

**Installation Guide**

# **JavaPOS Driver**

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**Ver. 1.01**

**AP3**

## Introduction

This manual provides information on the AP3 JavaPOS driver as well as on the usage POS printer products offered by AP3.

The following are terms contained in this manual.

- JDK : Java Development Kit
- JRE : Java Runtime Environment
- JavaPOS : Java Point of Sale
- JCL Utility : JavaPOS Configuration Loader Utility

[Reference Websites]

<http://www.javapos.com> : Java POS committee website

<http://java.com> : Official Java website

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# 1. Usage Environment

## 1-1 Features

- Using standard API functions, the POS System can be developed more quickly and easily, and applications can be developed independently from the operating system.

## 1-2 Supported Operating Systems

- Windows XP (32/64bit)
- Windows Server 2003 (32/64bit)
- Windows Vista (32/64bit)
- Windows 7 (32/64bit)
- Windows 8 (32/64bit)
- Windows 10 (32/64bit)
  
- OpenSUSE 11.3 (kernel 2.6.34) 32/64bit
- Red Hat Enterprise Linux 7.3 (kernel 3.10.0-514) 64bit
- CentOS 6.6 (kernel 2.6.32-504) 32/64bit
- CentOS 7.0 (kernel 3.10.0-123) 64bit
- SUSE Linux Enterprise Desktop 12.0 (kernel 3.12.28-4.6) 64bit

## 1-3 Supported Interface

POSPrinter

Model	Serial	USB	Ethernet
AP3	O	O	O
AP3-3	O	O	O

## 1-4 Java Environment

- JRE(Java Runtime Environment) 32bit Version 1.5 or higher
- JRE(Java Runtime Environment) 64bit Version 1.5 or higher

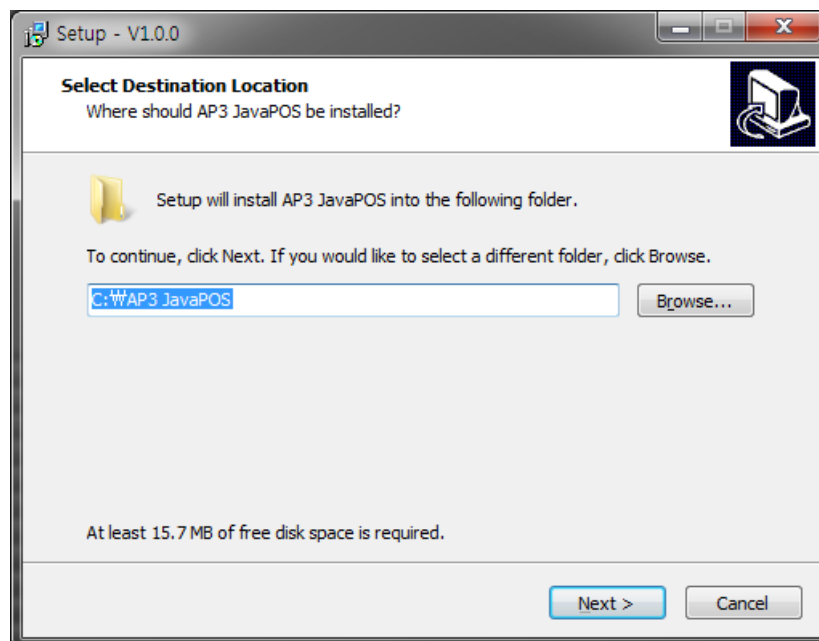
## 2. Installation

The AP3 JavaPOS driver includes the JavaPOS Device Control, JavaPOS Device Service, JCL(Java Configuration Loader) Utility, manual, test program, sample source, etc.

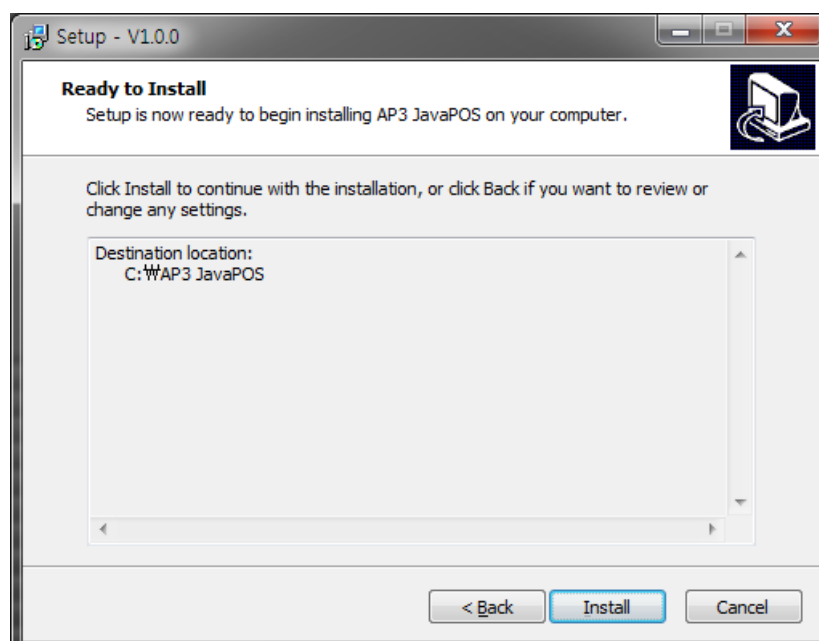
### 2-1 JavaPOS Driver Installation

- 1) Run the JavaPOS Driver installation file.
- 2) Select the installation folder.

