

## **CITIZEN POS for .NET DRIVER 1.12**

**Setup Guide**

**For Ver. 1.12.1.5**

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**Revision Record**

<b>Date</b>	<b>Version</b>	<b>Description</b>
2011/01/17	1.02	New issue
2011/04/05	1.03	- The CT-S310II model was added to each item. (Page 5,6,7,17,40) - "Printer Test" and "Drawer Test" was added to Configuration Utility Function. (Page 31,32,33)
2011/06/22	1.12.1.4	- Version number is changed to same version as driver itself. - The outline explanation was added to "1. Operating Environment". (Page 5) - The version of .NET Framework was changed. (Page 5) - Release Notes file was added to installation structure. (Page 11) - The setting of "Write Buffer" was added to "I/O Setting". (Page 18)
2011/09/12	1.12.1.5	- The setting of "Detect the completion of printing" was added to "I/O Setting". (Page 18) - The test result of "Testing Device" was changed. (Page 33) - "PE output at PNE=Invalid" was added to the memory switch setting table. (Page 40)

**Notes**

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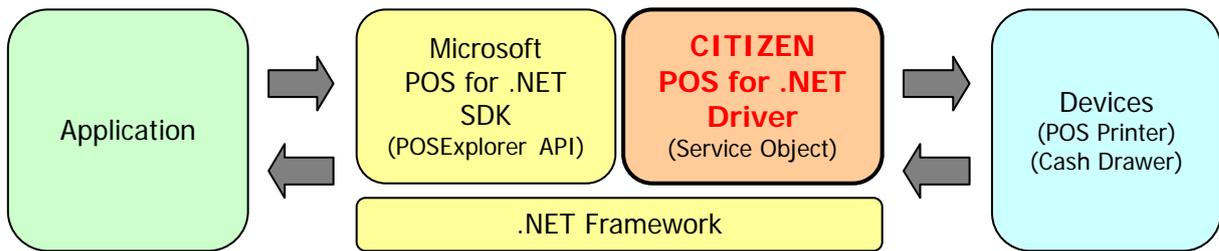
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# 1. Operating Environment

"CITIZEN POS for .NET Driver" control the devices by using ".NET Framework".



It is necessary to set up "Microsoft POS for .NET SDK" and ".NET Framework" separately to use this driver.

## Supported operating systems

This product supports the following Microsoft Windows operating systems:

- Windows XP
- Windows 7

## Microsoft POS for .NET SDK

Install "Microsoft POS for .NET SDK 1.12" before installing this product.

<http://www.microsoft.com/downloads/en/details.aspx?FamilyID=eaae202a-0fcc-406a-8fde-35713d7841ca&displaylang=en>

SDK contains the documents and sample codes.

## .NET Framework

The following Microsoft .NET Framework is required to use this product.

- Microsoft .NET Framework 2.0 SP2
- Microsoft .NET Framework 3.5 SP1

## Supported models

The models supported by this product and the corresponding interfaces are as listed below.

Refer to the user's manual of the printer for the detailed functions of each model.

Series of Model	Object Model	Interface	Printer Functions
CT-S310	CT-S310	Serial, Parallel, USB, Ethernet	Standard (Paper with blackmark on front side is supported.)
	CT-S310-M1/M2	Serial, Parallel, USB, Ethernet	Paper with blackmark on back side is supported.
CT-S310II	CT-S310II	Serial, USB	Standard
CT-S601/651/801/851	CT-S601/651/801/851	Serial, Parallel, USB, Ethernet	Standard
	CT-S801/851-M	Serial, Parallel, USB, Ethernet	Blackmark paper is supported.
	CT-S801-L	Serial, Parallel, USB, Ethernet	Label paper is supported.
CT-S2000	CT-S2000	Serial, Parallel, USB, Ethernet	Standard
	CT-S2000-M	Serial, Parallel, USB, Ethernet	Blackmark paper is supported.
	CT-S2000-L	Serial, Parallel, USB, Ethernet	Label paper is supported.

**USB interface connection**

You need to install the printer driver to use this product via the USB interface connection. The driver to be installed varies by the USB mode setting of the printer:

- 1) When the USB mode is the Printer Class  
Install the Windows driver. On the POS for .NET driver, specify the USB interface port (Virtual printer port for USB) specified on the Windows driver.
- 2) When the USB mode is Virtual COM  
Install the Virtual COM driver. On the POS for .NET driver, specify the serial interface port specified on the Virtual COM driver.

**Parallel interface connection**

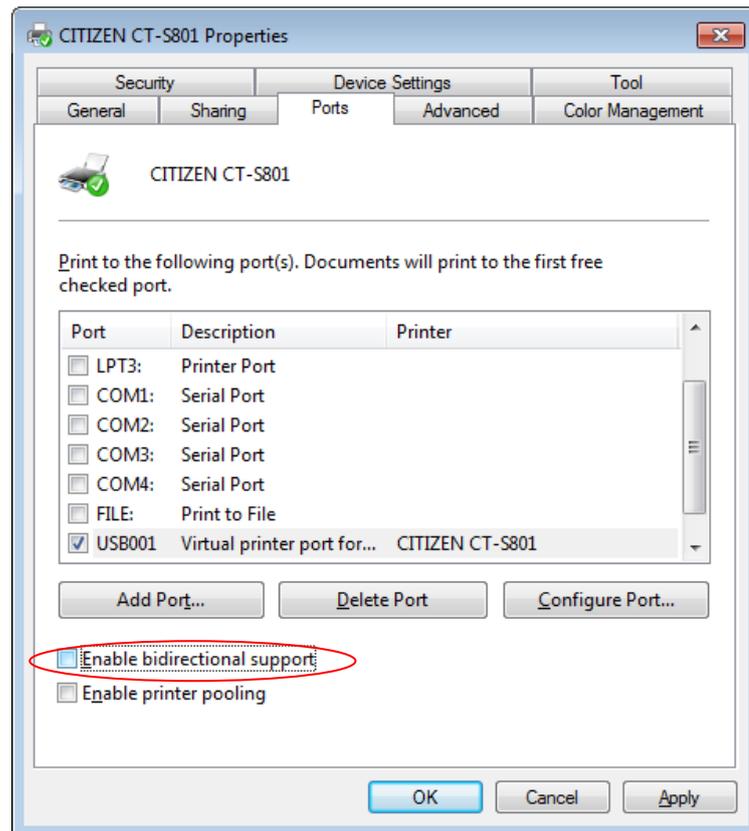
When the terminal and the printer are connected via the parallel interface, the installation wizard that requests the installation of the printer driver may be activated every time when the terminal is started up. You need to install the Windows driver to prevent the installation wizard from being activated.

**Installation of the Windows driver**

The Windows drivers that support each model are as listed below. For the installation instruction of the Windows driver, refer to the "Windows Driver Guide" that is attached to the Windows driver.

<b>Object Model</b>	<b>Windows Driver Name</b>	<b>Printer Function</b>
CT-S310	CITIZEN CT-S310	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-S310II	CITIZEN CT-S310II	Standard
CT-S601/651/801/851	CITIZEN CT-S601/651/801/851	Standard
CT-S801/851-M	CITIZEN CT-S801/851 Black Mark	Blackmark paper is supported.
CT-S801-L	CITIZEN CT-S801 Label	Label paper is supported.
CT-S2000	CITIZEN CT-S2000	Standard
CT-S2000-M	CITIZEN CT-S2000 Label	Blackmark paper is supported.
CT-S2000-L	CITIZEN CT-S2000 Label	Label paper is supported.

- \* This driver cannot be used with the status function (language monitor) of the Windows driver that shows the printer status. When using this driver, **install the Windows driver without the status function, or uncheck the "Enable bidirectional support" option under the Ports setting of the Windows driver.** (Need to reboot the computer in order for the changes to take effect.)



### **Installation of the USB Virtual COM driver**

Install the Virtual COM driver that corresponds to each model. For the installation instruction of the Virtual COM driver, refer to the "Virtual COM Driver Installation Guide" that is attached to the Virtual COM driver.

Each model and the corresponding USB virtual COM mode are as listed below:

Model Name	Corresponding Status for Virtual COM Mode	Port Name (Port Number)
CT-S310	Supported	Ctvrcom Virtual Communication Port (COM8)
CT-S310-M1/M2		
CT-S310II	Supported	Ctvrcom Virtual Communication Port (COM8)
CT-S601/651/801/851	Supported	Ctvrcom Virtual Communication Port (COM8)
CT-S801/851-M		
CT-S801-L		
CT-S2000	Supported	Ctvrcom Virtual Communication Port (COM8)
CT-S2000-M		
CT-S2000-L		

## 2. Installation

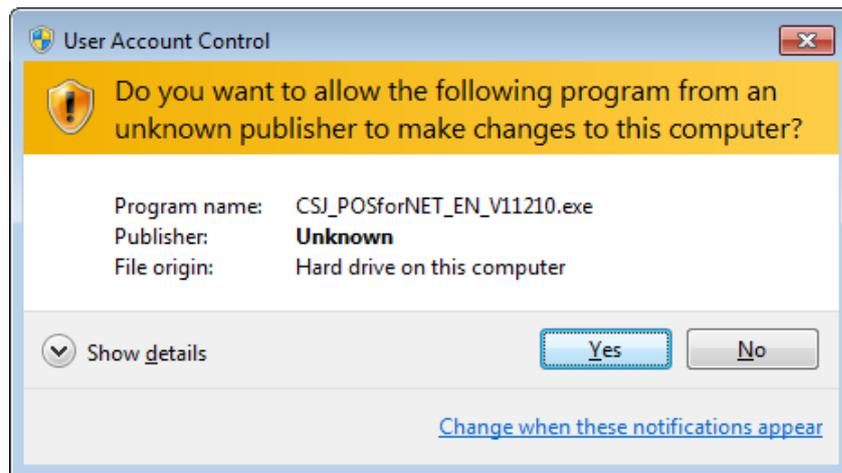
### 2.1. Installation Procedure

This section describes the installation instruction of this product.

Make sure to terminate all the running applications before starting the installation.

- 1) Activate CSJ\_POSforNET\_JA\_Vxxxx.exe (the installer, where xxxx represents the version). Proceed with the installation by following the instruction of the dialog.

On Windows 7, click "Yes" when the following "User Account Control" dialog is displayed.



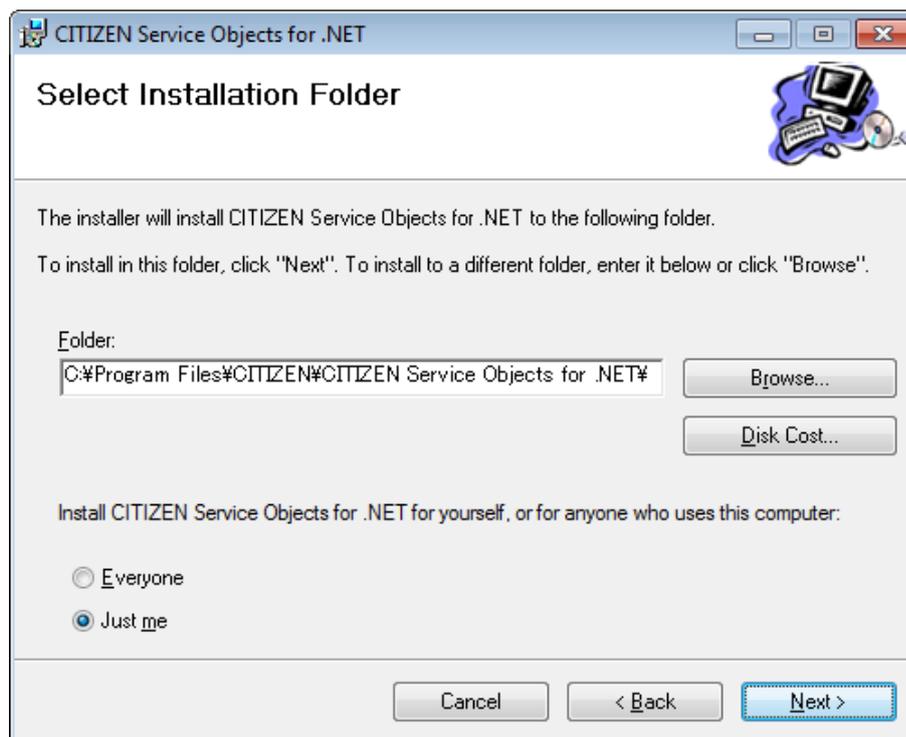
- 2) The Setup Wizard is activated. Click "Next".



