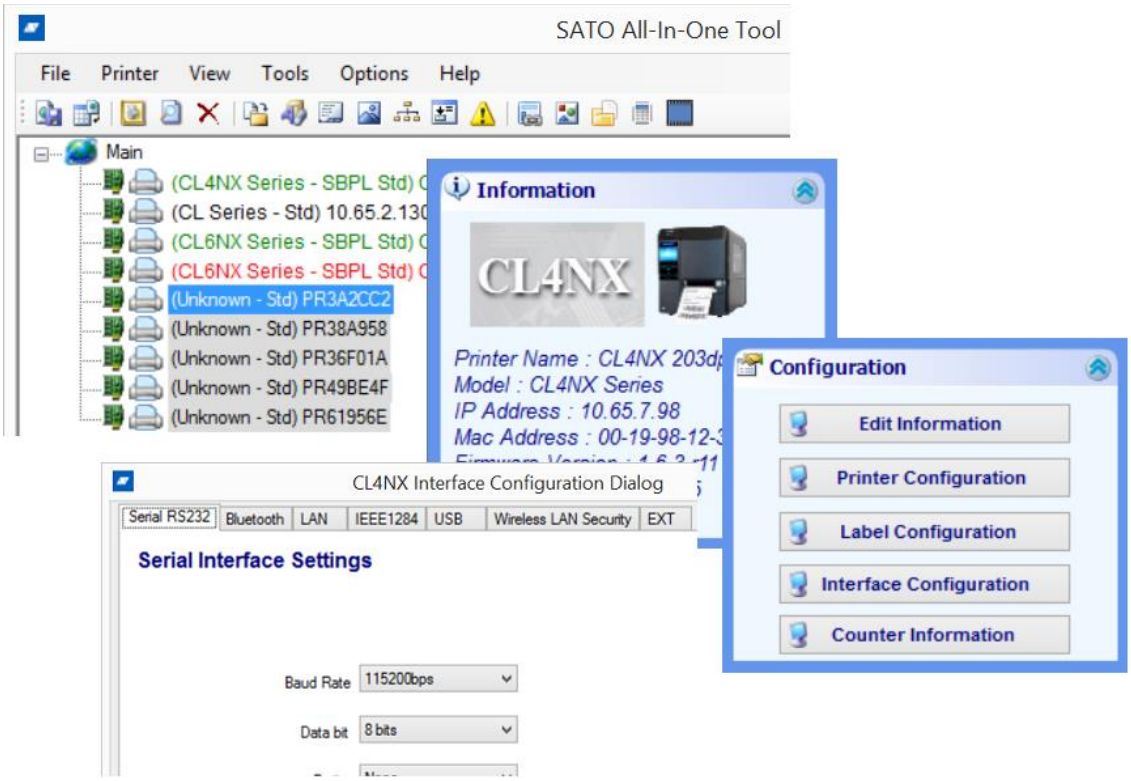
User Manual

SATO All-In-One Tool



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Overview 1

The SATO All-In-One Tool for printer remote control was developed to achieve the following goals:

- To simplify the SATO printer configuration and operation processes for end-users
- To allow remote configuration and control of SATO printers that are compatible with this application
- To consolidate as many of the separate software printer utilities as possible into a integrated application

1.1. Supported Models of SATO Printers

Currently only the following models of SATO printers are supported by the current version of the SATO All-In-One Tool:

- CG2/CG4 Series
- CL4NX/CL4NX-J/Plus Series
- CL6NX/CL6NX-J Series
- CL4e/CL6e Series
- LC4e Series
- CT4i Series
- CW408
- CZ4 Series
- D5xx Series
- DR308e
- GL4e Series
- GT4e Series
- GY4 Series
- GZ4 Series
- HR2 Series
- LM4 Series
- LT408
- M-10e
- M84SE Series
- M84 Pro Series
- MB2i / MB4i
- PW208/PW208m Series
- PW208NX/PW208mNX Series
- S84 Series
- S84-ex/S86-ex
- TG3 Series
- TH2
- FX3-LX
- WS2/WS4
- CT4-LX/CT4-LX-J, HC4-LX/HC4-LX-J
- SG112-ex

The SATO All-In-One Tool will be undergoing continual refinement, and it is expected that other SATO printer models will be supported in future, in line with customer demand.

System Requirements 2

The minimum system requirements for the SATO All-In-One Tool are

- A computer with at least a 450MHz Pentium® CPU with 128 MB of RAM, running Windows 2000, Windows XP, Windows Server 2003, Windows Vista, Windows Server 2008, Windows 7, Windows 8/8.1, Windows 10, Windows Server 2012, Windows Server 2016 or Windows Server 2019 platforms.
- Installed ***.NET Framework 3.0*** or higher version
  (Please refer to this document in case of encountering an error to install.NET Framework)
- At least one supported model of SATO printer that can connect to the computer running this application

Standard SBPL commands are sent to SATO printers to update configuration settings or to retrieve data. The data will then be presented in a meaningful and graphical interface for the software user.