The default folder: "C:\AP3 JavaPOS\"



- 3) Ready to install.



### 2-2 JDK & JRE installation

\* This document is based on Windows7 32bit and JRE 32bit

#### 1) JDK & JRE Installation

Download the 1.5 or higher version of the JDK for Windows 32bit from <http://java.sun.com/javase/downloads/index.jsp>

2) Run “jdk-XXX-windows-i586-X.exe” and install the JDK.



#### Note

The JRE is installed automatically during JDK installation and no separate JRE installation is required.

### 2-3 Java communication files installation

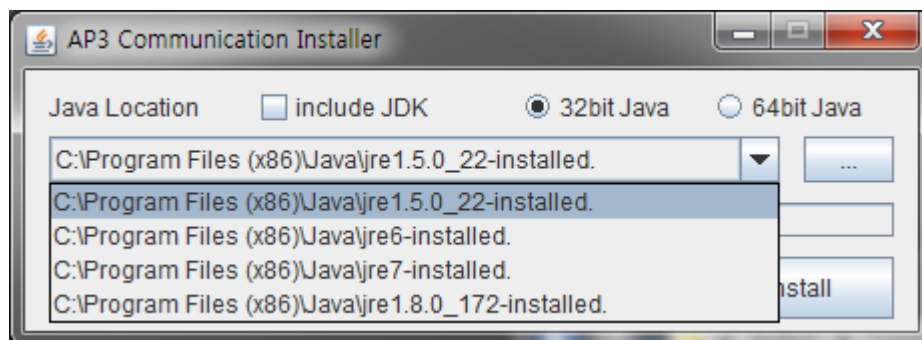
1) Run “CommInstaller.exe” file on installation path.



#### Warning

Run as administrator.

2) Check the JRE(Java Runtime Environment) location.

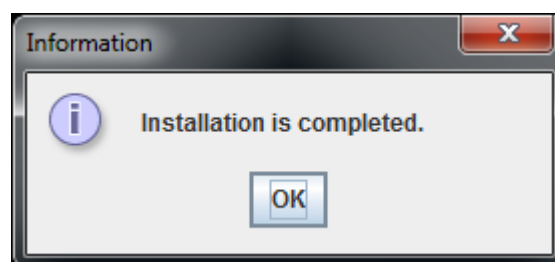


#### Note

- JRE location will be displayed. In case of various JRE installation, select one of the JRE location in Combo-box as above image.
- Unless JRE location does display in Combo Box, Click “Change install location” button. Then assign the correct JRE location.

3) Click “Run Install” button.

4) As soon as installation is complete, "Installation is completed" dialog message will be displayed.





### Warning

In case that "Installation is failed" message will be popped up, installation doesn't complete correctly. JavaPOS driver can not be worked properly.

- 5) 2 files below will be installed in a folder which includes CommInstaller.exe file.
- ap3-jclutility.bat : batch file for running JavaPOS Configuration Loader
  - ap3-testprogram.bat : batch file for running JavaPOS test program

## 2-4 Environment Variables configuration



### Note

You can use ap3-jclutility.Bat and ap3-testprogram.Bat In AP3 JavaPOS Driver without the setting of the environment variables.

- 1) Select Start -> Settings -> Control Panel -> System.



### Note

System may not appear if using Windows XP. In such cases, click "Switch to Classic View" at the top left of the Control Panel, and the System icon should appear.

- 2) In the Advanced tab, click the "Environment Variables" button.
- 3) Add the following content in the path value of both the user environment variables and the system environment variables.  
To Be Added: <JRE Location on CommInstaller>\bin  
Ex) C:\Program Files\Java\jre1.6.0\bin
- 4) Reboot the computer.
- 5) Select Start -> Programs -> Accessories -> Command Prompt.
- 6) Enter "java -version" in the command prompt window.
- 7) If the following appears, installation has been completed successfully.

```
C:\WINDOWS\system32\cmd.exe

C:\Documents and Settings\cools>java -version
java version "1.6.0_01"
Java(TM) SE Runtime Environment (build 1.6.0_01-b06)
Java HotSpot(TM) Client VM (build 1.6.0_01-b06, mixed mode, sharing)

C:\Documents and Settings\cools>
```

## 3. Installation - Linux OS

- The AP3 JavaPOS driver includes the JavaPOS Device Control, JavaPOS Device Service, JCL(Java Configuration Loader) Utility, manual, test program, sample source, etc.