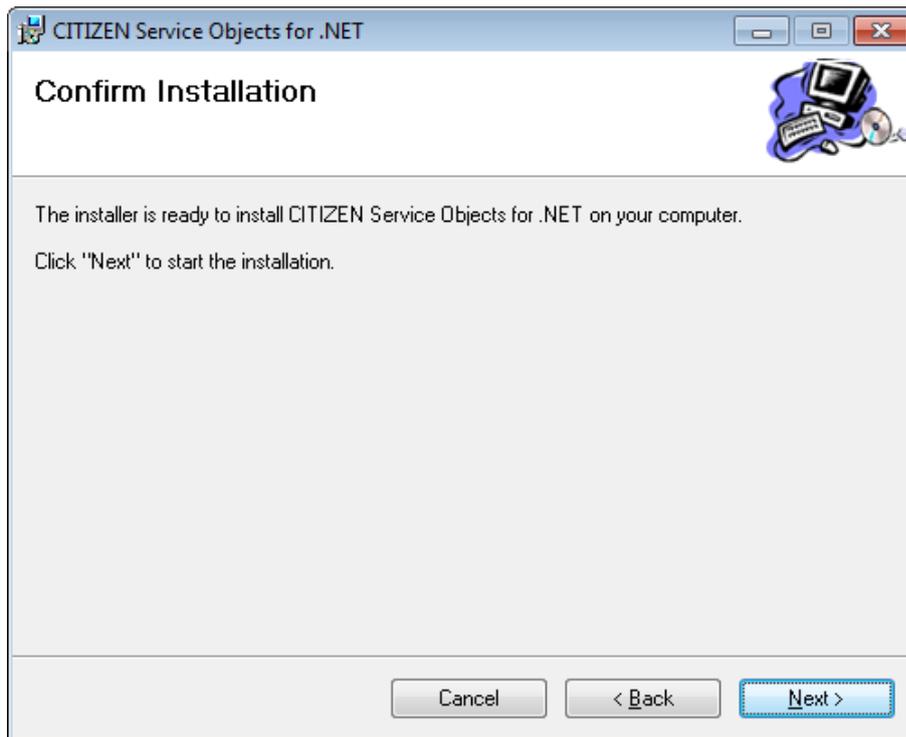
- 3) The "License Agreement" window is displayed.  
Select "I Agree" and click "Next" if you agree with the license agreement. Select "I Do Not Agree" and terminate the Setup Wizard if you do not agree with the license agreement.



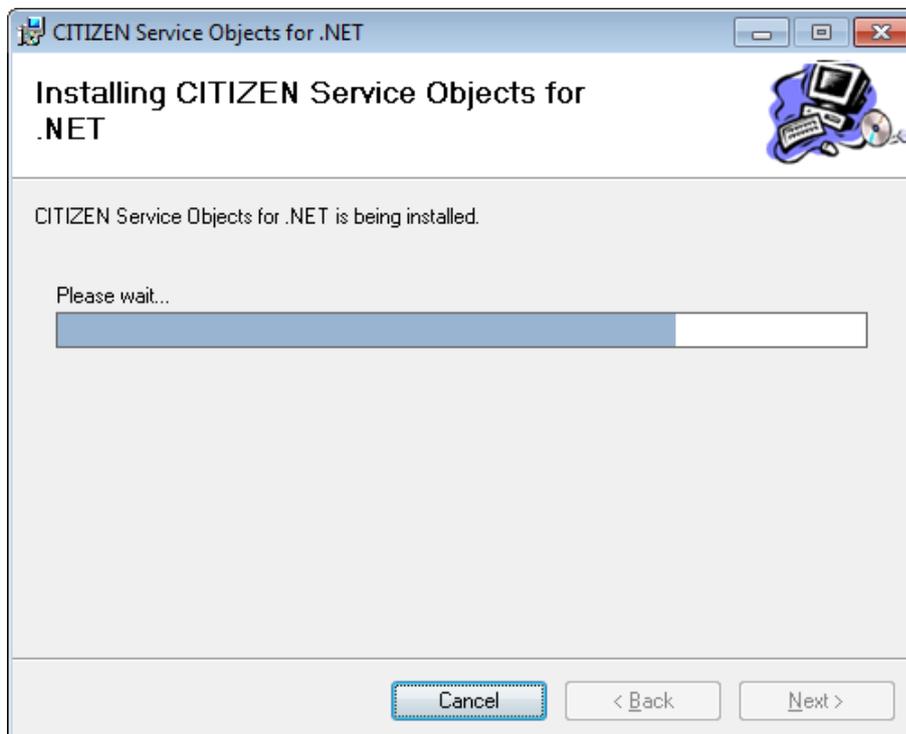
- 4) The "Select Installation Folder" window is displayed.  
Specify the installation directory. If you do not change the default installation folder, click "Next". To change the default installation folder, specify a desired folder for installation.



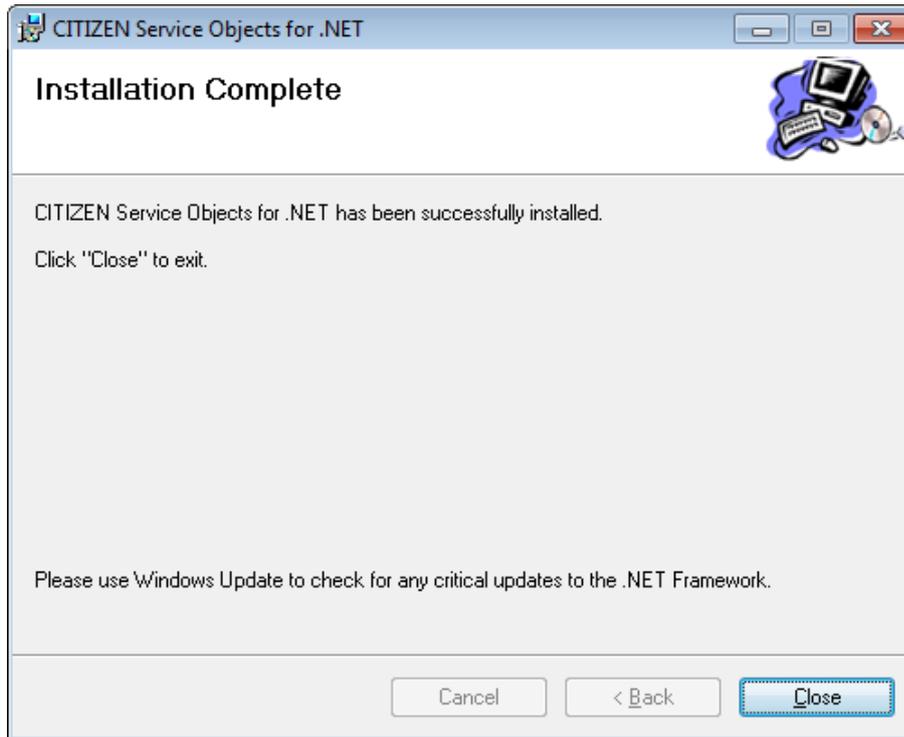
- 5) The window to confirm the installation is displayed. Click "Next".



- 6) The window to show the installation progress is displayed.  
(It may take longer time to complete, depending on the environment and specifications of the terminal)



- 7) When the installation is completed successfully, the "Installation Complete" window is displayed. Click "Close".



## 2.2. Installation Structure

This section shows the installation files of this product.

"Installation Folder"¥CITIZEN¥CITIZEN Service Objects for .NET

— BcWidth.dll	: Extended library for service objects
— ConfigurationUtility.exe	: Driver setting tool
— CSJCheckHealthLib.dll	: Extended library for setting tool
— CSJWPOS.dll	: Service objects for the line thermal printer
— EventLog.dll	: Extended library for service objects
— License.rtf	: Driver license agreement
— PortService.exe	: Port service
— PortServiceRemote.dll	: Extended library for port service
— ReleaseNotes_EN.txt	: Release Notes file

## 2.3. Uninstallation Procedure

This section describes the uninstallation of this product.

### Deleting Configuration XML file

Delete the physical and logical devices in Configuration Utility.

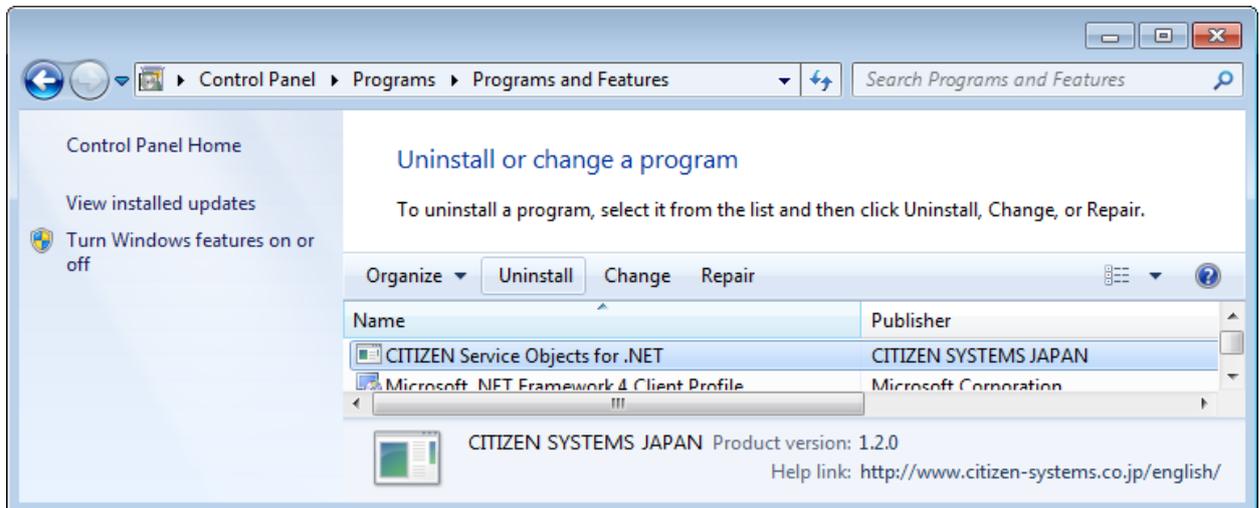
The Configuration XML file is deleted when everything is deleted.

For the deletion of a device, see the description in "3.4 Deleting a device".

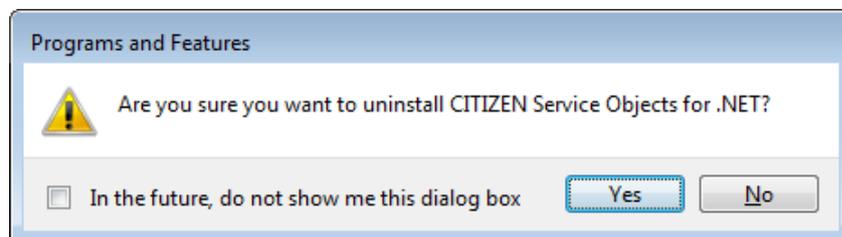
※ It is recommended to leave the registered device setting when upgrading the version of this product.

### Deleting Service Objects for .NET

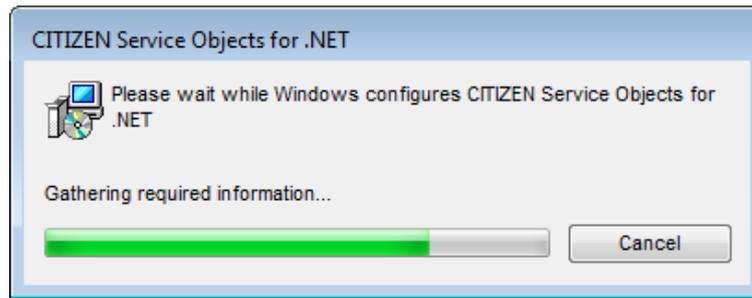
- 1) Under "Control Panel" - "Programs" - "Programs and Features" (it may be "Add/Remove Programs" in some OS versions) list, select "Citizen Service Objects for .NET" and click "Uninstall".



- 2) The message dialog of "Add/Remove Programs" is displayed. Click "Yes". Or, click "No" to cancel the uninstallation of this program.



- 3) The dialog to show the progress of the uninstallation processing is displayed.



