Height/Quadruple

Map image with Printer Resolution

When this setting is enabled, the setting of "Bit image size" is effective.
When this setting is disabled, it is treated as the size (Normal) of the bit image registered in the SetBitmap method.

After the above setting, click [Next].

- 5) "Select the port." window is displayed.
Select a port to be used and click [Next].

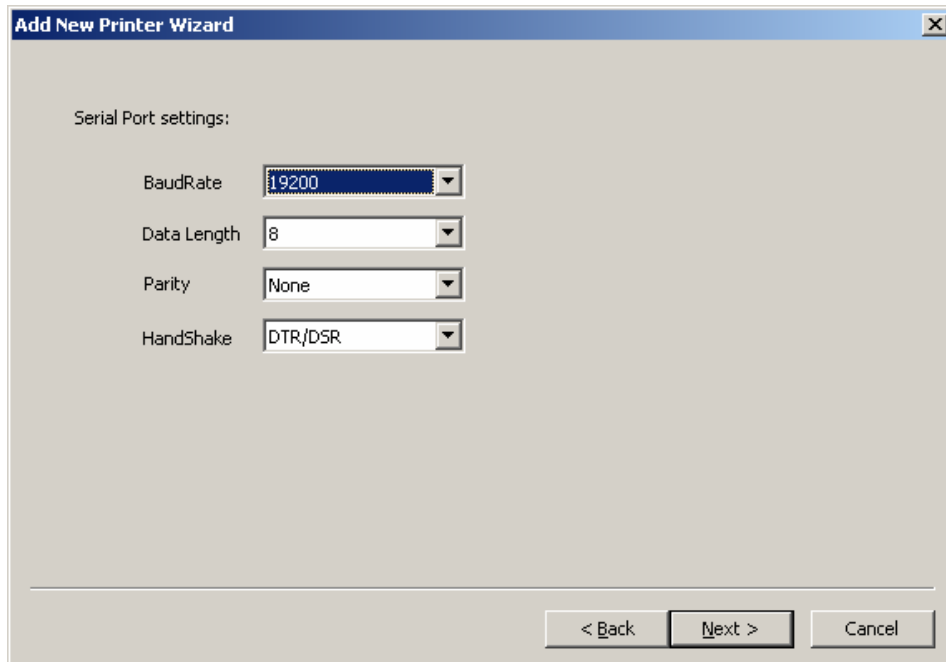


When the COM port is specified, the "Serial Port settings" window is displayed.

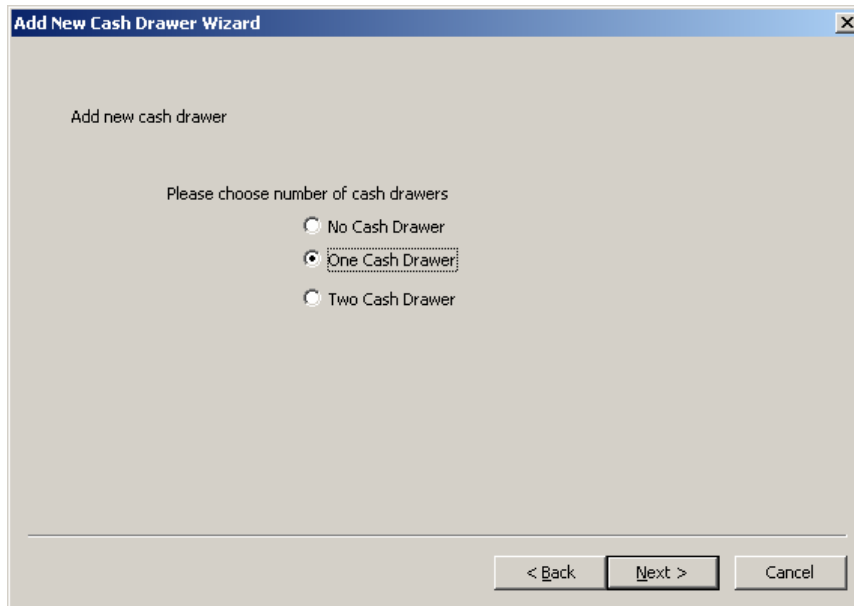
Specify "Baud rate", "Data length", "Parity", and "Flow control" and then click [Next].