### 3-1 Java installation

Referring below link, install JAVA.

[https://java.com/en/download/help/linux\\_install.xml](https://java.com/en/download/help/linux_install.xml)

### 3-2 JavaPOS driver installation

<b>Note</b>	<ul style="list-style-type: none"><li>- Following example installs the driver at <b>/opt/ap3/javapos</b></li><li>- If the installation path is different, only change the installation path.</li><li>- The exemplified path requires root authority</li></ul>
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- 1) Copy the JavaPOS driver file (.tgz) to the installation path.  
>> cp Software\_AP3\_JavaPOS\_Setup\_EN\_Vx.x.x.tgz /opt/ap3/javapos
- 2) Move to the installation path.  
>> cd /opt/ap3/javapos
- 3) Unzip JavaPOS driver file(.tgz).  
>> tar -xvf Software\_AP3\_JavaPOS\_Setup\_EN\_Vx.x.x.tgz

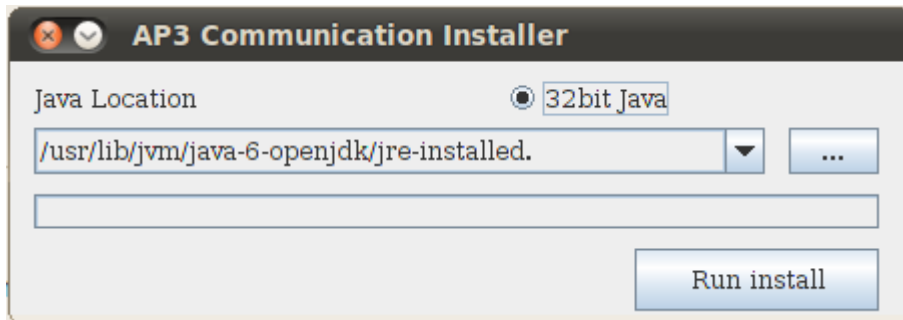


**3-3 JavaPOS Communication Files installation****Caution**

- bellow procedure requires root authority
- If root authority is not be obtained, communication module files required for JavaPOS cannot be installed.

1) If x-windows is accessible

```
>> ./comminstaller-ui.sh
```



The currently configured java path is displayed.

If a different Java version is needed to be installed or a different path for Java installation is required, set it to another java via the 'update-alternatives' command and then run comminstaller again.

```
>> update-alternatives --config java
```

2) If x-windows is not executed

```
>> ./comminstaller-cmd.sh
```

When the following message appears, enter the path to java installed on your PC.

Enter your java location : /usr/lib/jvm/jre6 (Example)

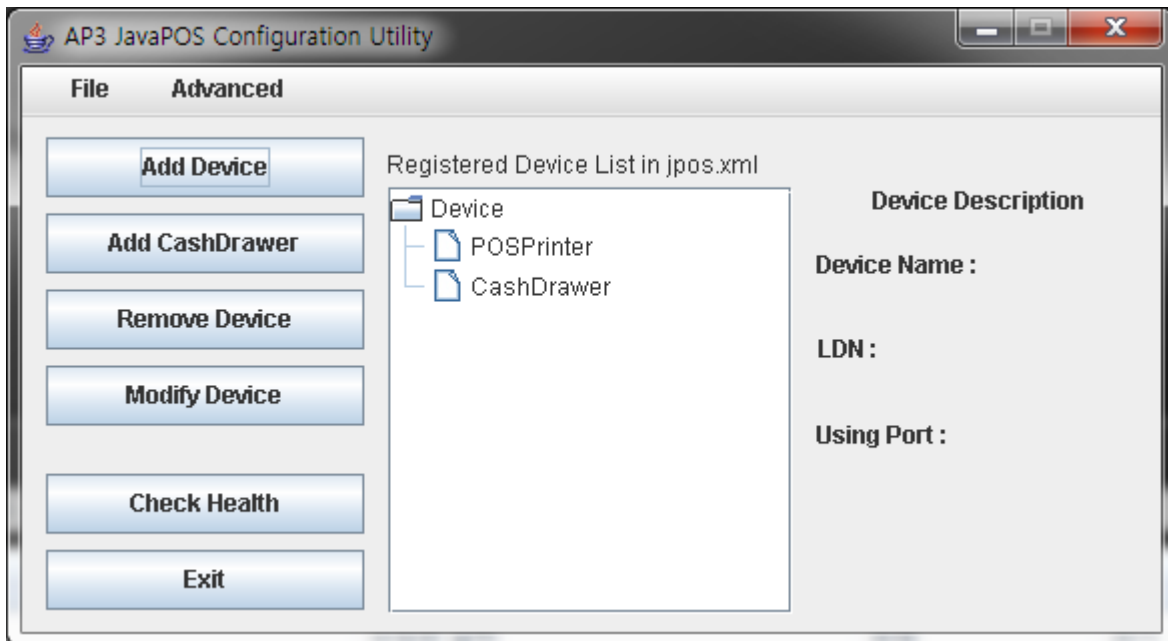
3) When the communication file installation is completed, two files are created.