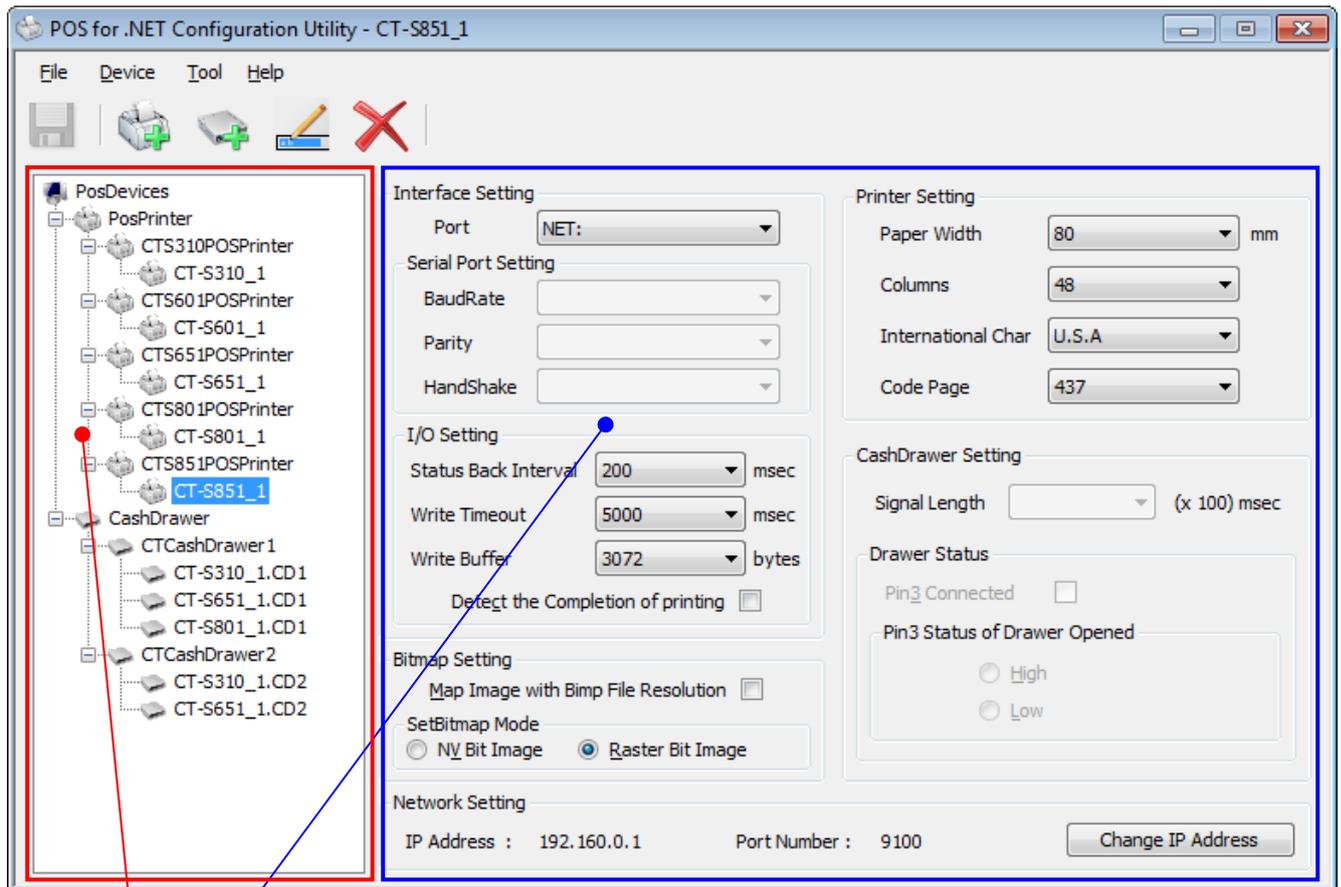
- 4) When the uninstallation is completed successfully, "Citizen Service Objects for .NET" is removed from the list of the "Programs and Features" (or "Add/Remove Programs" in some OS versions).

### 3. POS for .NET Driver Setting Tool

This section describes the usage of Configuration Utility. When the driver is installed, the shortcut icon is registered in the Windows Start Menu.

"Start" -> "Programs" -> "CITIZEN" -> "Pos for .NET" -> "Configuration Utility"

#### Main Screen

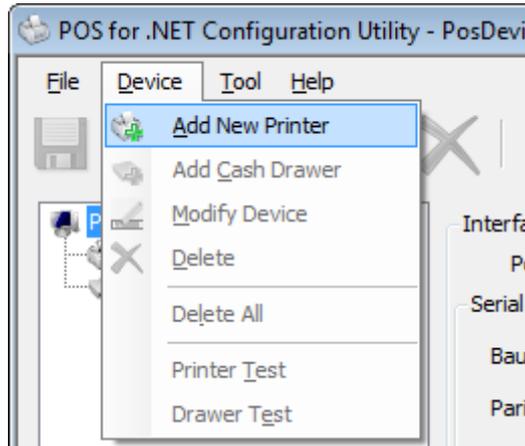


**Setting View:** The setting of each device is displayed (the setting can be changed directly)

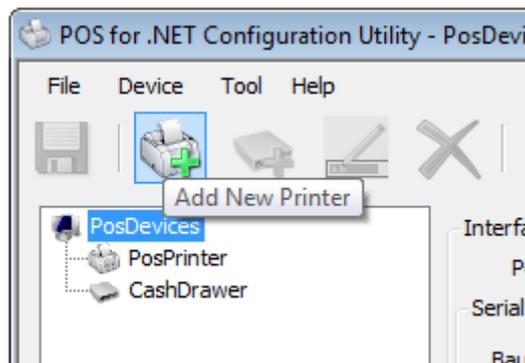
**Device View:** The service objects and the logical devices are shown in the tree view.

### 3.1. Adding New Printer and Cash Drawer

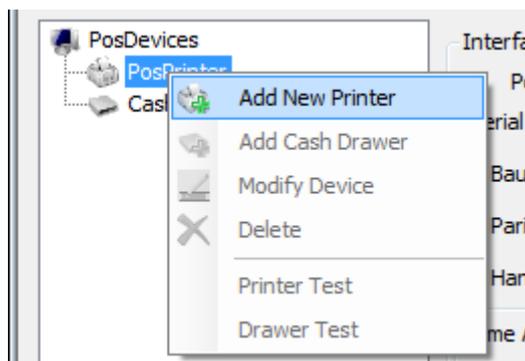
- 1) Click "Add New Printer" in the "Device" menu.



Or, click "Add New Printer" icon on the tool bar.



Or, click "Add New Printer" in the context menu on the device view.

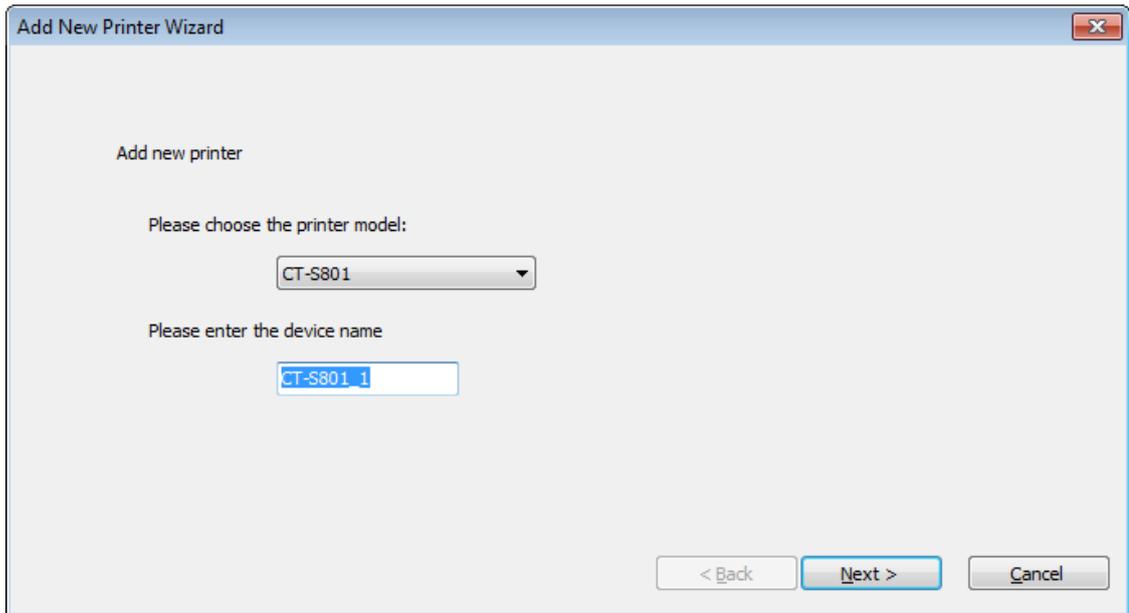


- 2) "Add New Printer Wizard" is activated.

Enter the model and the logical device name of the printer to be added, and click "Next".

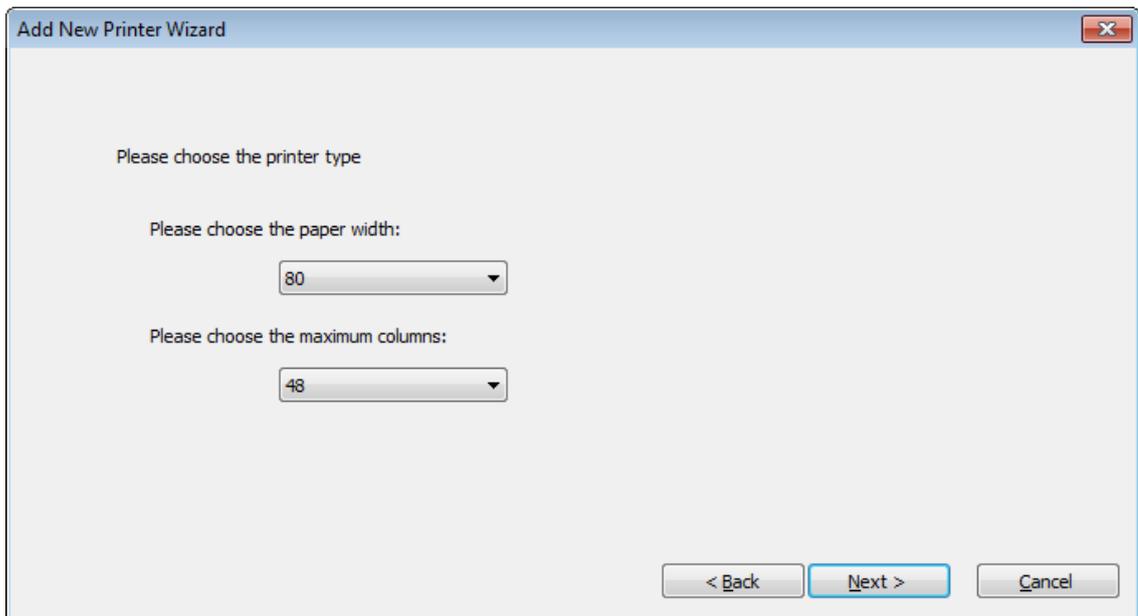
The default logical device name is the "model name of the printer+ serial number of the printer".

(CT-S801 is specified in this example)



For the functions of each printer, see "1. Operating Environment".

- 3) The "Please choose the printer type" window is displayed.  
Choose the paper width and the maximum columns per line with reference to the table below.  
The setting is linked to the default value of the "RecLineWidth / RecLineChars / RecLineCharsList"  
properties.  
For details, refer to Application Development Guide of this product.