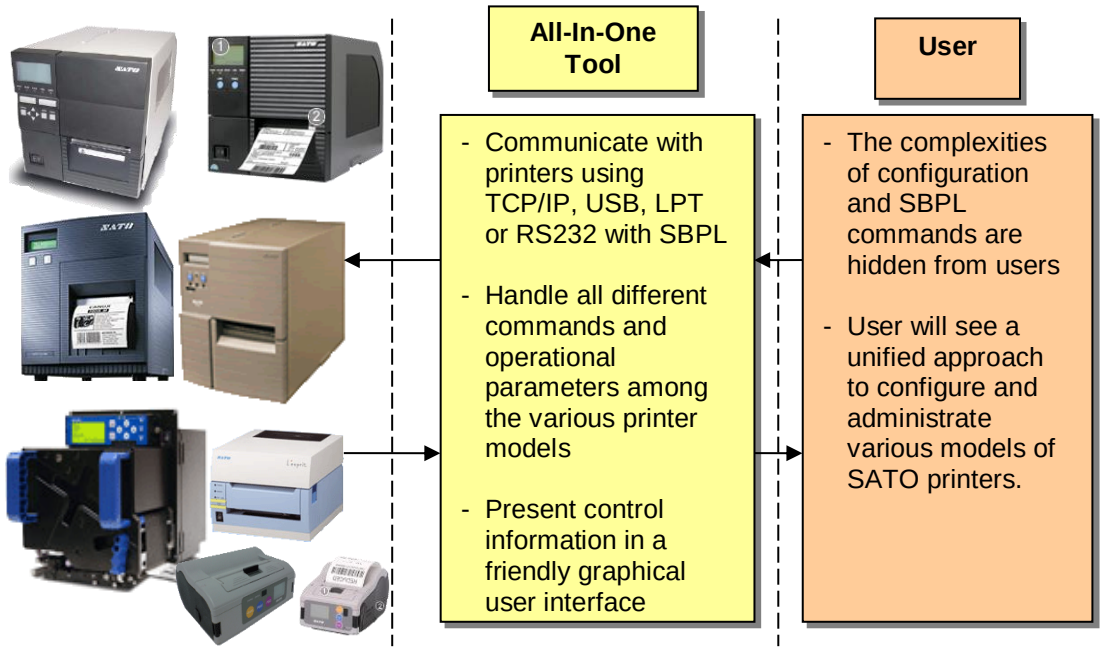


Figure 1 System Overview

Currently, SATO All-In-One Tool does not require a database system. The only scenario where persistent data is needed is during the exporting of application profile into XML files. Please Note that Windows Vista and above OS user must be administrator in order All-In-One Tool to perform well. Things like saving Preference Settings, Firmware download etc might not function well if user does not have admin rights.

Setup 3

After obtaining the installation software, double click on the setup file to install the application.