* Communication is not available unless the serial port settings at the printer and at the terminal are the same.

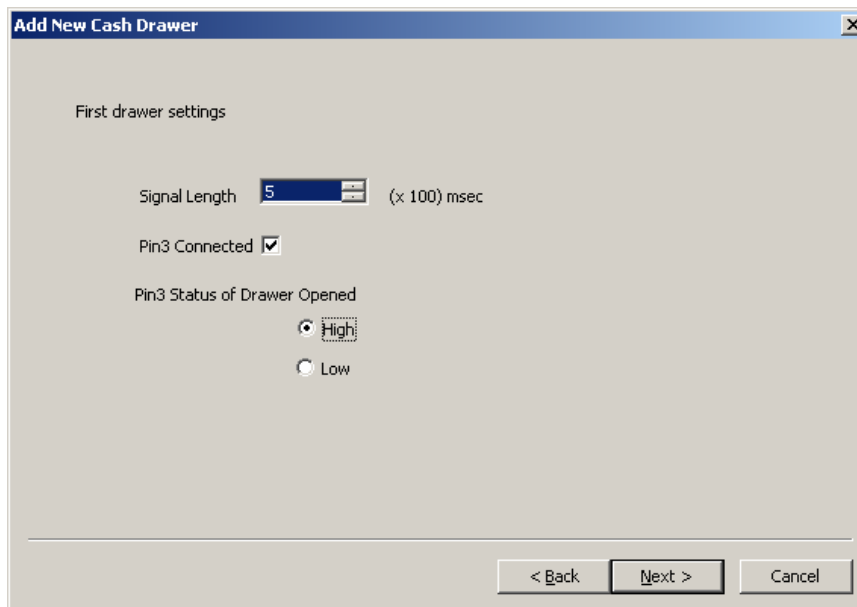
For the serial port setting of the printer, refer to the printer User's Guide.



- 6) Then the “Add new cash drawer” wizard starts.
Specify the number of cash drawers connected to the printer and click [Next].



If “One Cash Drawer” or “Two Cash Drawers” is specified, the “First drawer settings” window is displayed.



Signal Length

Specifies the time width of the pulse signal output to the solenoid of the cash drawer.
Setting range: 1 to 10 msec

Pin3 Connected

Check this when the pin 3 (drawer switch input) of the drawer kick connector is connected.

Pin3 Status of Drawer Opened

Specify the drawer switch input signal level with cash drawer open.
Setting value: High/Low

After the above setting, click [Next].

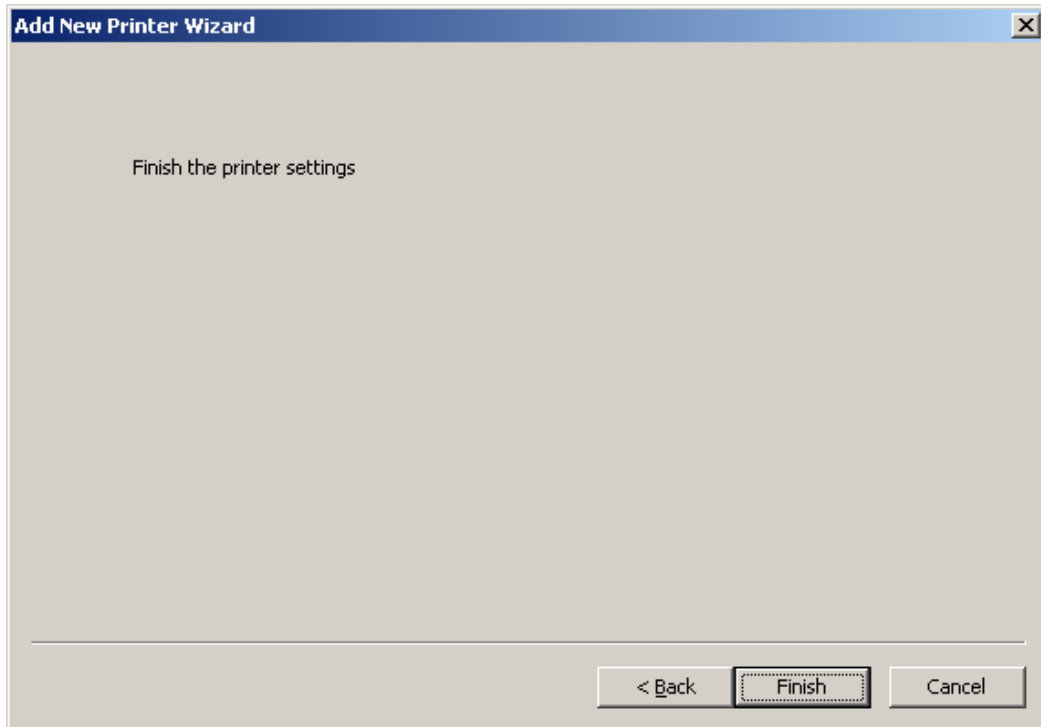
* When "Two Cash Drawers" is specified, clicking [Next] causes the "Second drawer settings" window is displayed.