**CT-S310 Series**

Paper Size (mm)		Max. print columns	RecLineWidth	RecLineChars	RecLineCharsList
80	58	30	360	30	30, 40, 45
		32	384	32	32, 42, 48
	42	504	42	42, 56, 63	
	48	576	48	48, 64, 72	

**CT-S310II Series**

Paper Size (mm)		Max. print columns	RecLineWidth	RecLineChars	RecLineCharsList
80	58	30	360	30	30, 40, 45
		32	384	32	32, 42, 48
		35	420	35	35, 46, 52
	42	512	42	42, 56, 64	
	48	576	48	48, 64, 72	

**CT- S601/651/801/851 Series**

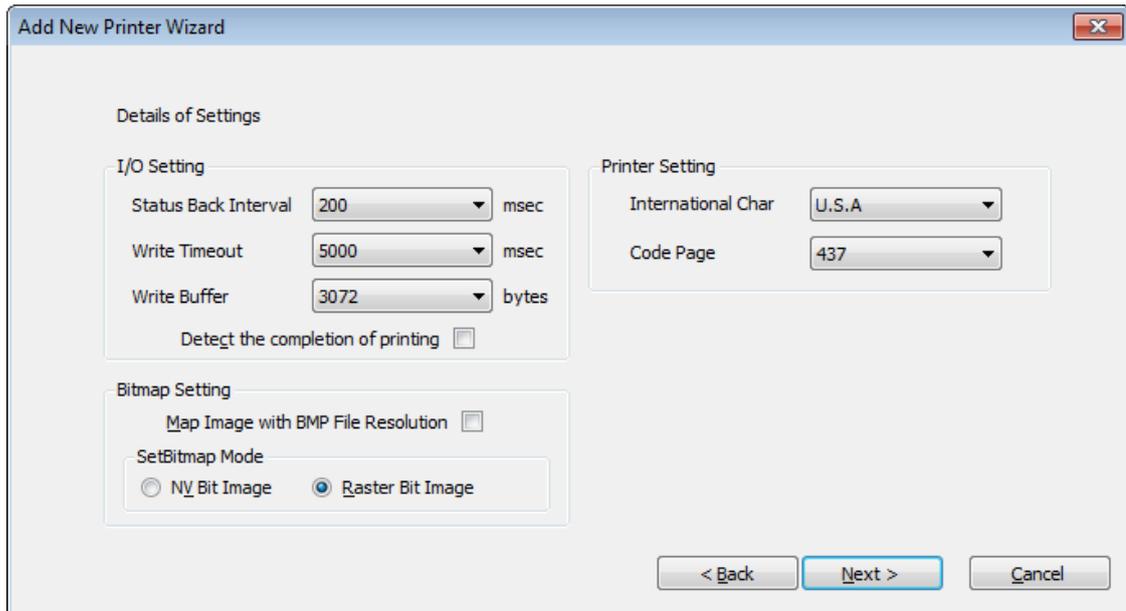
Paper Size (mm)				Max. print columns	RecLineWidth	RecLineChars	RecLineCharsList
83	80	60	58	30	360	30	30, 40, 45
				32	384	32	32, 42, 48
				35	420	35	35, 46, 52
	80	60	58	36	432	36	36, 48, 54
				42	512	42	42, 56, 64
				48	576	48	48, 64, 72
				53	640	53	53, 71, 80

**CT- S2000 Series**

Paper Size (mm)				Max. print columns	RecLineWidth	RecLineChars	RecLineCharsList
83	80	60	58	30	360	30	30, 40, 45
				32	384	32	32, 42, 48
				35	420	35	35, 46, 52
	80	60	58	36	432	36	36, 48, 54
				42	512	42	42, 56, 64
				48	576	48	48, 64, 72
				53	640	53	53, 71, 80

Specify the above settings, and click "Next".

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



### **Status Back Interval**

You can specify the polling interval to obtain the printer status.

Setting range: 100 – 900 msec

### **Write Timeout**

You can specify the timeout period for the writing to the output port.

Setting range: 5,000 - 1,000,000 msec

### **Write Buffer**

You can specify the buffer size for the writing to the output port.

Setting range: 0 - 4,096 bytes

### **Detect the completion of printing**

When you enable the setting, the driver judges the completion of the printing output. For the details of this setting, refer to Application Development Guide of this product.

### **International Char**

You can specify the international characters.

Setting Values: U.S.A/ France/ Germany/ U.K./ DenmarkI /Sweden/ Italy/ SpainI/ Japan/  
Norway/ DenmarkII/ SpainII/ Latin America/ Korea

### **Code Page**

You can specify the code page. (The selections vary by the model)

Setting Value: 437/ 850/ 852/ 857/ 858/ 860/ 863/ 864/ 865/ 866/ 874/ 932/ 998/ 999/ 1252/  
User Defined/

### **SetBitmap Mode**

You can specify the bit image mode of the SetBitmap method. For the details of this mode, refer to Application Development Guide of this product.

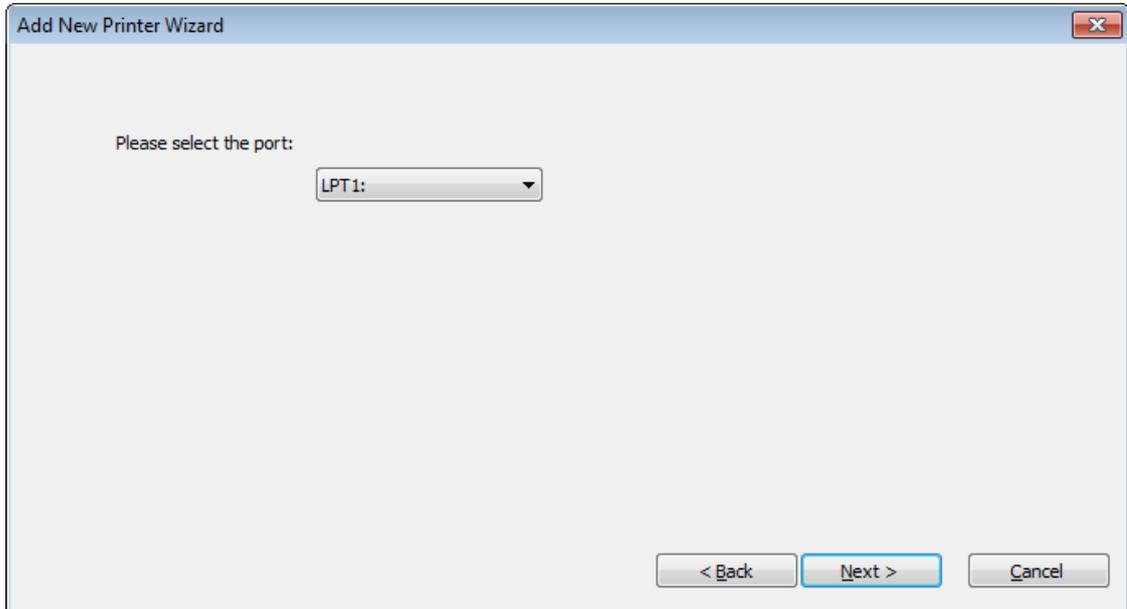
Setting values: NV Bit Image / Raster Bit Image

### **Map Image with BMP File Resolution**

When you enable the setting, a bit image that is specified with the Setbitmap method and PrintBitmap is output based on the BMP file resolution.

Specify the above settings and click "Next".

- 5) The "Please select the port" window is displayed.  
Select the port to use and click "Next".



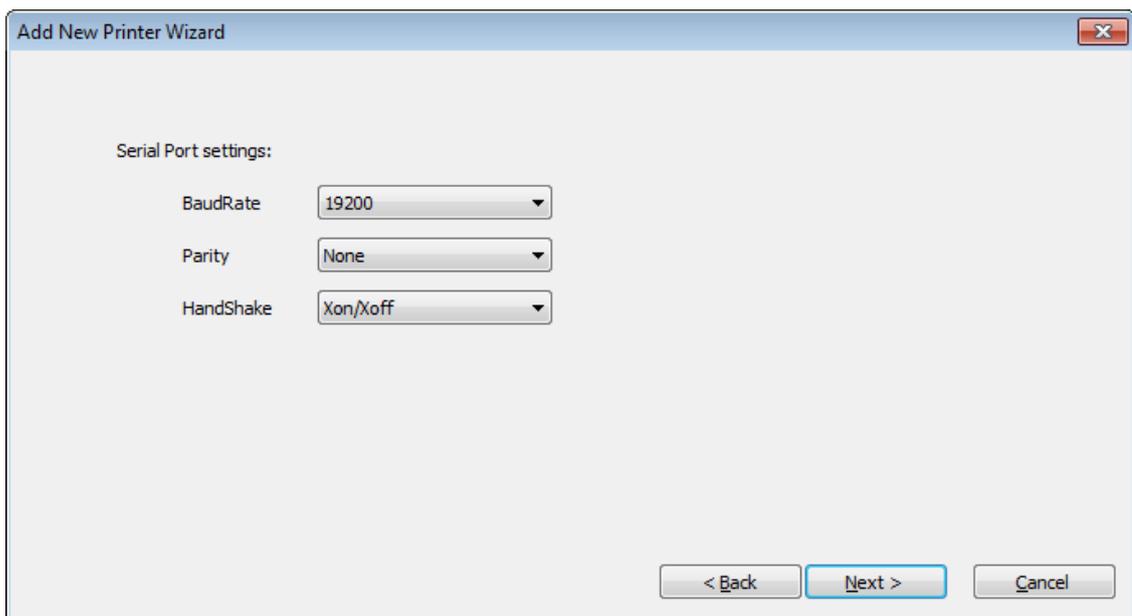
### **When the COM port is specified**

The "Serial Port settings" window is displayed.

Specify "BaudRate", "Parity" and "Handshake", and click "Next".

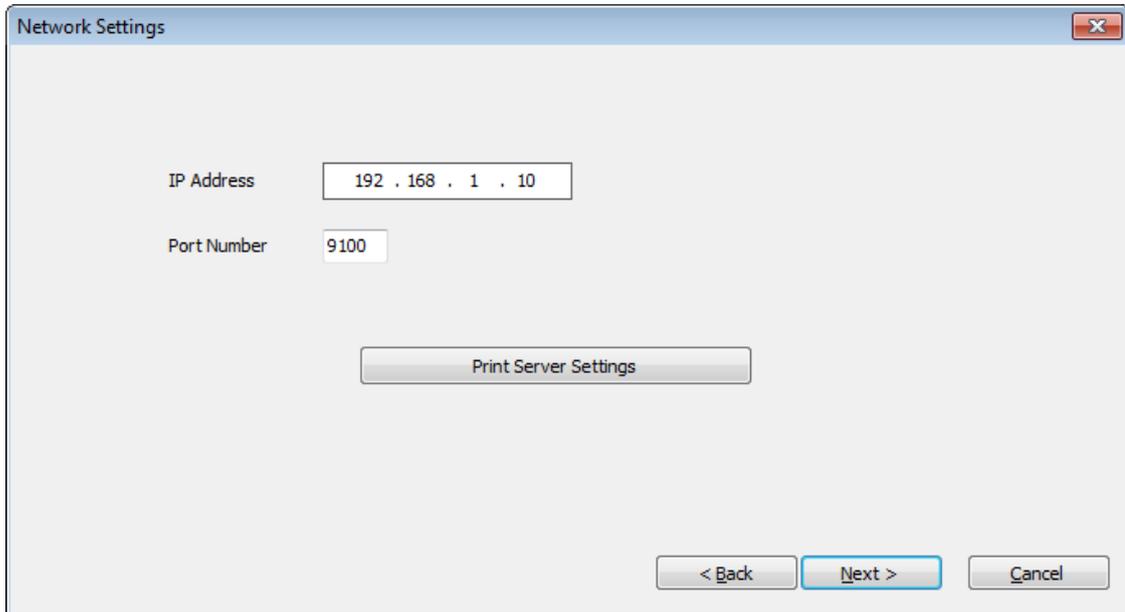
\* The communication cannot be performed when the same serial port setting is not made on the printer and the terminal.

For the serial port setting of the printer, refer to the user's manual of the printer.



**When NET is specified**

The "Network Settings" window is displayed. Input the "IP Address" and the "Port Number" to use.



\* When "Print Server Settings" is clicked, the print server setting tool is activated. For the usage of this tool, refer to the manual attached to the tool.

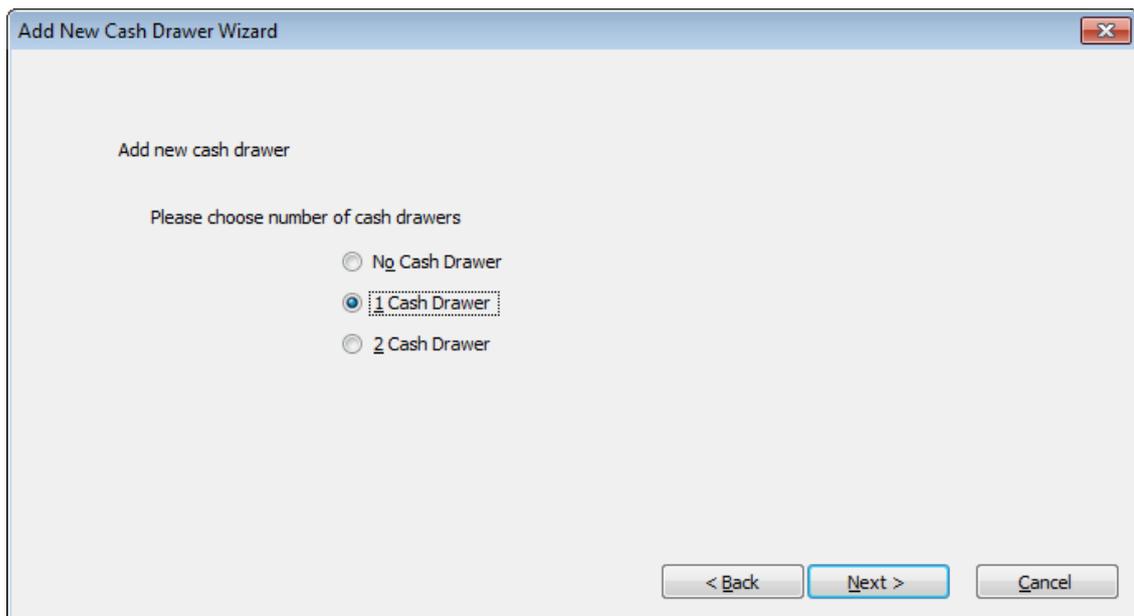
\* Specify "Job receive timeout" in "Print Server Settings".