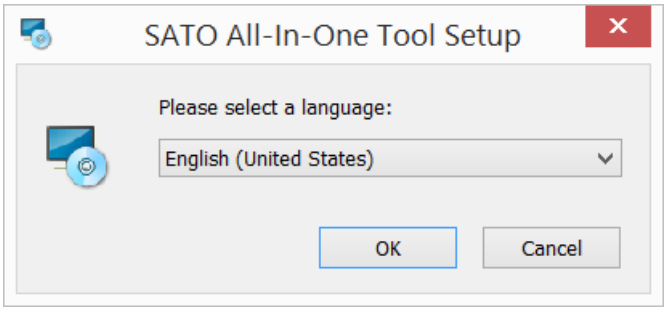


Figure 1 Language selection

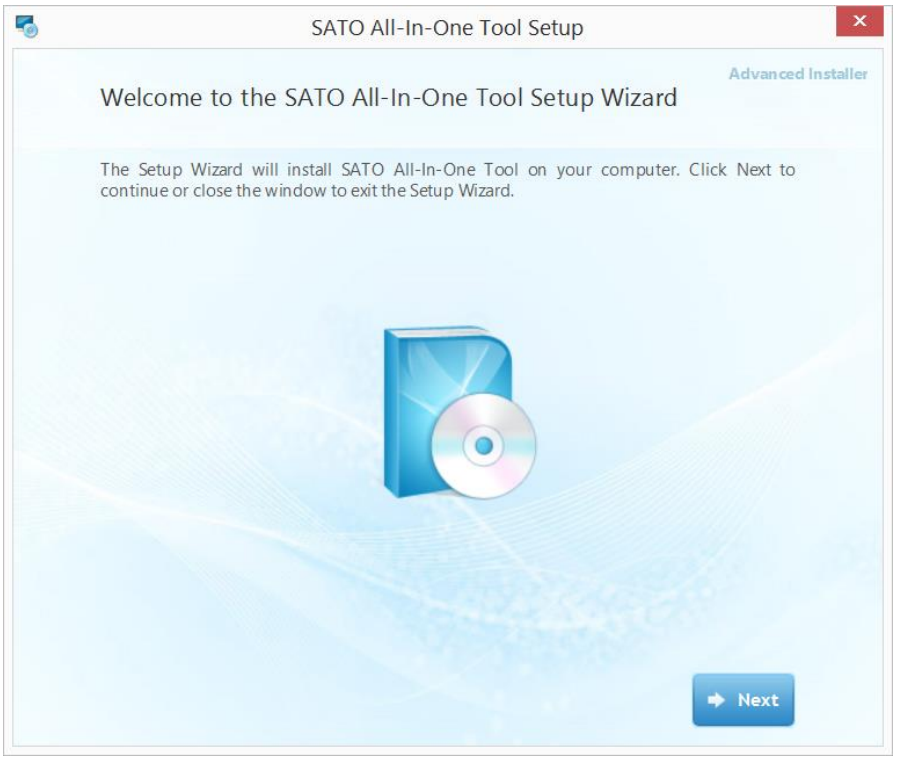


Figure 2 Setup screen

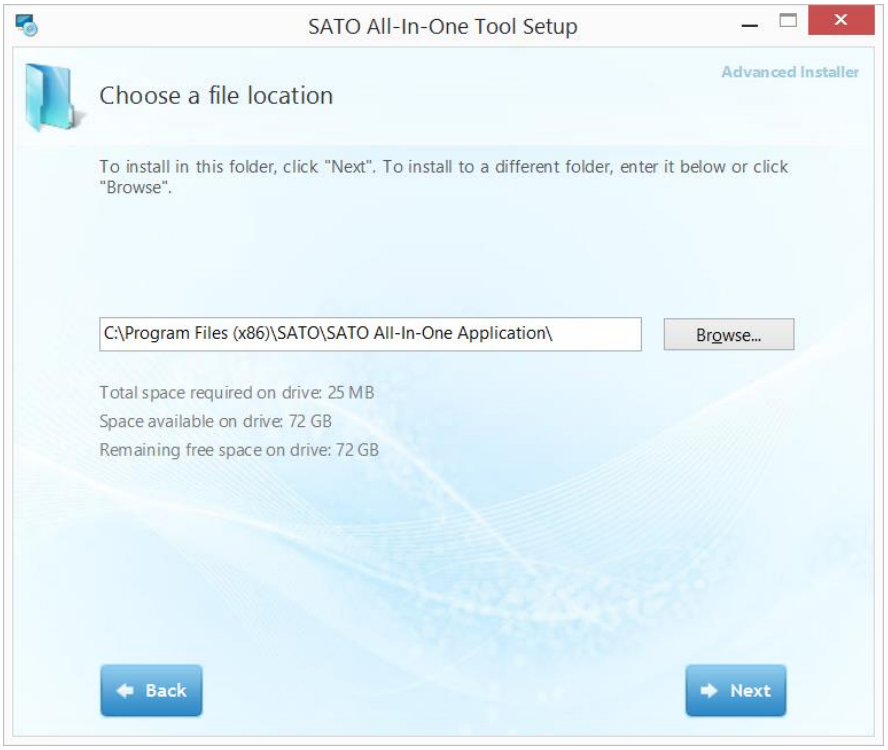


Figure 3 Installation folder

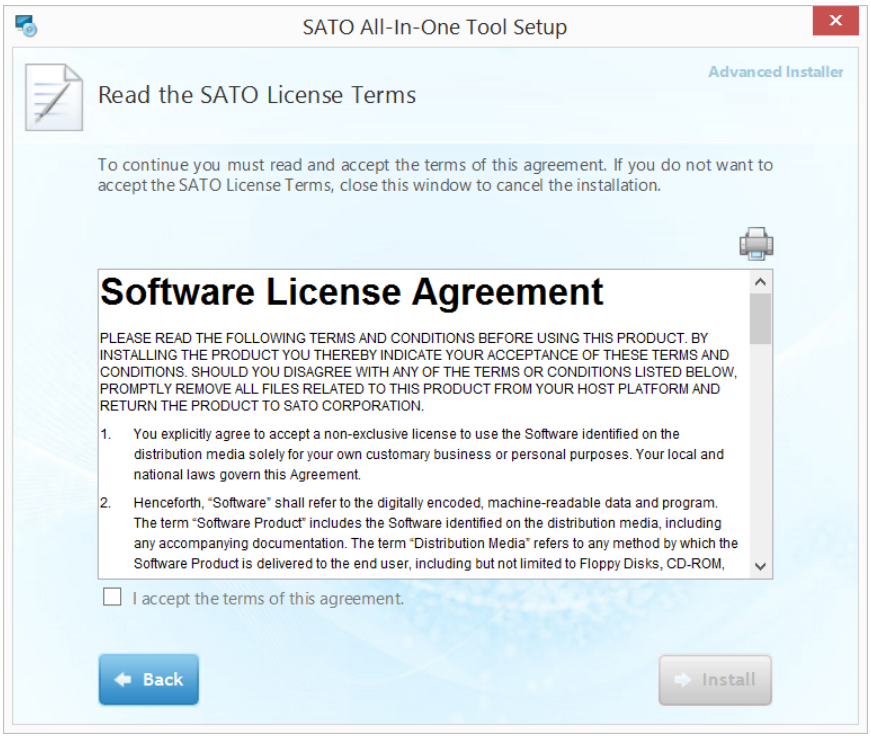


Figure 4 License Agreement

In order to have access to the "Install" button to proceed with the installation, the user must agree with the License Agreement by checking the "I accept the terms of this agreement".