- ap3-jclutility.sh : JavaPOS Configuration utility executing file
- ap3-testprogram.sh : JavaPOS Test program excuting file

\* When setting the class path of the jar file in the program, refer to the path of class path set in ap3-testprogram.sh file.

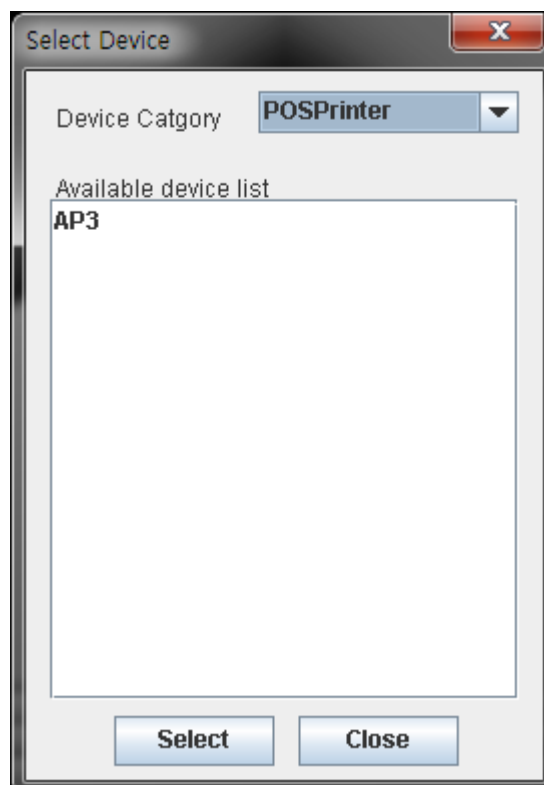
## 4. JavaPOS Configuration Utility Setting

Double click “ap3-jclutility.bat”. The JavaPOS Configuration Utility begins.

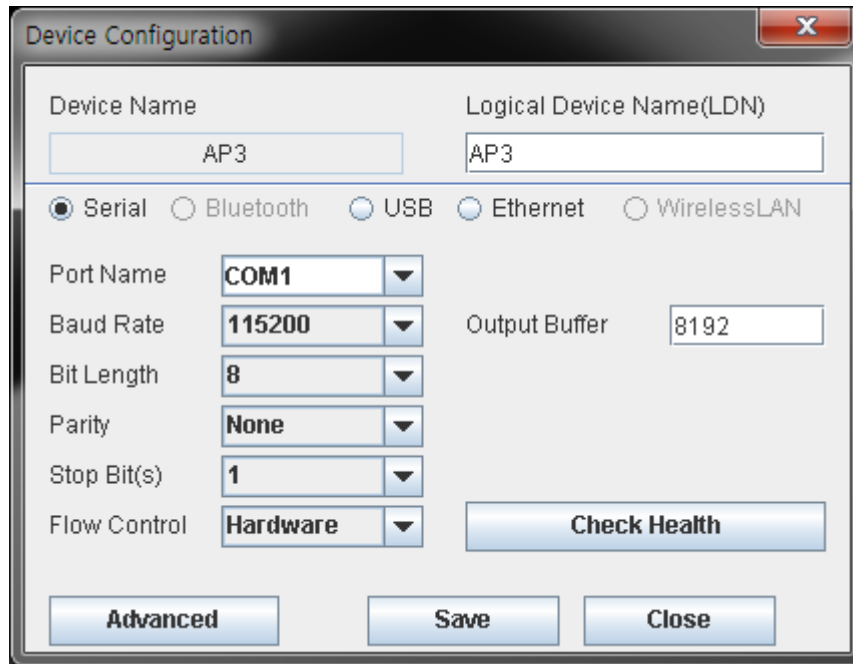


### 3-1 POSPrinter Registration

1) Click “Add Device” button and select ‘POSPrinter’ in Device Category.

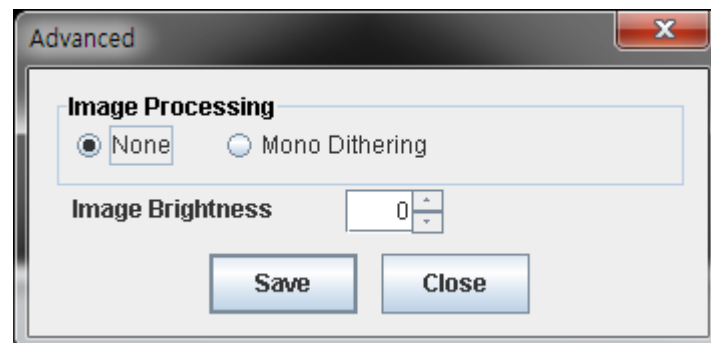


2) Click the “Select” button after choosing one of the available device lists.