It is recommended to set the time in seconds to cancel the connection to "120".

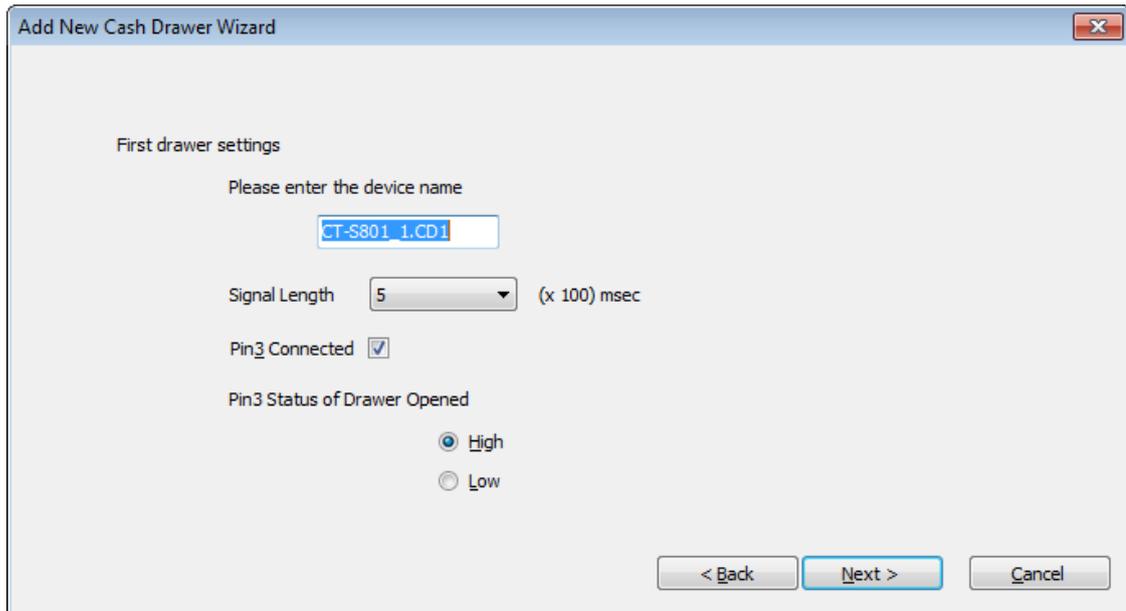
Specify the above settings and click "Next".

6) "Add New Cash Drawer Wizard" is activated subsequently.

Specify the number of the cash drawers connected to the printer, and click "Next".



When "1 Cash Drawer" or "2 Cash Drawer" is specified, the "First drawer settings" window is displayed.



### **Please enter the device name**

Enter the logical device name of the cash drawer.

The default logical device name is "the model name of the printer + the serial number of the printer + CD1".

(And for the second drawer, it is "the model name of the printer + the serial number of the printer + CD 2".)

### **Signal Length**

Specify the time interval of the pulse signal to be output to the solenoid of the cash drawer.

Setting range: 1 - 8 (x 100) msec

### **Pin3 Connected**

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

### **Pin3 Status of Drawer Opened**

Specify the drawer switch input signal level when the cash drawer is opened.

Setting values: High / Low

Specify the above settings and click "Next".

※ When "2 Cash Drawer" is specified and "Next" is clicked, the "Second drawer settings" window is displayed.

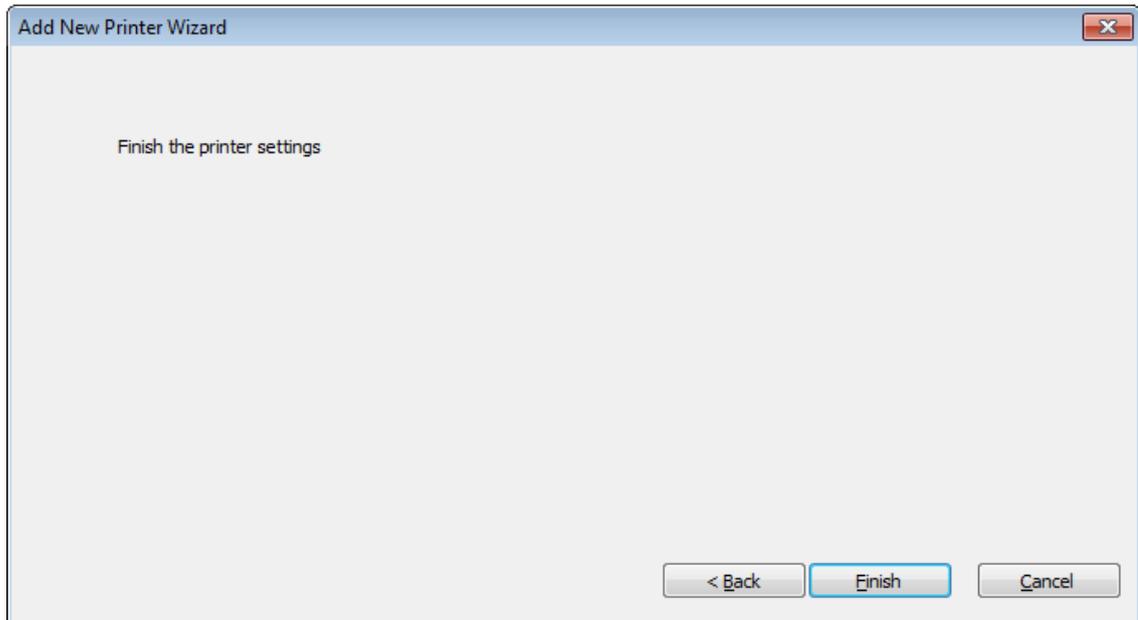
Make the settings for the second cash drawer in the same manner as the above setting, and click "Next".

7) The "Finish the printer settings" window is displayed.

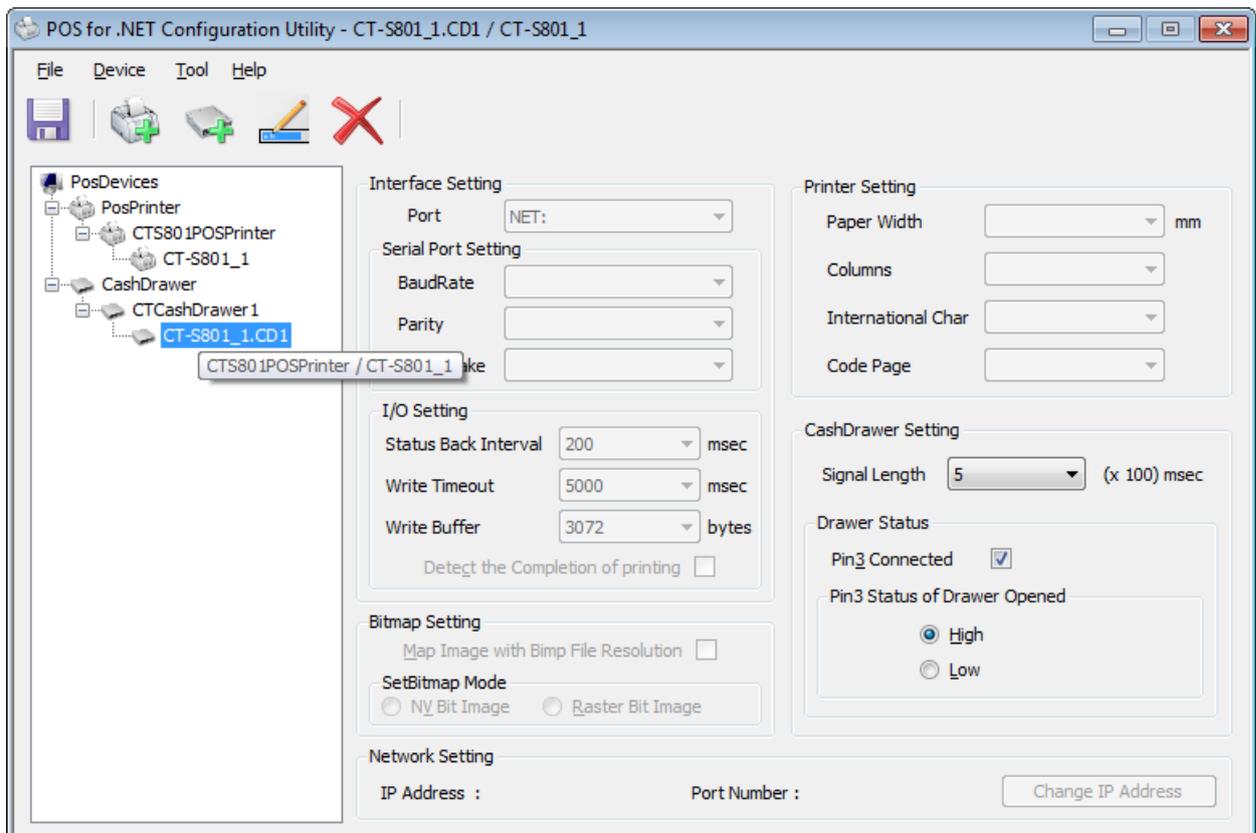
Click "Finish". The settings are not reflected to the Configuration XML file at this point.

\* The settings are not reflected to the Configuration XML file until "Save" is clicked on the Main Screen.

(See the description in "Save" in 3.5 "File menu" for how to "Save")



- 8) When the wizard is terminated, the registered printer and the cash drawer are shown in “Device View” and “Setting View”. When the drawer is selected, the logical device name of the connected printer is added at the tail of the logical device name on the title bar, and the “service object name of the connected printer / logical device name of the printer” is shown in the tooltip.

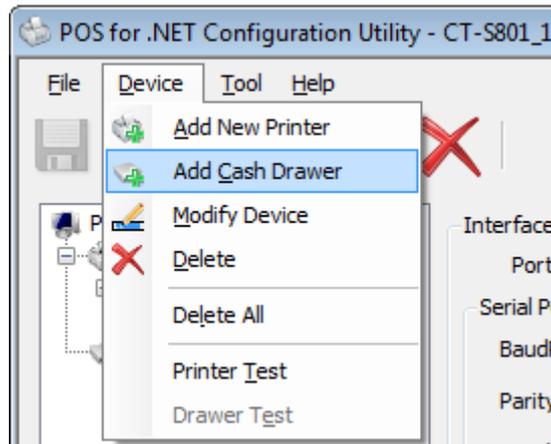


- \*1 After the device is registered, the setting of each item can be changed directly through the Setting View. The settings are not reflected to the Configuration XML file until “Save” is clicked on the Main Screen. (See the description in “Save” in 3.5 “File menu” for how to “Save”)
- \*2 Click “Change IP Address” to change “IP Address” or “Port Number” in the “Network Setting” section.

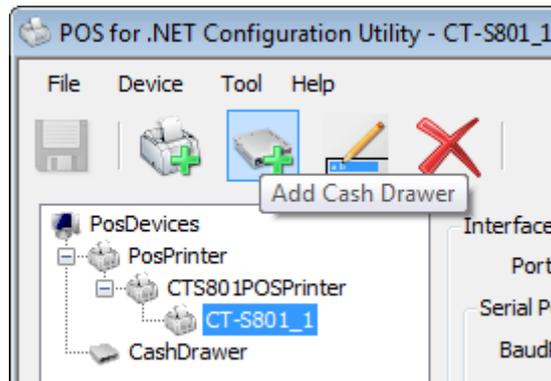
### 3.2. Adding New Cash Drawer

1) Click "Add Cash Drawer" in the "Device" menu.