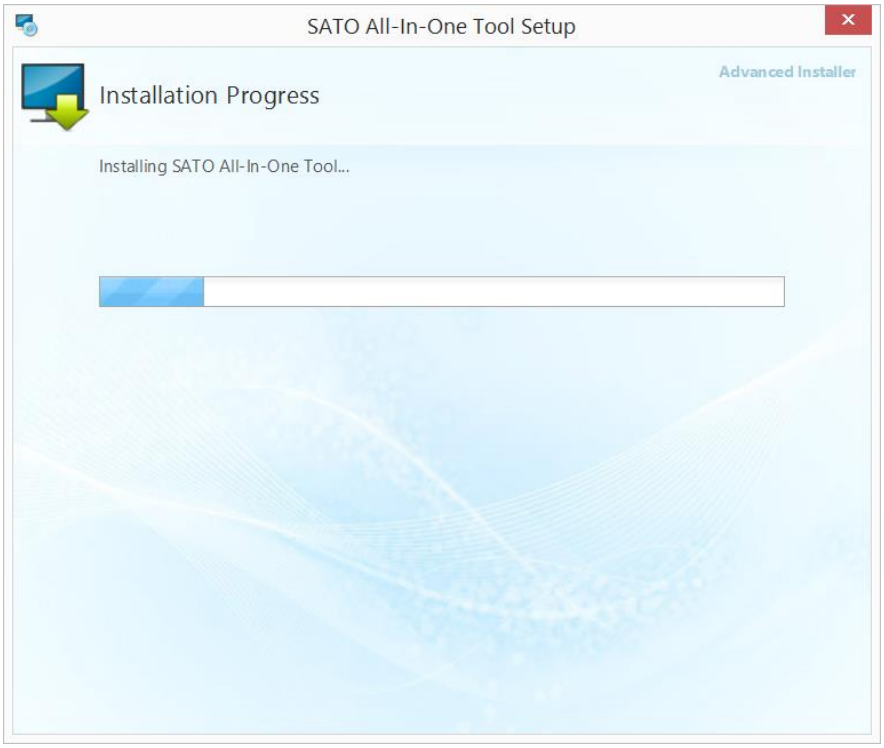


Figure 5 Installation in progress

Figure 6 Installation Complete

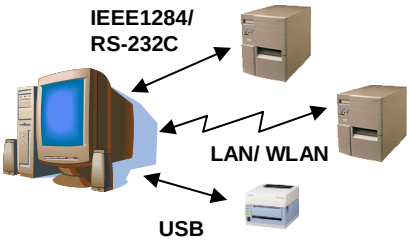
The program can then be launched from the Start Button->All Programs->SATO->SATO All-In-One Tool program group.

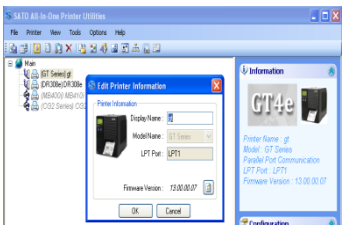
Using the All-In-One Tool

4

4.1. Overview

The SATO All-In-One Tool works on the following paradigm:





1 **CONNECT**
Link to supported printer(s) via Auto-Discovery or via manual entry

2 **ORGANIZE**
Use the graphical treeview structure to organize connected printers into groups using custom folders & display names.

3 **CONTROL**
Configure/control any SATO printer regardless of its location in the world.

4.2. Summarized Features List

	Feature	CL4/6xxe/LC4xxe	LM4xxe	GT4xxe	GL4xxe	M-10e	MB2/4xxi	M84xxSE	CT4xxi	S84xx	DR308e	CG2/4	LT408	D500/12	TH2	TG3	CL6 Plus	GY4	GZ4	CL4NX/CL4NX-J/Plus	S84-ex/S86-ex	CL6NX/CL6NX-J	PW208/PW208m	PW208NX/PW208mNX	FX3-LX	HR2	CW408	CZ4xx	M84Prox	WS2/WS4	CT4-LX /J, HC4-LX/J	SG112-ex
1	Auto-Discovery	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
2	Saving and loading Printer Configuration	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O
3	Displaying and setting of Printer Configuration	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
4	Firmware Download	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
5	Concurrent download firmware to multiple printers	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	O	O
6	Send and query SBPL command	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7	True Type Font Download (Expanded Memory/Cartridge)	O	X	O	O	X	X	X	X	O	X	X	X	X	X	O	O	X	X	O	O	O	X	X	X	X	X	X	O	X	X	X
8	Graphics Download	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O
	Supported Interface																															
9	LAN	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O
10	RS232c	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	O	X	O	O	O	O	O
11	IEEE1284 Parallel Port	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	X	X	O	O	X	X	O
12	USB	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
13	Test Print	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
14	LAN Interface Card Configuration	O	O	O	O	O	X	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O
15	Format Download to Keypad	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16	Bitmap Font Download (Internal Memory)	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	X	X	X	O	O	O	O	O	X	O	X
17	TH2 Package Download	X	X	X	X	X	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Note: For troubleshooting purposes, SATO All-In-One Tool generates a log file to capture important debugging information such as error codes. By default, the log file is created at c:\ directory and the file name is *SATO_All-in-one.log.*
The default directory can be changed from the dialog box in Option->Preferences. Refer to Section *4.24 Application Configuration* for details.
When reporting bugs or problems, copy the log file to the systems support team.
The default directory can be changed from the dialog box in Option->Preferences. Refer to Section *4.24 Application Configuration* for details.