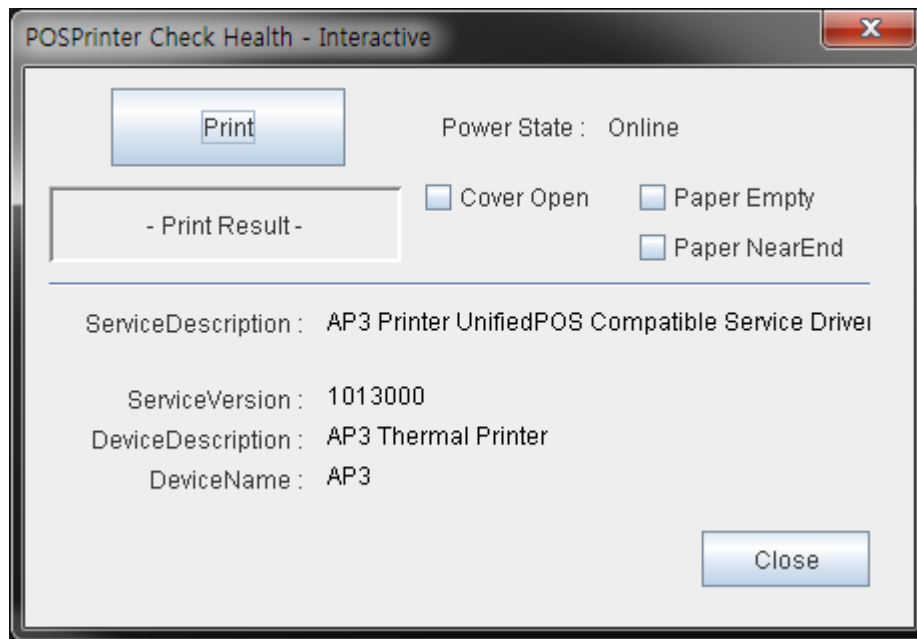
3) Set the communication environment of the connected printer and click “Save” button.

4) To apply the dithering or grayscale printing when you want to print the image, please select the following Advanced dialog.

**Note**

The image processing options can only be applied to "PrintBitmap" function.

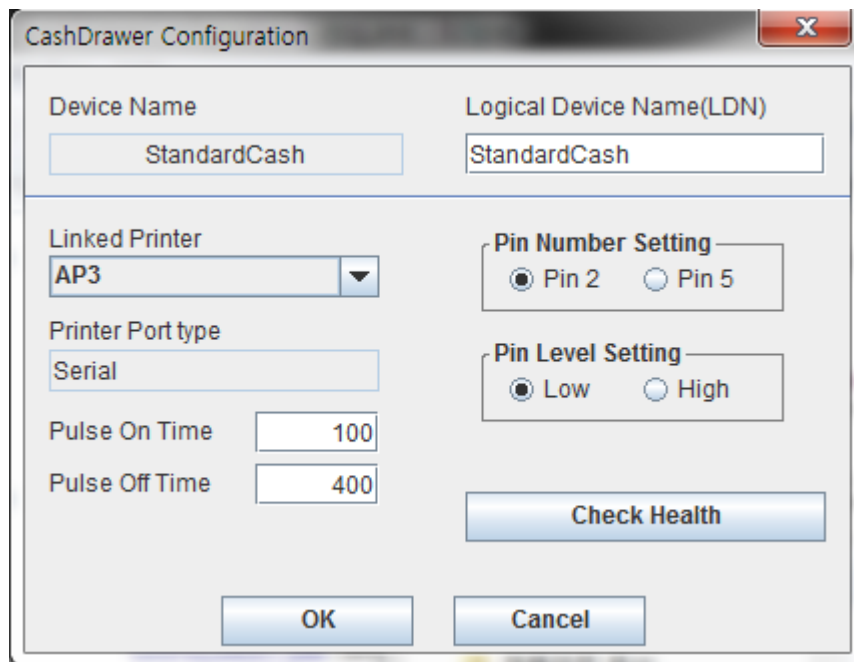
5) Click "Check Health" to see if the printer operates properly.



<POSPrinter - Check Health Dialog>

### 3-2 CashDrawer Registration

1) Click “Add CashDrawer” button.

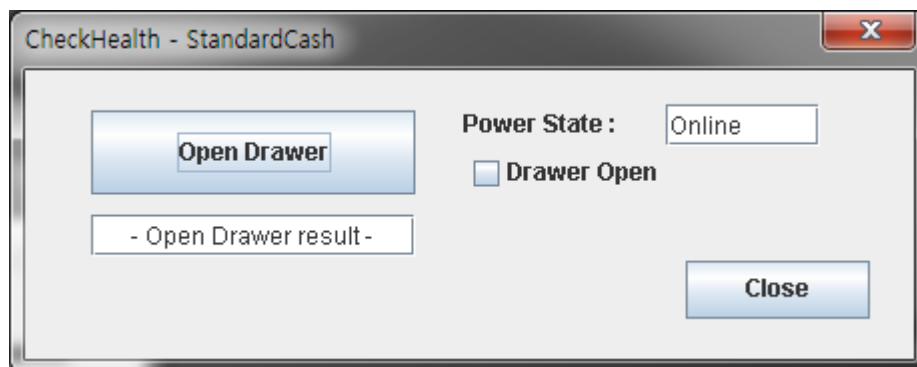


The 'CashDrawer Configuration' dialog box contains the following fields and controls:

- Device Name:** Text box containing 'StandardCash'.
- Logical Device Name(LDN):** Text box containing 'StandardCash'.
- Linked Printer:** Combo box with 'AP3' selected.
- Printer Port type:** Text box containing 'Serial'.
- Pulse On Time:** Text box containing '100'.
- Pulse Off Time:** Text box containing '400'.
- Pin Number Setting:** Radio buttons for 'Pin 2' (selected) and 'Pin 5'.
- Pin Level Setting:** Radio buttons for 'Low' (selected) and 'High'.
- Check Health:** Button.
- OK:** Button.
- Cancel:** Button.

2) Select the Printer which works with CashDrawer in ‘Linked Printer’ Combo-Box and set the Pin Number and Pin Level.

3) Save the settings by “OK” button click or check if communication status through the CashDrawer is normal by “CheckHealth” button.



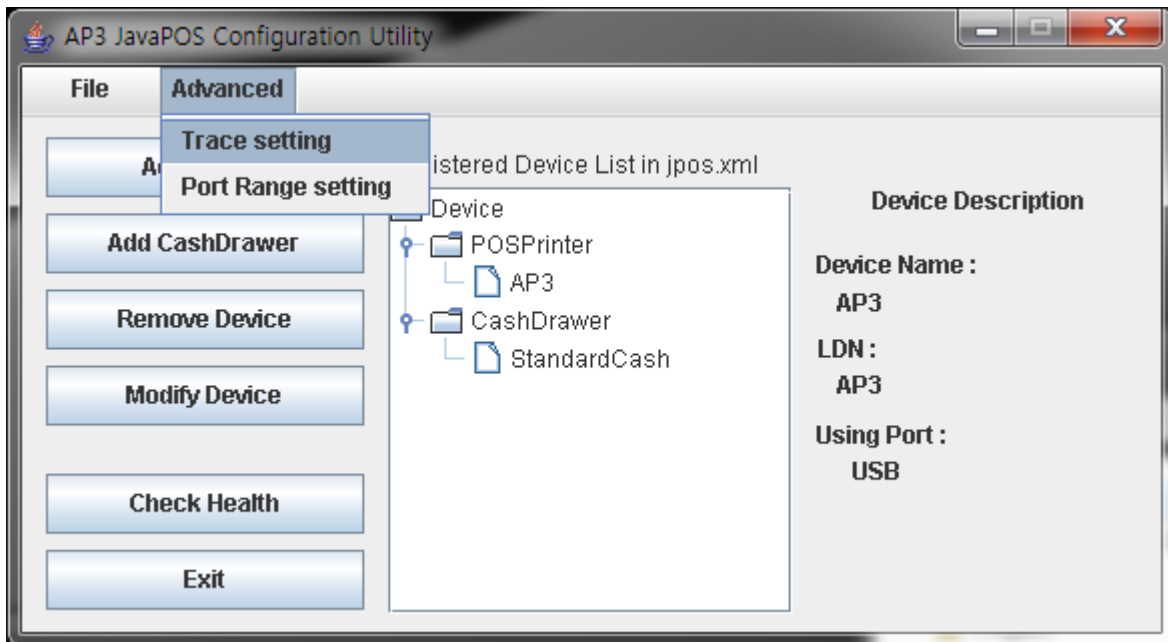
The 'CheckHealth - StandardCash' dialog box contains the following fields and controls:

- Open Drawer:** Button.
- Power State:** Text box containing 'Online'.
- Drawer Open:** Check box (unchecked).
- Open Drawer result -:** Text box.
- Close:** Button.

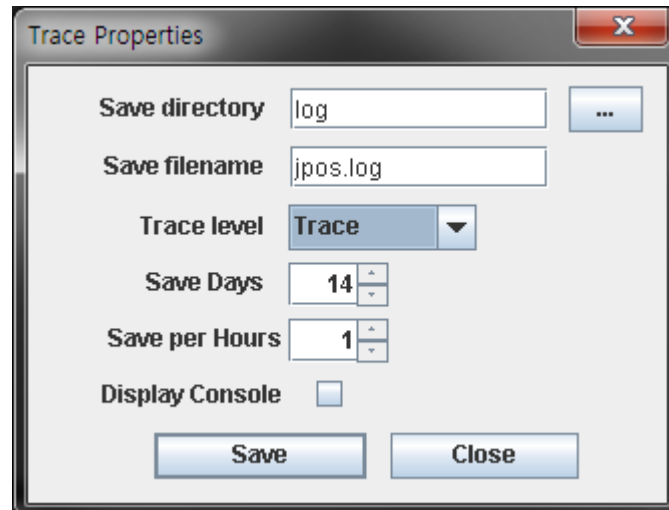
## 3-3 Trace Setting

**Caution**

Please set the trace setting when it's necessary only. Otherwise Hard Drive capacity will be lack of containing other files due to the trace function.