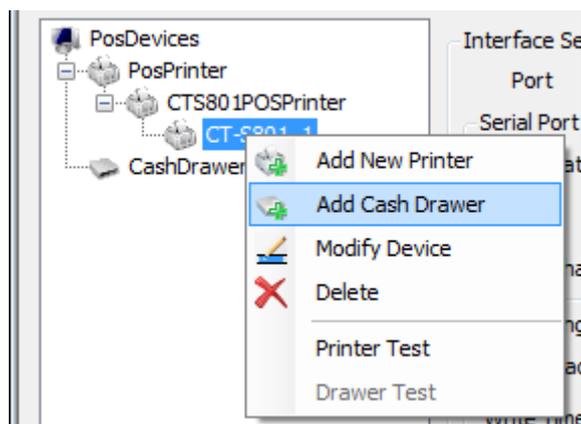
\* Make sure to complete the registration of the printer before adding a cash drawer.



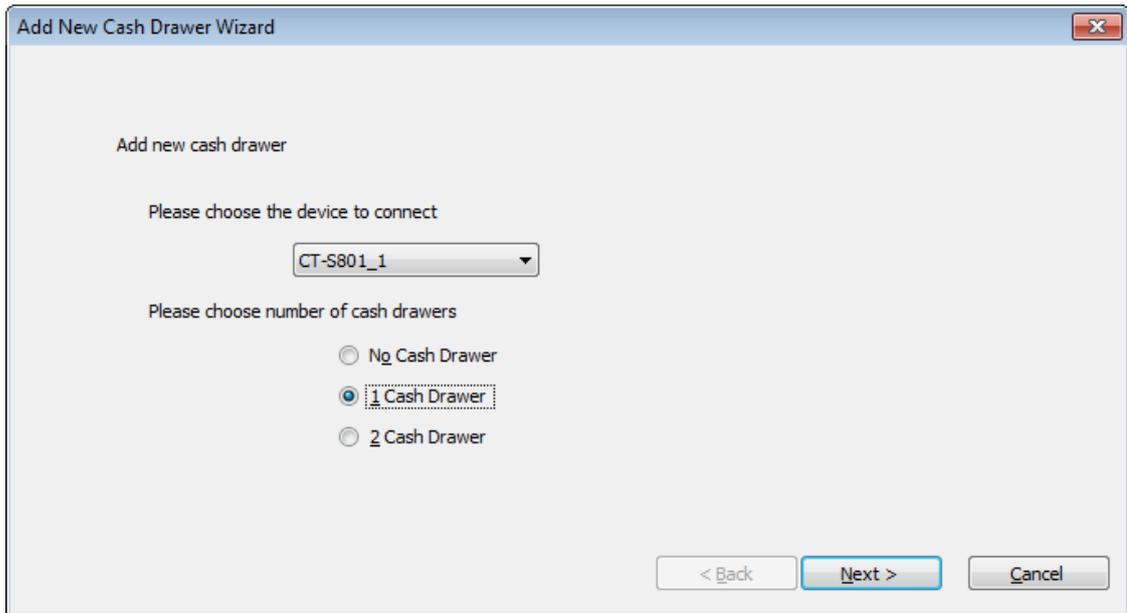
Or, click the "Add Cash Drawer" icon on the tool bar.



Or, click "Add Cash Drawer" in the context menu on the Device View.



2) "Add New Cash Drawer Wizard" is activated.

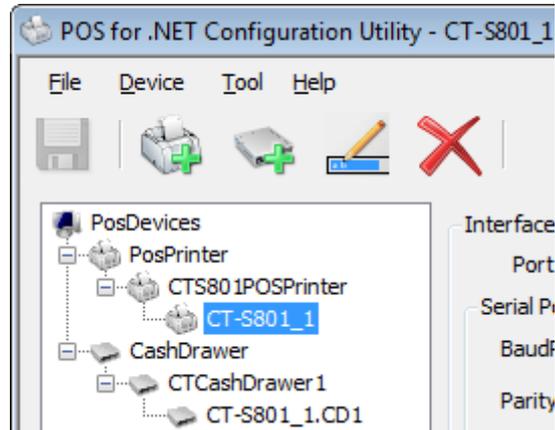


- \* For the subsequent procedure, see the descriptions in "6) "Add New Cash Drawer Wizard" is activated subsequently." and later in "3.1 Adding a new printer / cash drawer" and add a drawer in the same manner.

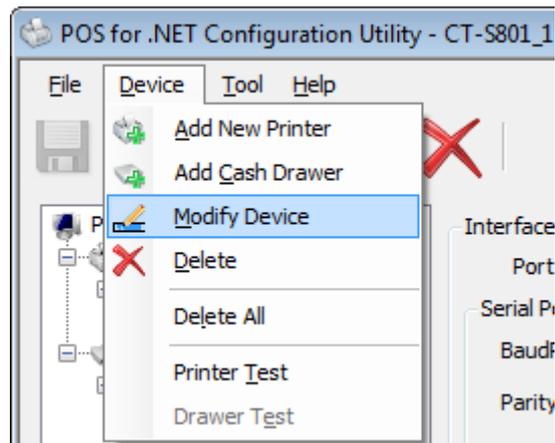
### 3.3. Modifying Logical Device

Modify the logical device name of the registered printer or cash drawer.

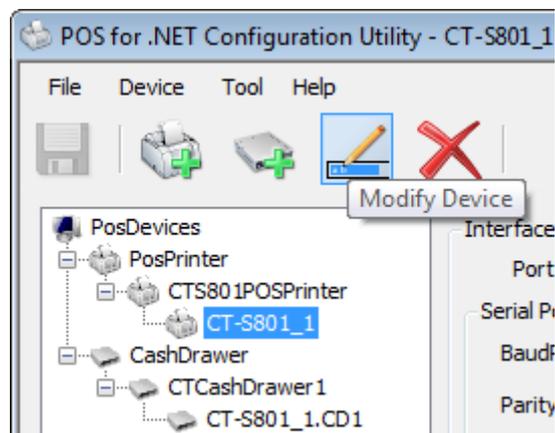
- 1) Select the printer or the cash drawer to change the logical device name from the list of "PosDevices" in the Device View.



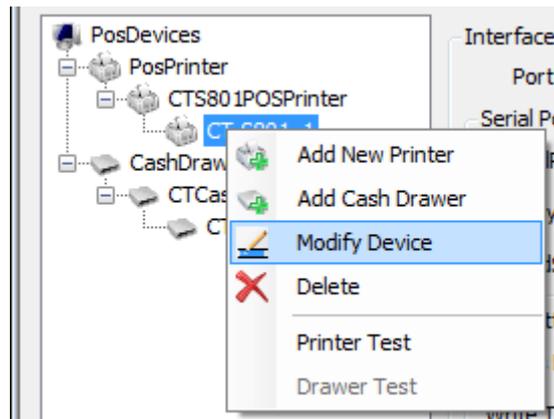
- 2) Click "Modify Device" in the "Device" menu.



Or, click the "Modify Device" icon on the tool bar.



Or, Click "Modify Device" in the context menu on the Device View.



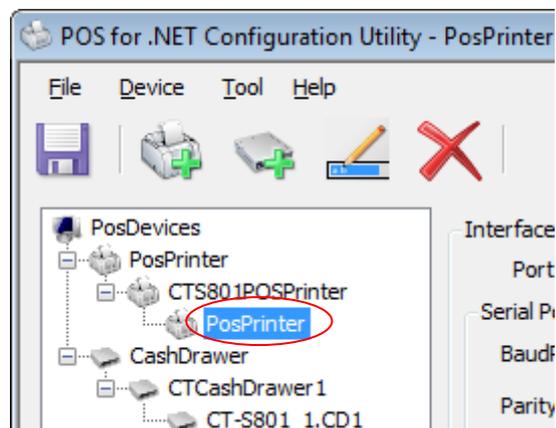
- 3) The “Modify Device” window is displayed.

The logical device name of the selected printer or cash drawer before modification is shown in “The device name before modification”. Enter the new logical device name in the “Please enter the device name” textbox.



Specify the above and click “OK”. Or, click “Cancel” to cancel the above setting.

- 4) When the above operation is completed, the modified logical device name is shown in the Device View. (Circled in red in the image below)



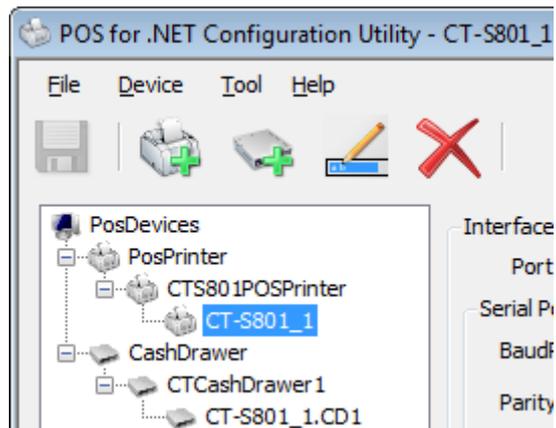
### 3.4. Deleting Device

Delete a registered physical device (printer or cash drawer).

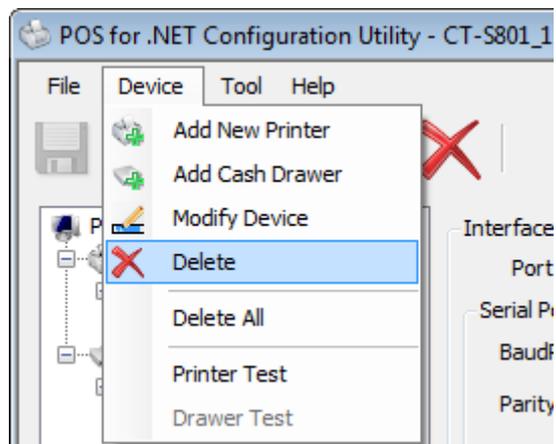
\* Even after "Delete" or "Delete All" is executed, the setting is not reflected to the Configuration XML file until "Save" is clicked on the Main Screen. (See the description in "Save" in 3.5 "File menu" for how to "Save")

#### Deleting Printer

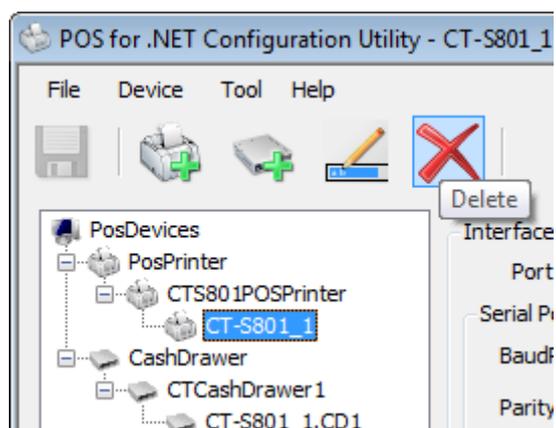
- 1) Select the printer to remove from the list of "PosPrinter" in the Device View.



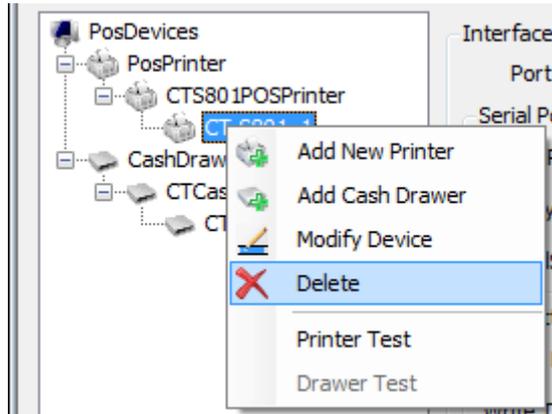
- 2) Click "Delete" in the "Device" menu.



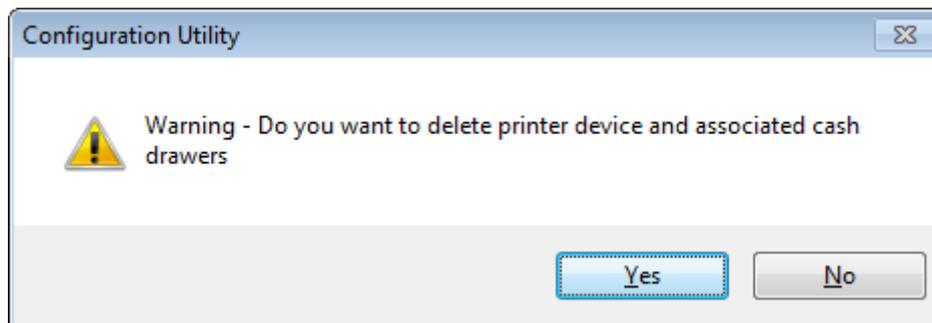
Or, click the "Delete" icon on the tool bar.



Or, click "Delete" in the context menu on the Device View.