4.3. Multi-Lingual Support

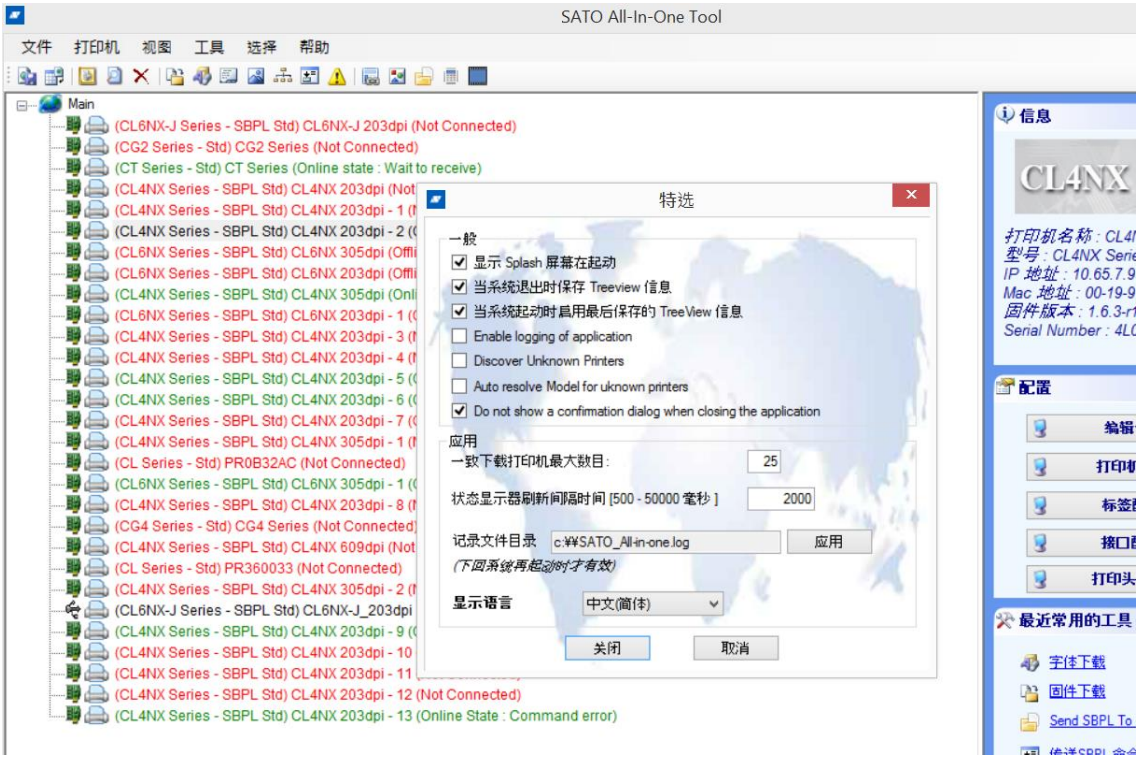


Figure 7 Multi-Lingual Support

This version of All-In-One Tool supports English and Traditional/Simplified Chinese. User can change the language setting at the Options->Preferences.

4.4. Adding a Printer

Only SATO printers, specifically those supported by this All-In-One Tool, can be detected and added. Currently, the following interfaces are supported:

- LAN (Wired and Wireless, TCP/IP)
- Serial Communication (RS232c)
- Parallel Port (IEEE 1284)
- USB (Plug & Play)

For printers using SILEX Network Interface card (such as GT and CL), it is necessary to use the SILEX firmware which supports bi-directional communications on port 9100, i.e., version A1.2.3 and above.
** For SAI-SILEX firmware, it is necessary to add the printer with Port no.: 1024.*

The All-In-One Tool provides two methods for detecting and/or adding compatible printers to the system:

1. Using the Auto-Discovery mode
2. Manually entering an IP Address, or Parallel Port/Serial Comm settings

In any of the above modes, the system will attempt to handshake with the target printer(s) and issue an appropriate command to retrieve the printer firmware information. If the handshake is successful, the detected printer(s) will be presented in the main panel's treeview as an icon.

Note: When All-In-One Tool tries to connect to the printer, it is important to ensure that there is no other application (such as printer driver) using the printer at the same time.

For example, a printer driver which is actively connecting to the CT412i via the USB port with printer driver will cause connection problems to All-In-One Tool with this printer.