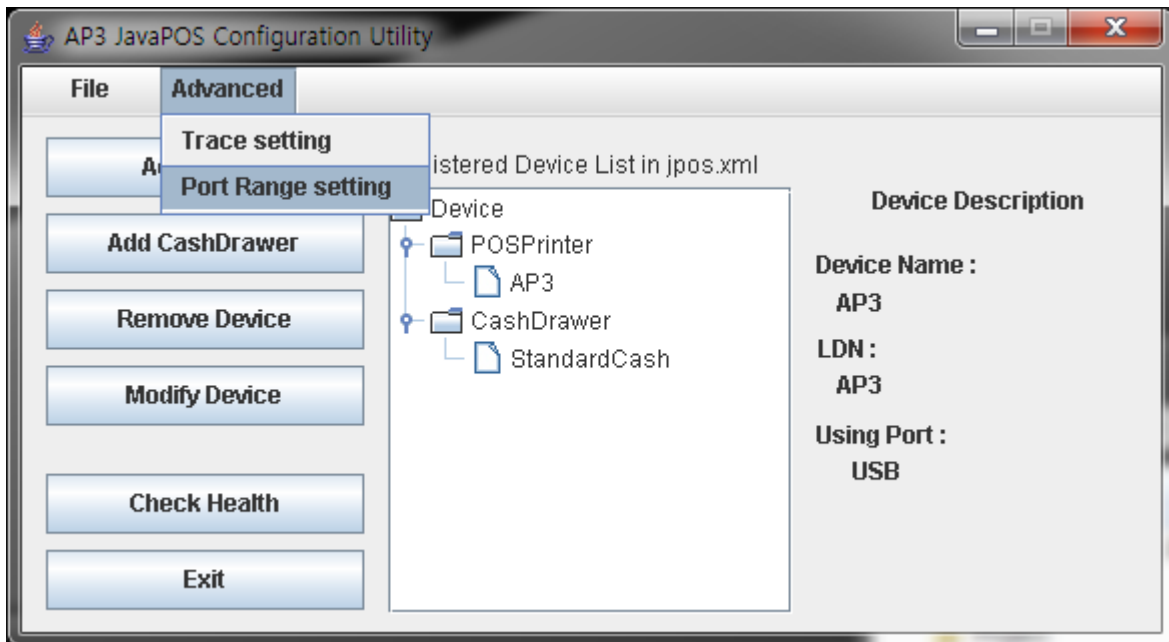


1) Select the trace level in combobox and click "Save" button.

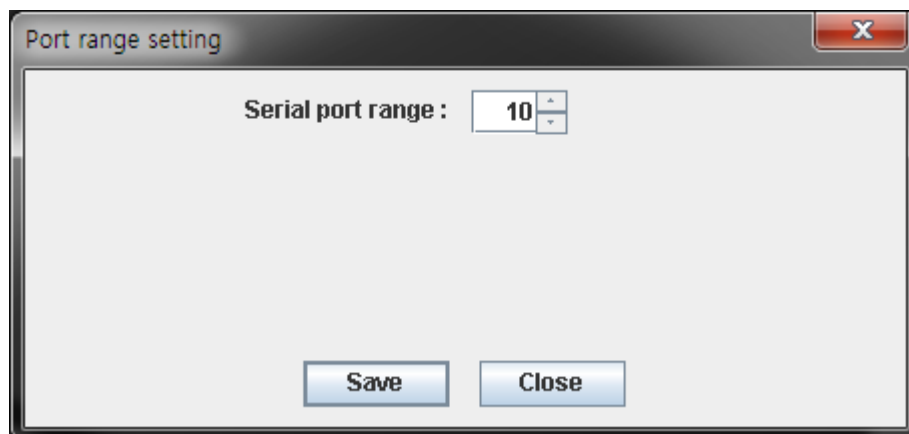


### 3-4 Port Range Setting

- 'Port Range setting' can be adjustable according to the Serial communication setting option. So, adjust the port number if there's no available port in system.