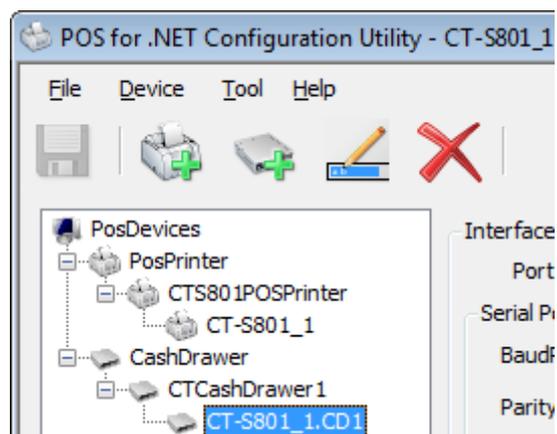
- 3) The message dialog "Warning – Do you want to delete printer device and associated cash drawers" is displayed. Click "Yes". Or, click "No" to cancel the deletion of the printer.



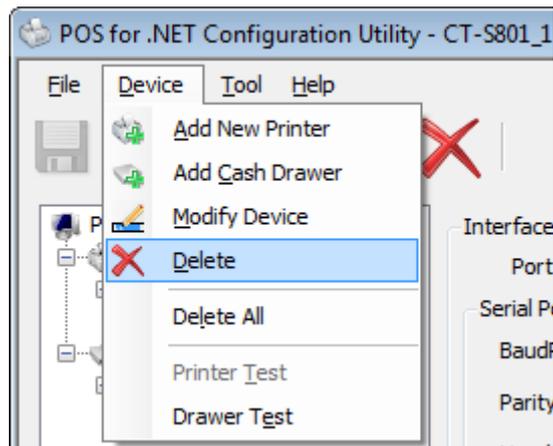
\* When the printer is deleted, the registered drawers are also deleted.

### **Deleting Cash Drawer**

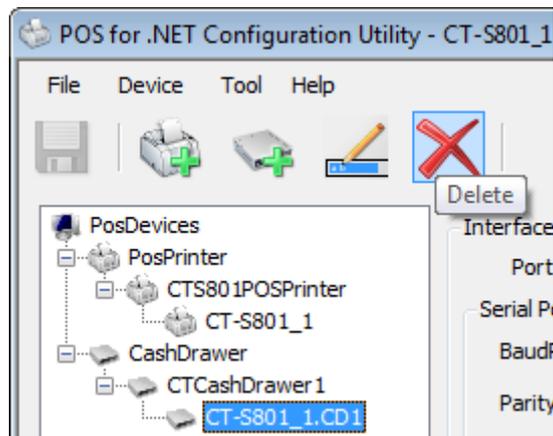
- 1) Select a cash drawer to remove from the list of "CashDrawer" in the Device View.



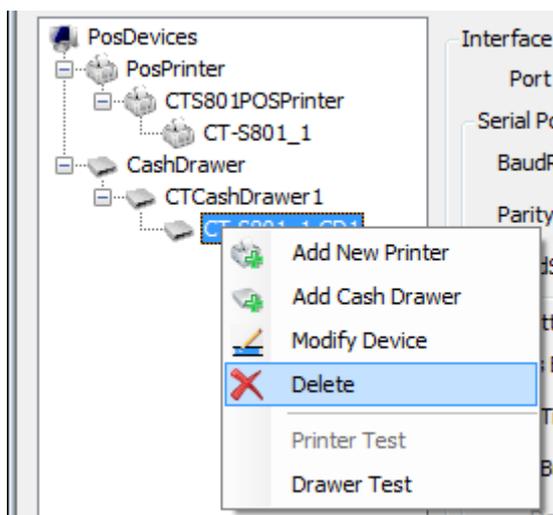
- 2) Click "Delete" in the "Device" menu.



Or, click the "Delete" icon on the tool bar.

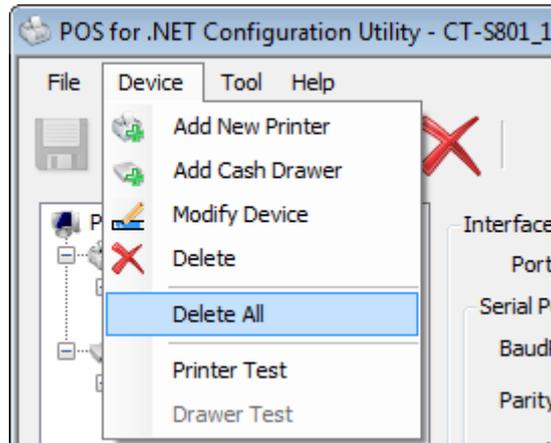


Or, click "Delete" on the context menu on the Device View.

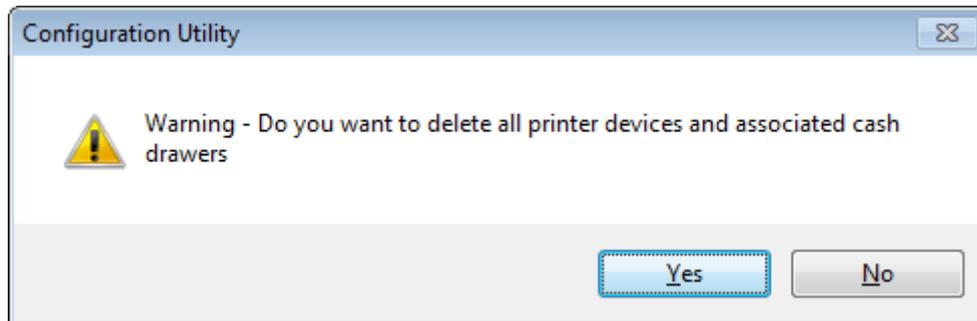


**Delete all devices (Delete All)**

- 1) Click "Delete All" in the "Device" menu.



- 2) The message dialog "Warning – Do you want to delete all printer devices and associated cash drawers" is displayed. Click "Yes". Or, click "No" to cancel the delete all.



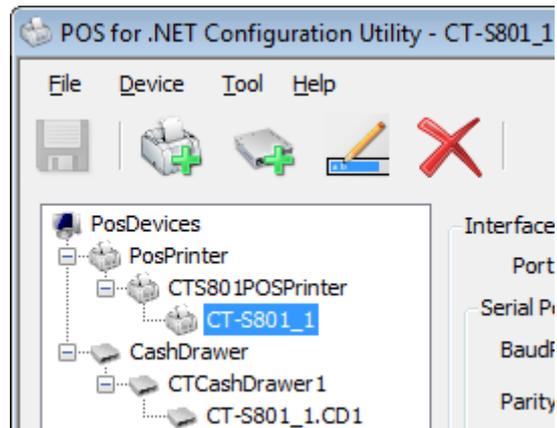
### 3.5. Testing Device

Test a registered physical device (printer or cash drawer).

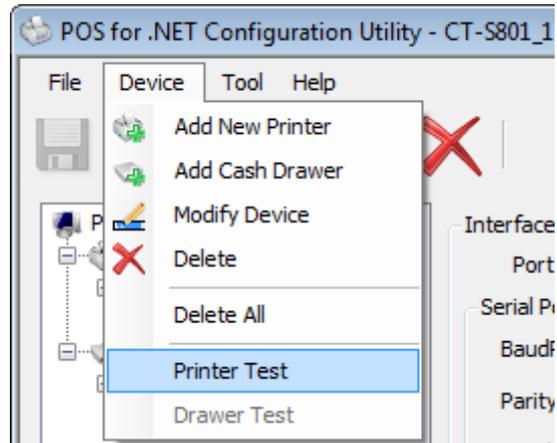
\* Before testing device, it is necessary to save the setting. (See the description in "Save" in 3.5 "File menu" for how to "Save")

#### Testing Printer

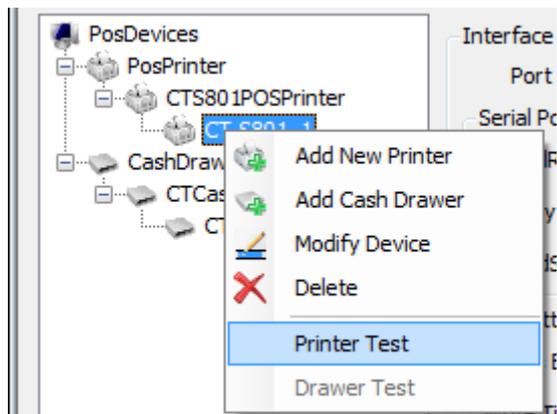
- 1) Select the printer to test from the list of "PosPrinter" in the Device View.



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

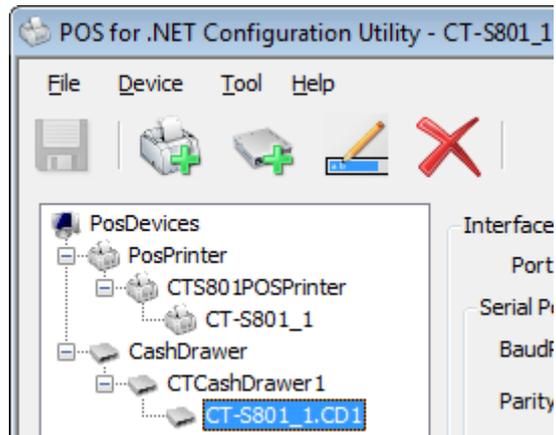


Or, click "Printer Test" on the context menu on the Device View.

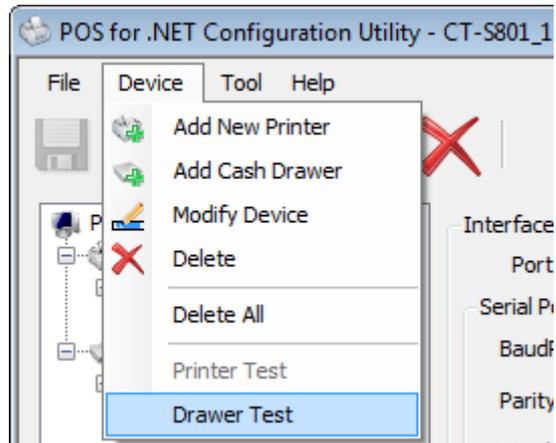


## Testing Cash Drawer

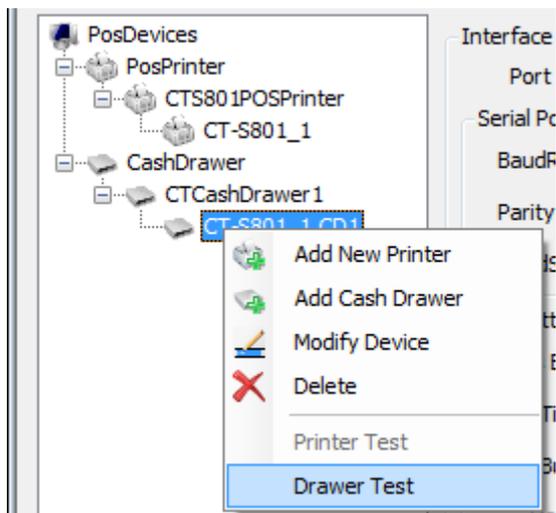
- 1) Select a cash drawer to test from the list of "CashDrawer" in the Device View.



- 2) Click "Drawer Test" in the "Device" menu.

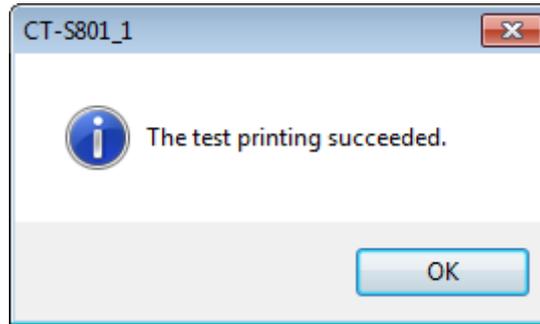


Or, click "Drawer Test" on the context menu on the Device View.



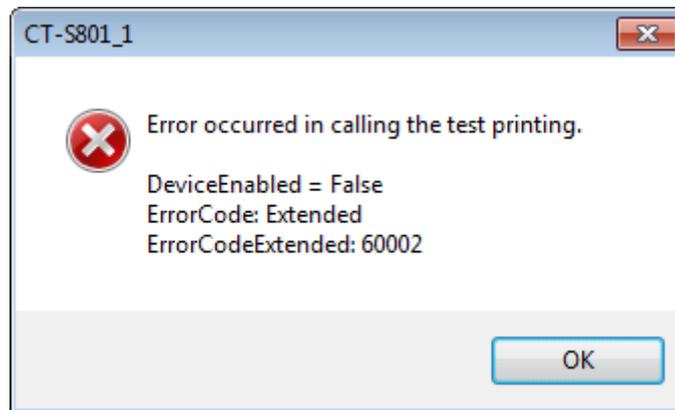
## **Test Results**

If you can successfully run the testing, the following message is displayed.