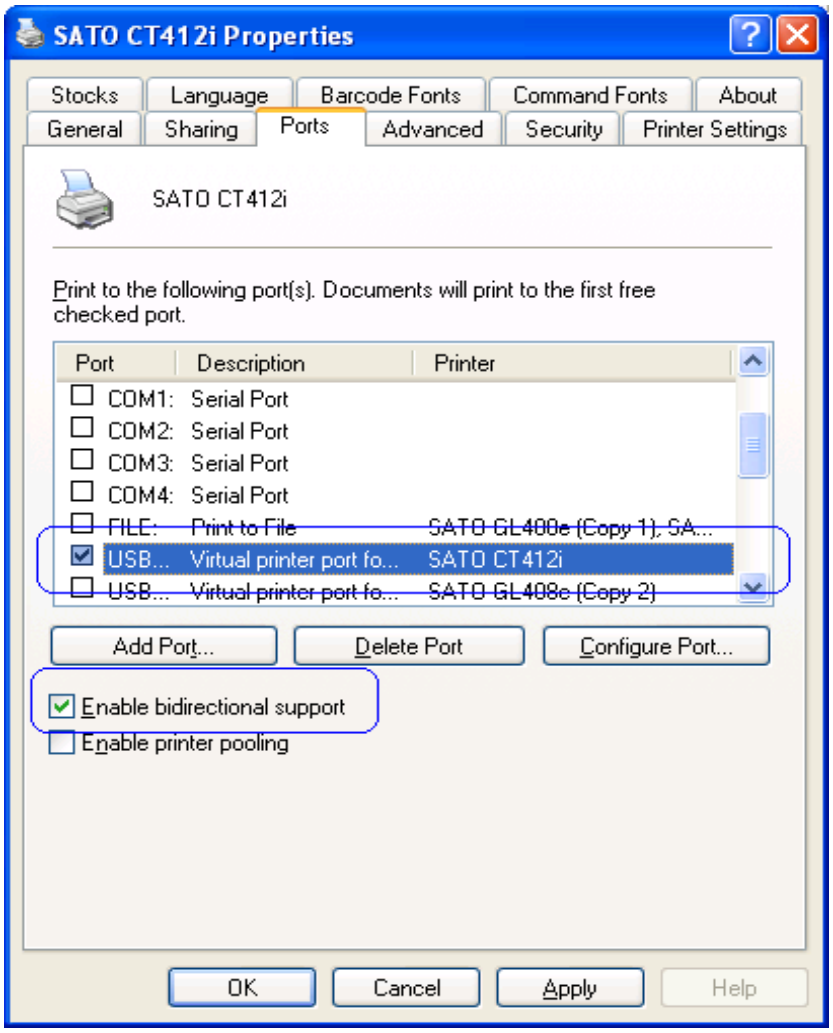


Figure 8 Active connection from printer driver

4.4.1. Adding a Printer via Auto-Discovery

The All-In-One Tool can automatically detect SATO printers connected via USB interface, the SILEX network interface card (CL and GT series), or the standard built-in LAN interface (new CT4xx*i* series, CG Series), or the GL Series Network Interface card.

Upon installation, the software automatically registers itself into the Windows Firewall Exception list. Thus, the firewall can continue to protect the computer without compromising the functionality of the Auto-Discovery feature.

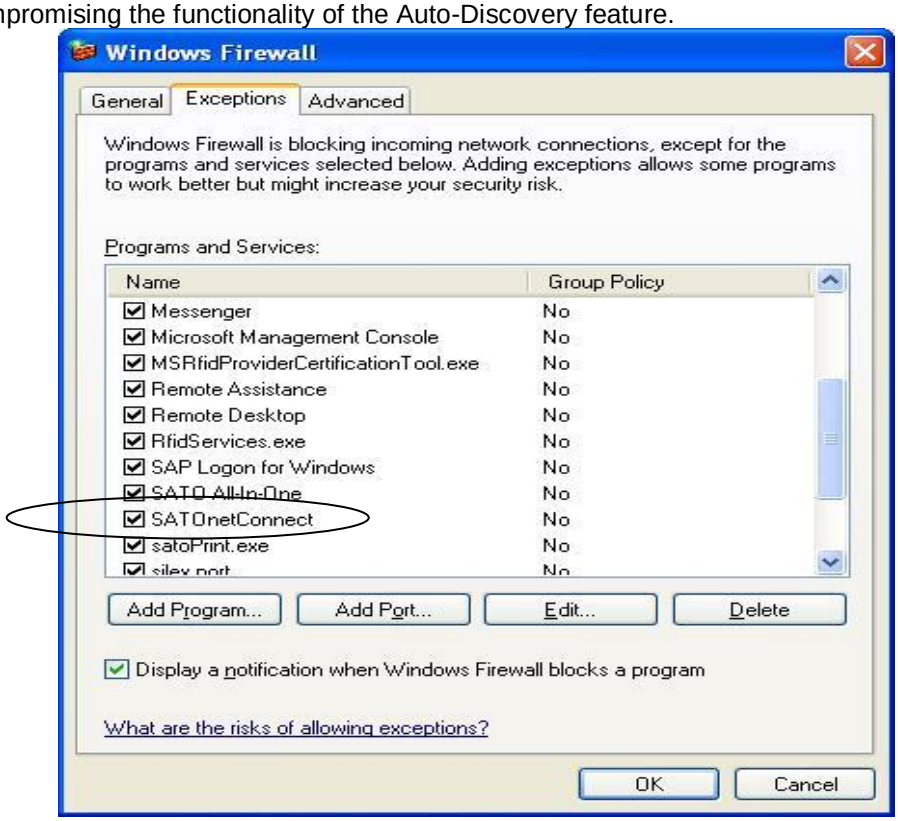


Figure 9 Exception entry in FireWall

4.4.2. Adding a Printer via LAN, Parallel Port or Serial Comm settings

You can add a new printer to the system by specifying its IP Address, USB port, Parallel Port or Serial Comm settings such as network port, communication port and baud rate. User with USB to Serial can easily notify with USB2Serial text beside com port. USB to Parallel port is now supported and will listed under USB Port.