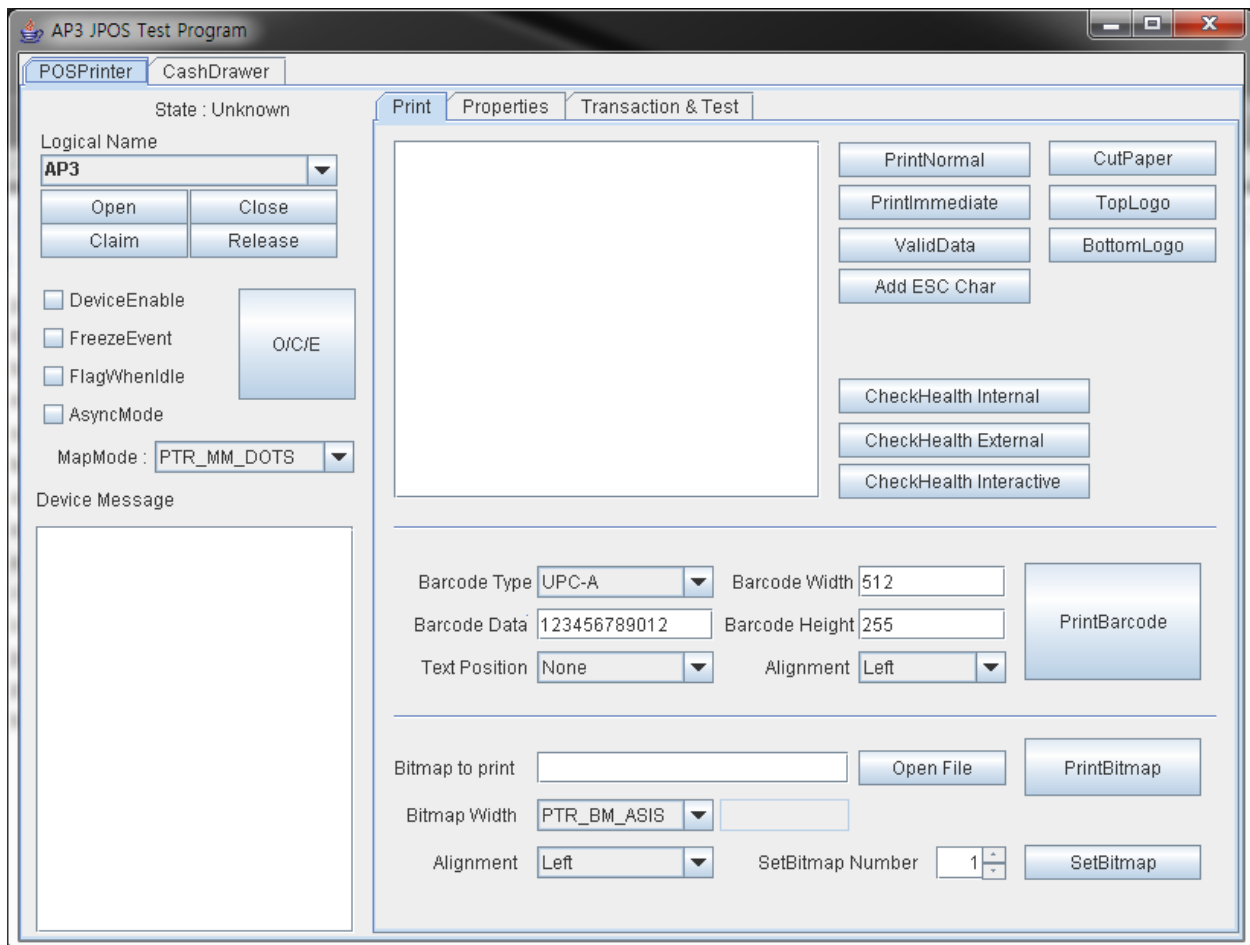


- 1) Input the maximum COM port number for Serial communication.



## 5. AP3 JPOS Test Program

Double click “ap3-testprogram.bat”. The JavaPOS test program begins.



- 1) Logical Name: Select the test device in the list.
- 2) Click “Open” button to open JavaPOS device service.
- 3) Click “Claim” button to check the status of device.
- 4) Check “Device enabled” check box.
- 5) You can test each function with each button.



## 6. Sample Source

The content of the “Sample Source” folder is as follows.

- sampleimage.bmp : sample image
- \*.java : java source file

### 5-1 POS Printer Samples

- |                               |  |
|-------------------------------|--|
| 1) PrintNormalSample. java    | PrintNormal function sample source     |
| 2) PrintBitmapSample. java    | PrintBitmap function sample source     |
| 3) PrintBarcodeSample. Java   | PrintBarcode function sample source    |
| 4) CutPaperSample. java       | CutPaper function sample source        |
| 5) ESCSequenceSample. java    | ESC Sequence sample source             |
| 6) CheckHealthSample. java    | CheckHealth function sample source     |
| 7) POSPrinterEventSampe. java | POSPrinter-related event sample source |

### 5-2 CashDrawer Samples

- |                           |                                   |
|---------------------------|-----------------------------------|
| 1) CashdrawerSample. java | Opendrawer function sample source |
|---------------------------|-----------------------------------|

## **7. Precautions**

The AP3 JavaPOS software package that is installed supports devices offered by AP3. Normal operation is not guaranteed when used with other devices.

Errors in operation may occur if installed with another JavaPOS Driver.

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## Caution

Some semiconductor devices are easily damaged by static electricity. You should turn the printer "OFF", before you connect or remove the cables on the rear side, in order to guard the printer against the static electricity. If the printer is damaged by the static electricity, you should turn the printer "OFF".

## Revision history

[illegible]