Set the second cash drawer as in the same manner as the above and click [Next].

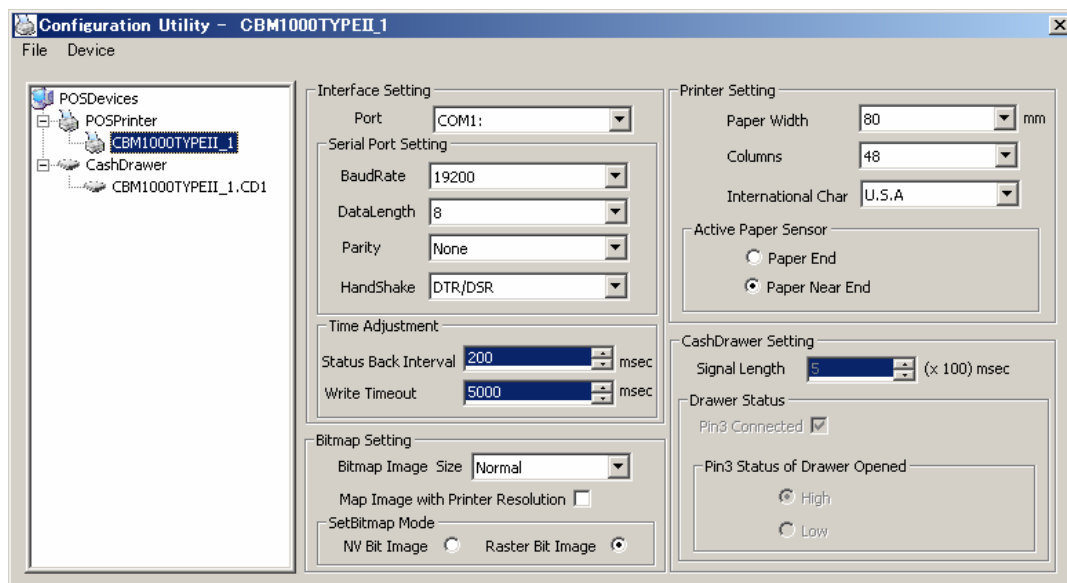
7) "Finish the printer setting" window is displayed.

Click [Finish]. Here, this tool performs registration processing for system registry.

* It takes some time till registration of system registry is completed.



8) When this wizard is finished, the printer and the cash drawer registered in "Device view" and "Setting view" are indicated.

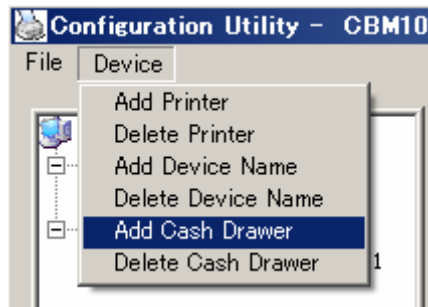


* Setting of each item can be changed directly from Setting view.