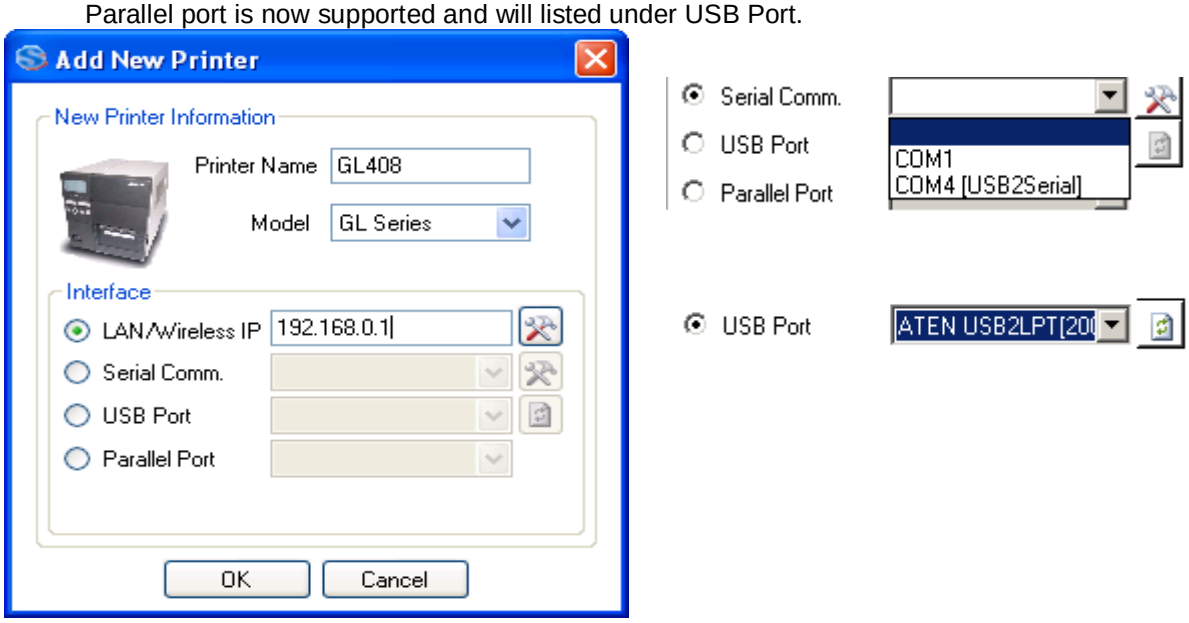


Figure 10 Add New Printer

Note: GL printer with Standard Protocol is able to be added with this method. However, it might take a little longer.

4.5. Navigating the Treeview

After all target SATO printers have been successfully detected or registered into the application, they will appear in a Tree view as icons (See Figure 12 below) representing a **Node**. You can manage the nodes in this view (hereafter called the **treeview**) in various ways, as follows.

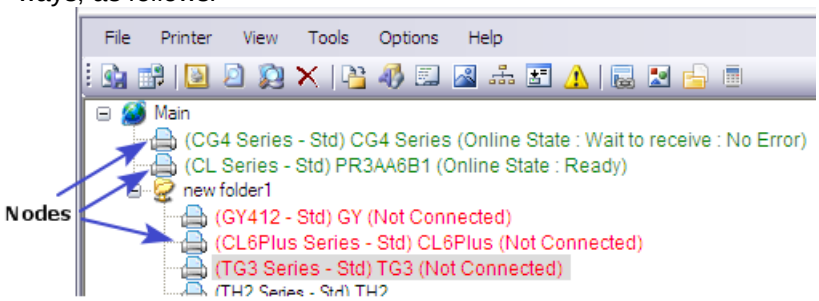


Figure 11 Treeview

4.5.1. Creating folders

By default, detected printers will populate the treeview as nodes at the root. However, just as with any standard treeview in Windows Explorer, you can also create your own folders in the root, and then drag-and-drop any registered printer to and from any folder or root area.

By creating folders, you can organize connected printers into groups meeting particular criteria such as “all GL printers on the Production Floor” or “All compact printers in the Packaging Dept” . You can then control printers in that group more conveniently rather than individually select different printers when needed.

The only limitation is that your custom folders must contain a non-blank name, and the folder name cannot be “***root” or*** “***main”.*** Also, within the same level, the same folder name cannot be repeated.

4.5.2. Renaming folders

The folder name and the “display” of the printer can be renamed on the treeview. Click on the folder name and wait for the text editing cursor to appear, then type the new name.

4.5.3. Relocating printers via Drag-and-Drop

A node icon can be moved in and out of the root area or folders easily. Just make sure the source and target locations are visible, then drag the icon and drop it in the target location.

4.6. Displaying Printer Firmware Information

When a printer node on the treeview is clicked, you will see basic information about the printer, as depicted below.