When the printer was selected, the test printing is run. And when the cash drawer was selected, the CheckHealth method is run.

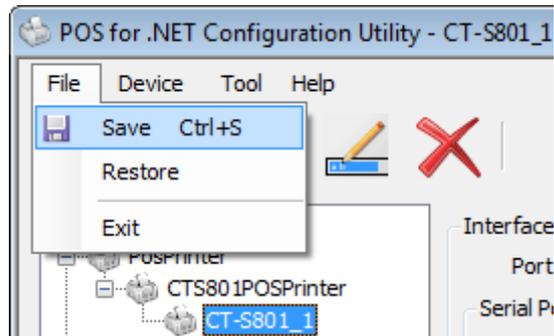
If an error occurred calling the testing, like the following error message is displayed.



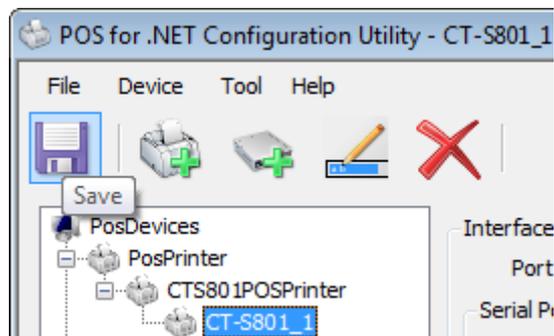
### 3.6. File Menu

#### Save

- 1) Click "Save" in the "File" menu.



Or, click the "Save" icon on the tool bar.

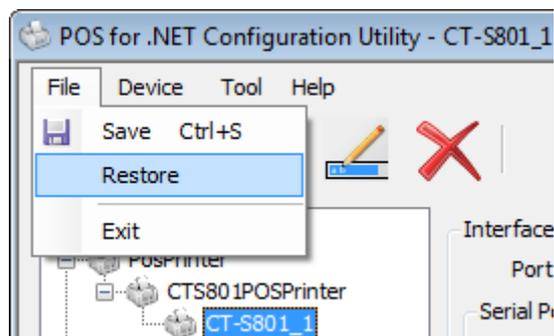


The above operation reflects the current setting to the Configuration XML file.

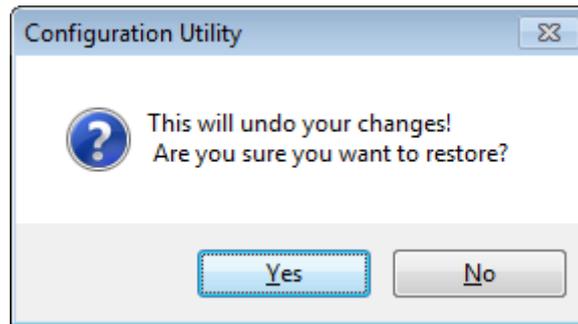
\* This function can be selected only when a change is made after activation, saving or restoration.

#### Restore

- 1) Click "Restore" in the "File" menu.



- 2) The message dialog "This will undo your changes! Are you sure you want to restore?" is displayed. Click "Yes". Or, click "No" to cancel the restoration.

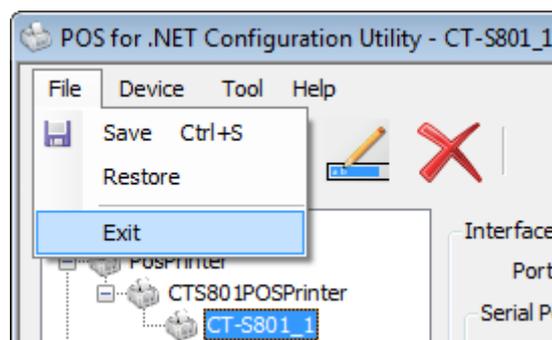


The above operation changes the current setting to the state upon the last saving. (When saving is not performed after the activation, it is changed to the state immediately after the activation.)

\* This function can be selected only when a change is made after activation, saving or restoration.

### **Exit**

- 1) Click "Exit" in the "File" menu.

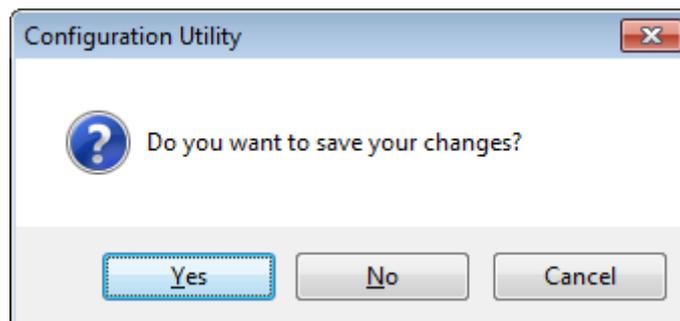


- 2) Upon exiting, the message dialog "Do you want to save your changes?" is displayed when the current setting has not been saved in the Configuration XML file (you will exit directly when the current setting is saved.)

Click "Yes" to reflect the current setting to the Configuration XML file and exit the Configuration Utility.

Click "No" to exit the Configuration Utility without reflecting the current setting to the Configuration XML file.

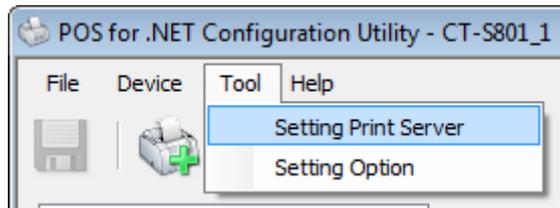
Click "Cancel" to cancel the exit and return to the Main Screen.



### 3.7. Tool Menu

#### Setting Print Server

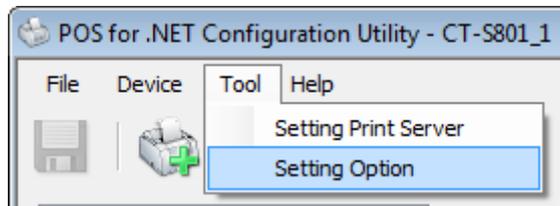
- 1) Click "Setting Print Server" in the "Tool" menu.



- \* The print server setting tool is activated when "Setting Print Server" is clicked. Refer to the manual attached to the tool for the usage of this tool.

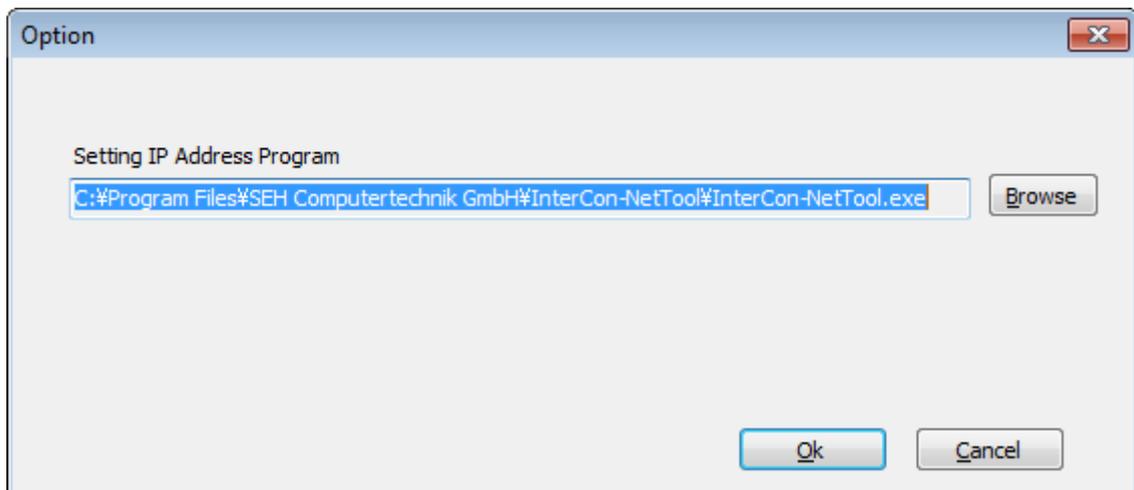
#### Setting Option

- 1) Click "Setting Option" in the "Tool" menu.



- 2) The "Option" dialog is displayed.

When the print server setting program has not been installed under the default directory, you can specify it on this screen.

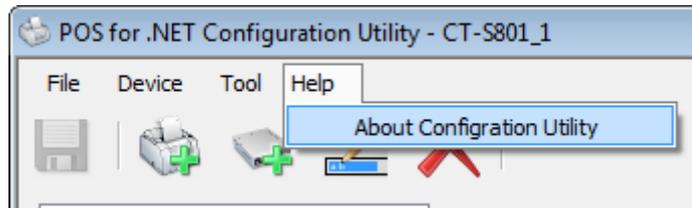


- \* "C:\Program Files\SEH Computertechnik GmbH\InterCon-NetTool\InterCon-NetTool.exe" is the default setting when the POS for .NET driver is installed.

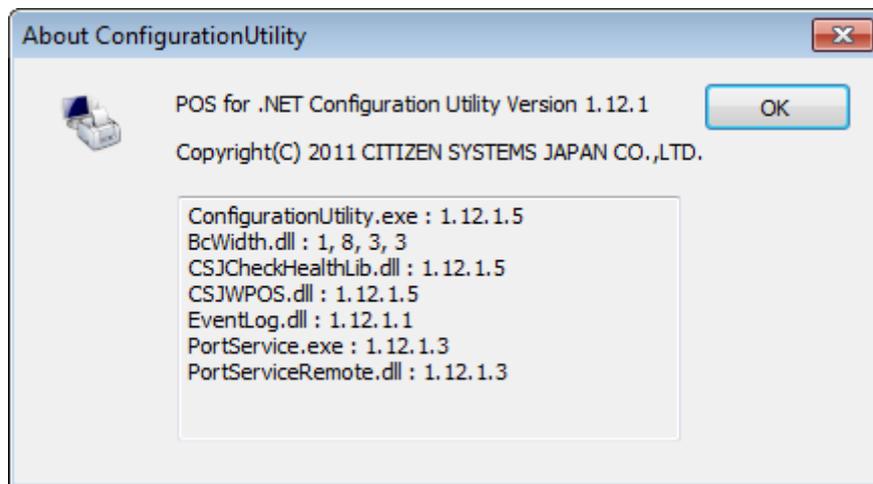
### 3.8. Help Menu

#### Version information

- 1) Click "About Configuration Utility" in the "Help" menu.



- 2) The dialog "About Configuration Utility" is displayed.  
You can see the detailed version information of POS for .NET Driver / POS for .NET Configuration Utility on this dialog.



## 4. Printer Setting

It is the prerequisite for the use of this product that the DIP switch and the memory switch of the printer are set as listed below. For the switching and the detailed setting of each switch, refer to the user's manual of each model.

### 4.1. CT-S310 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 Col Print	ON	Wait Data
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
9-1	Code page	Katakana	-
9-2	Foreign language characters	Japan	-
9-3	Kanji	Enable	-
9-4	JIS/Shift-JIS	Shift-JIS	-

## 4.2. CT-S310II Series

### 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 Col Print	ON	Wait Data
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
6-1	Act. For Driver	ON	Valid
7-6	DMA control	Enable	-
8-3	Line Gap Reduce	Invalid	-
8-4	Reduced Char	100% / 100%	-
8-5	Auto Side Shift	Invalid	-
9-1	Code page	Katakana	-
9-2	Foreign language characters	Japan	-
9-3	Kanji	Enable	-
9-4	JIS/Shift-JIS	Shift-JIS	-

### 4.3. CT-S601/651/801/851 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 Col Print	ON	Wait Data
3-1	Auto cutter restore	OFF	L/F enabled
3-2	PE output at PNE (when parallel IF are used)	ON	Invalid
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
6-1	Act. For Driver	ON	Valid
7-6	DMA control	Enable	-
9-1	Code page	Katakana	-
9-2	Foreign language characters	Japan	-
9-3	Kanji	Enable	-
9-4	JIS/Shift-JIS	Shift-JIS	-
10-3	ACK output timing (when USB and parallel IF are used)	Before BUSY	-

## 4.4. 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 Col Print	ON	Wait Data
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
7-6	DMA control	Enable	-
9-1	Code page	Katakana	-
9-2	Foreign language characters	Japan	-
9-3	Kanji	Enable	-