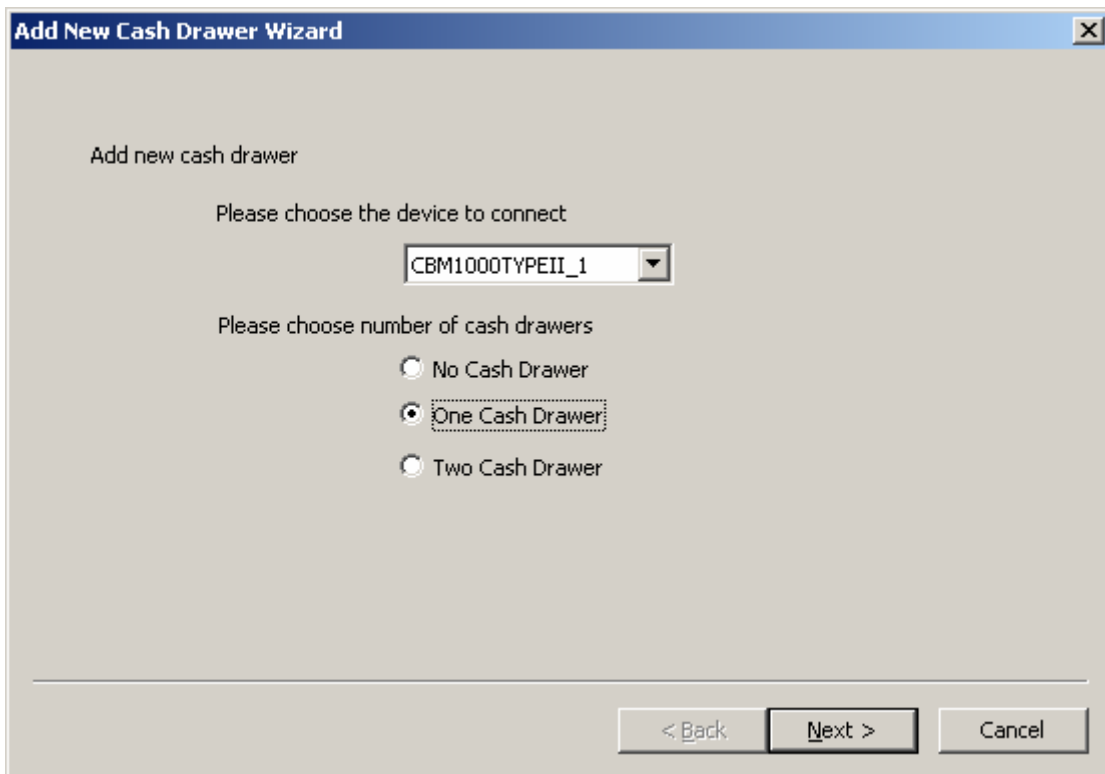
Each time setting of item is changed, the change is reflected to the system registry immediately.

4.2 Adding New Cash Drawer

- 1) Click "Add Cash Drawer" from the "Device" menu.
* Be sure to execute Add Cash Drawer after finishing printer registration.



- 2) "Add new cash drawer" wizard starts.

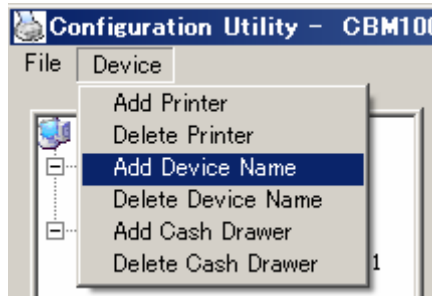


Following this step, refer to the description in "6) Then the "Add new cash drawer" wizard starts" of the section "4.1 Adding New Printer and Cash Drawer" and later, and perform adding drawer procedure in the same manner.

4.3 Adding Logical Device

A logical device name can be assigned to the printer and cash drawer registered.

- 1) Click "Add Device Name" in the "Device" menu.

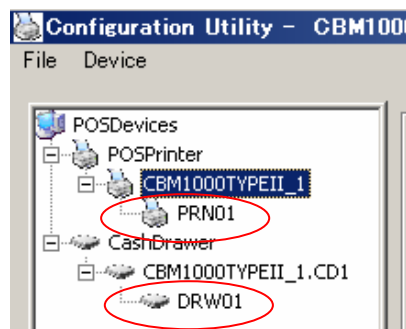


- 2) "Add Device" window is displayed. The printer or cash drawer registered is shown in the list of "Select the device". Select the object printer or cash drawer and enter a logical device name in the text box of "Enter the device name".



After the above setting, click [Add]. If [Cancel] is clicked, the above setting is discarded.

- 3) After completion of the above procedure, the added logical device name is indicated on the Device view.

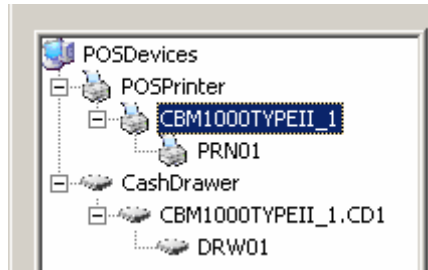


4.4 Deleting Device

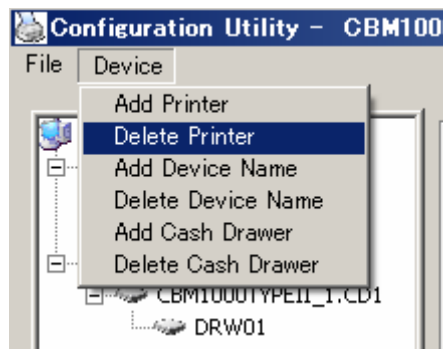
This section describes deletion of physical device (printer) and cash drawer registered.

Deleting Printer

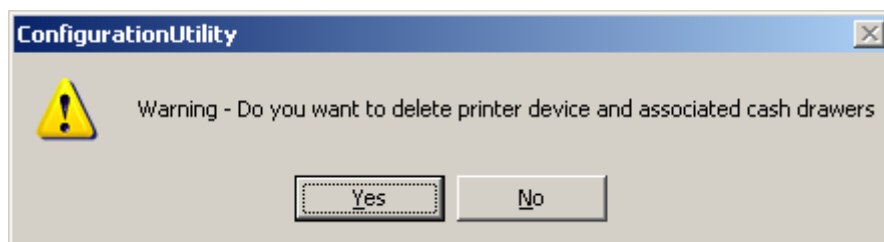
- 1) Select the printer you want to delete from the "POSPrinter" list of Device view.



- 2) Click "Delete Printer" in the "Device" menu.



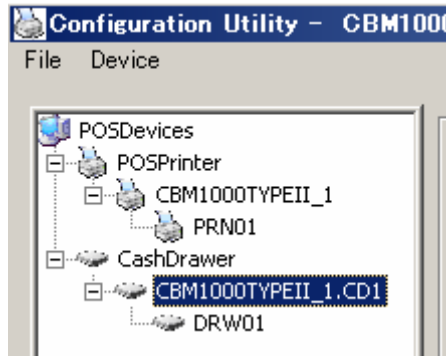
- 3) Message dialog "Warning – Do you want to delete printer device and assorted cash drawers" is displayed. Click [Yes (Y)]. If you click [No (N)], deleting the printer is aborted.



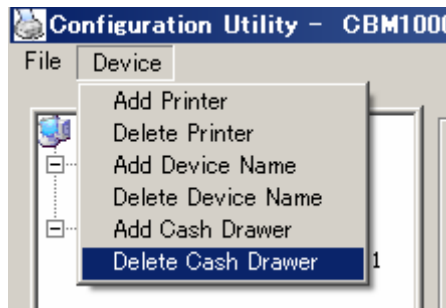
* When deleting a printer is carried out, all the registered drawer and logical device are deleted.

Deleting Cash Drawer

- 1) Select a cash drawer you want to delete from the "CashDrawer" list of the Device view.



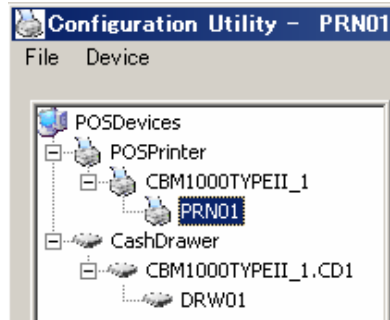
- 2) Click "Delete Cash Drawer" on the "Device" menu.



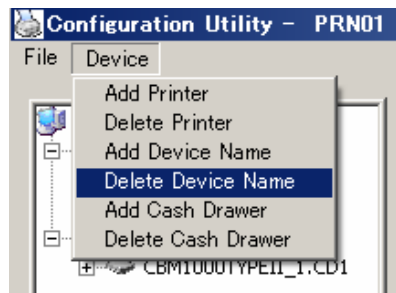
* When deleting a drawer is carried out, logical device is also deleted (printer is not deleted).

Deleting Logical Device (Printer)

- 1) Select a logical device to delete from the "POSPrinter" of the Device view.

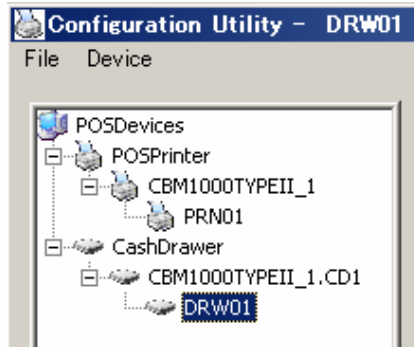


- 2) Click "Delete Device Name" on the "Device" menu.

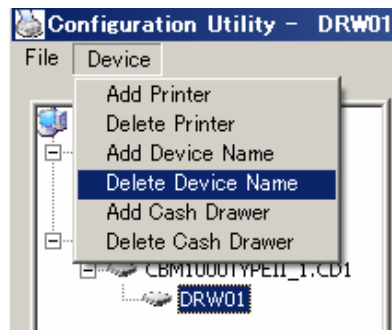


Deleting Logical Device (Cash Drawer)

- 1) Select a logical device you want to delete from the "CashDrawer" list of the Device view.



- 2) Click "Delete Device Name" on the "Device" menu.



5. Uninstall

Uninstall of this product is explained.

Deleting System Registry

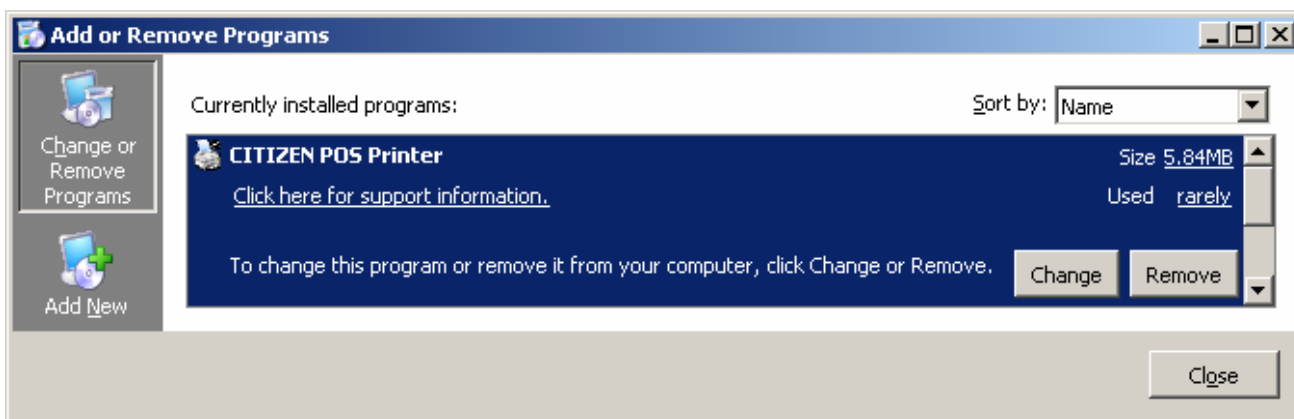
Physical and logical devices are deleted by Configuration Utility.

For the method of deleting device, refer to the section "4.4 Deleting Device".

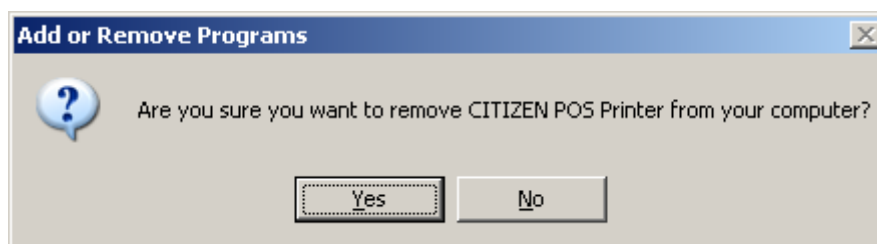
* When upgrading this product, retaining the registered device setting is recommended.

Deleting OPOS Driver

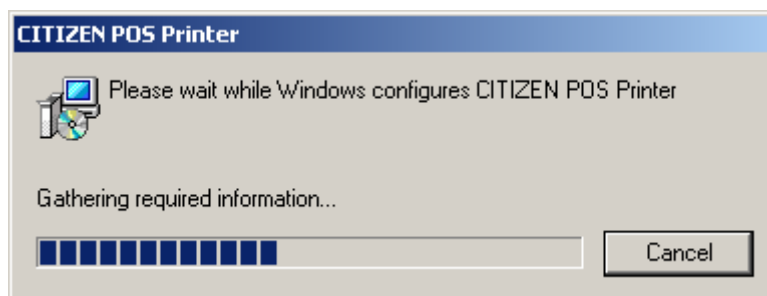
- 1) From the "Add or Remove Programs" in "Control Panel", select "CITIZEN Thermal POS Printer" and click [Delete].



- 2) A message dialog "Are you sure you want to remove CITIZEN POS Printer from you computer?" is displayed. Click [Yes (Y)]. If you click [No (N)], deleting this program is cancelled.



- 3) A dialog indicating the progress of uninstall process is displayed.



- 4) When the uninstall procedure is finished normally, "CITIZEN Thermal POS Printer" is removed from the "Add or Remove Programs" list.

6. Printer Setting

Using this product assumes that the DIP switch and memory switch of the printer are set as shown below. For the details of the method of operating each switch and the content of setting, refer to User's Guide of each model.

6.1 CBM-1000II Series

DIP Switch Setting

DSW No.	Function	Setting	Description
1-1	Auto cutter	ON	With auto cutter
1-5	CR mode	OFF	Ignored
1-6	Input buffer	OFF	4KB
2-1	Select character code table.	ON	Katakana
2-2		OFF	
2-3		OFF	
2-4		OFF	
2-5	JIS/Shift-JIS	ON	Shift-JIS
2-6	Condition for BUSY state	ON	Receiving buffer full
3-7	DSR (when serial interface is used)	OFF	DSR
3-8	INIT (when serial interface is used)	OFF	Disabled

* This model has no software switch function.

6.2 CT-S300 Series

DIP Switch Setting

DSW No.	Function	Setting	Description
8	INIT (when serial interface is used)	OFF	Disabled

Memory Switch Setting

MSW No.	Function	Setting	Description
1-1	Power ON notify setting	OFF	Enabled
1-2	Input buffer	OFF	4KB
1-3	Busy condition	ON	Buffer full
1-4	Receiving error character	OFF	Character ?
1-5	CR mode	OFF	Disabled
1-7	DSR signal (when serial interface is used)	OFF	DSR
1-8	INIT signal (when serial interface is used)	OFF	-
2-2	Auto cutter operation	ON	Enabled
2-4	Full column printing	ON	EPSON
3-1	Auto cutter restore	OFF	L/F enabled
3-2	Cover open restore	OFF	Cover closed
3-3	Parallel 31 Pin (when USB and parallel IF are used)	OFF	Reset
3-7	CBM1000-compatible mode	OFF	Non-compatible
3-8	Cover opened while printing	OFF	Auto restore
4-8	Full cut command	OFF	Full cut

6.3 CT-S2000 Series

DIP Switch Setting

DSW No.	Function	Setting	Description
8	INIT (when serial interface is used)	OFF	Disabled

Memory Switch Setting

MSW No.	Function	Setting	Description
1-1	Power ON notify setting	OFF	Enabled
1-2	Input buffer	OFF	4KB
1-3	Busy condition	ON	Buffer full
1-4	Receiving error character	OFF	Character ?
1-5	CR mode	OFF	Disabled
1-7	Select DSR signal (when serial interface is used)	OFF	DSR
1-8	Select INIT signal (when serial interface is used)	OFF	-
2-2	Auto cutter operation	ON	Enabled
2-4	Full column printing	OFF	Print immediately
3-1	Auto cutter restore	OFF	L/F enabled
3-3	Parallel 31Pin (when USB and parallel IF are used)	OFF	Reset
3-7	CBM1000-compatible mode	ON	Compatible
3-8	Cover opened while printing	OFF	Auto restore
4-8	Forced partial	OFF	Disabled
5-2	Vertical basic calculation pitch	OFF	360 dots
5-3	USB mode (when USB interface is used)	ON	Printer class
7-6	DMA control	Enabled	-
9-1	Code page	Katakana	-
9-2	Foreign language characters	Japan	-
9-3	Kanji	Enabled	-
9-4	JIS/Shift-JIS	Shift-JIS	-
10-3	ACK output timing (when USB and parallel IF are used)	Before BUSY	-

6.4 CT-S4000 Series

DIP Switch Setting

DSW No.	Function	Setting	Description
8	INIT (when serial interface is used)	OFF	Disabled

Memory Switch Setting

MSW No.	Function	Setting	Description
1-1	Power ON notify setting	OFF	Enabled
1-2	Input buffer	OFF	4KB
1-3	Busy condition	ON	Buffer full
1-4	Receiving error character	OFF	Character ?
1-5	CR mode	OFF	Disabled
1-7	Select DSR signal (when serial interface is used)	OFF	DSR
1-8	Select INIT signal (when serial interface is used)	OFF	-
2-2	Auto cutter operation	ON	Enabled
2-4	Full column printing	OFF	Print immediately
3-1	Auto cutter restore	OFF	L/F enabled
3-3	Parallel 31Pin (when USB and parallel IF are used)	OFF	Reset
3-7	CBM1000-compatible mode	ON	Compatible
3-8	Cover opened while printing	OFF	Auto restore
4-8	Forced partial	OFF	Disabled
5-2	Vertical basic calculation pitch	OFF	360 dots
5-3	USB mode (when USB interface is used)	ON	Printer class
5-5	Power OFF notify	Disabled	-
7-6	DMA control	Enabled	-
9-1	Code page	Katakana	-
9-2	Foreign language characters	Japan	-
9-3	Kanji	Enabled	-
9-4	JIS/Shift-JIS	Shift-JIS	-
10-3	ACK output timing (when USB and parallel IF are used)	Before BUSY	-

6.5 CD-S500 Series

DIP Switch Setting

DSW No.	Function	Setting	Description
8	INIT (when serial interface is used)	OFF	Disabled

Memory Switch Setting

MSW No.	Function	Setting	Description
SoftCtrl-1	Command Type	EPSON	-
SoftCtrl-5	Paper End (when USB and parallel IF are used)	DIS	At paper end Only Busy signal is output.
SoftCtrl-6	Paper Near-End (when USB and parallel IF are used)	DIS	At paper near-end Signal not output
SoftCtrl-8	Print Direct (Specifies print direction)	BI-DIR	Print from right or left end nearer from the print stop position.
SoftCtrl-9	Auto LF	OFF	-
SoftCtrl-11	Buffer Size	4Kbyte	-
SoftCtrl-12	Init Signal	ENB	Initialize signal enabled
Mechanical-2	Auto-Cutter	FREE	-
Mechanical-3	Color Ribbon	ON	Command switching