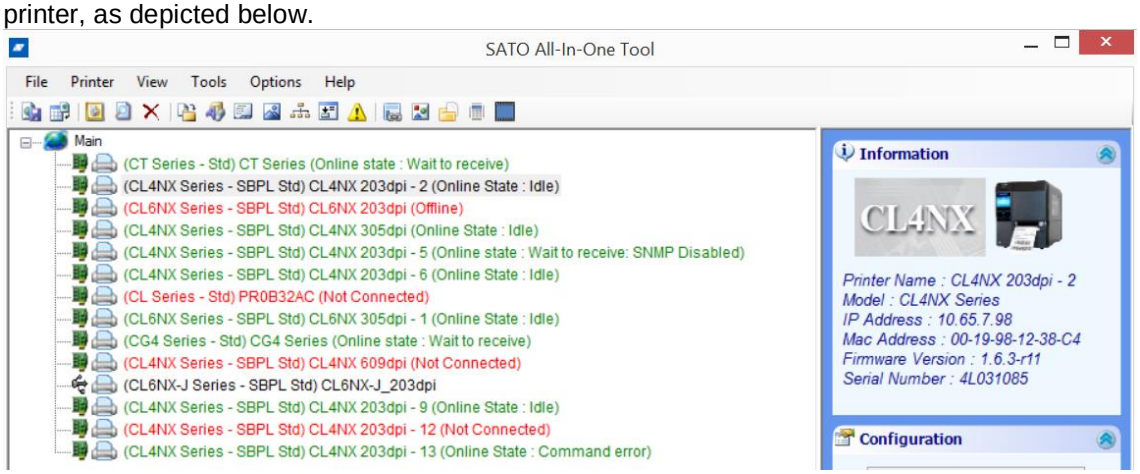


Figure 12 Printer Information

4.7. Editing Printer Information

You are allowed to change the printer's Display Name and the Model, which are displayed next to the node icon.

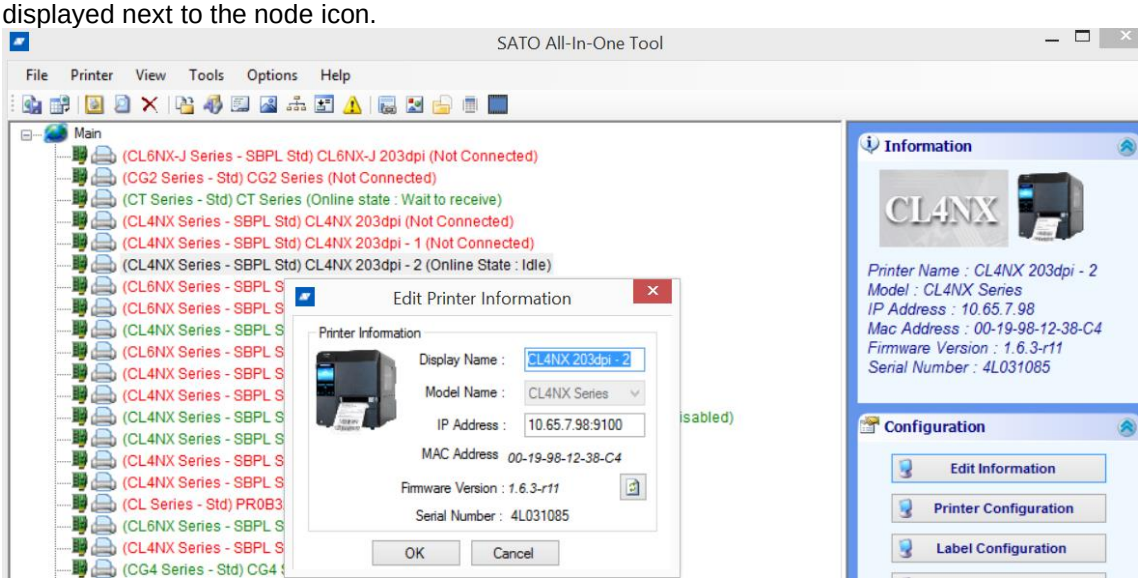


Figure 13 Edit Printer Information

Changing the Display Name/Model does not affect the printer. No command will actually be sent to the printer. The changes apply only to the treeview of the SATO All-In-One Tool, and are stored in memory or exported to XML files when you export profiles (See **Section 4.11 Export/Import Profile**).

4.8. Enquiring Printer Status

For printers connected by LAN, the SATO All-In-One Tool periodically sends a status-probing command and display the printer status for monitoring purposes.

This feature is not available to printers connected via Parallel Port and RS-232. This is based on the assumption that local printers (non LAN) can be monitored locally rather than via remote.

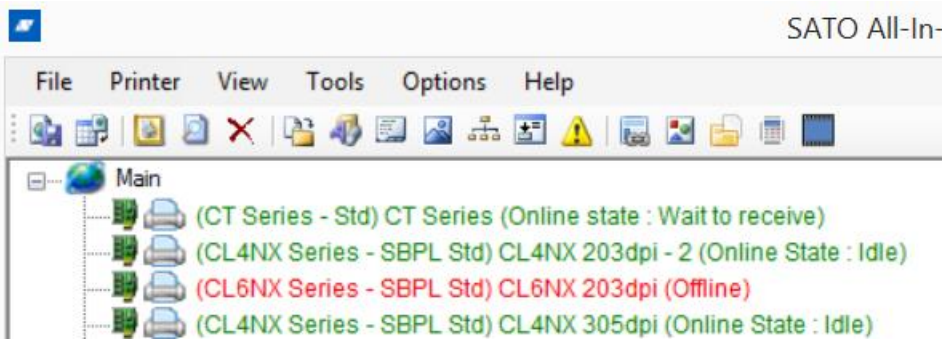


Figure 14 Status Monitoring

4.9. Interface Configuration

Interface Configuration feature is available for CT, MB, CG printers and e-series models that connected with LAN interface.

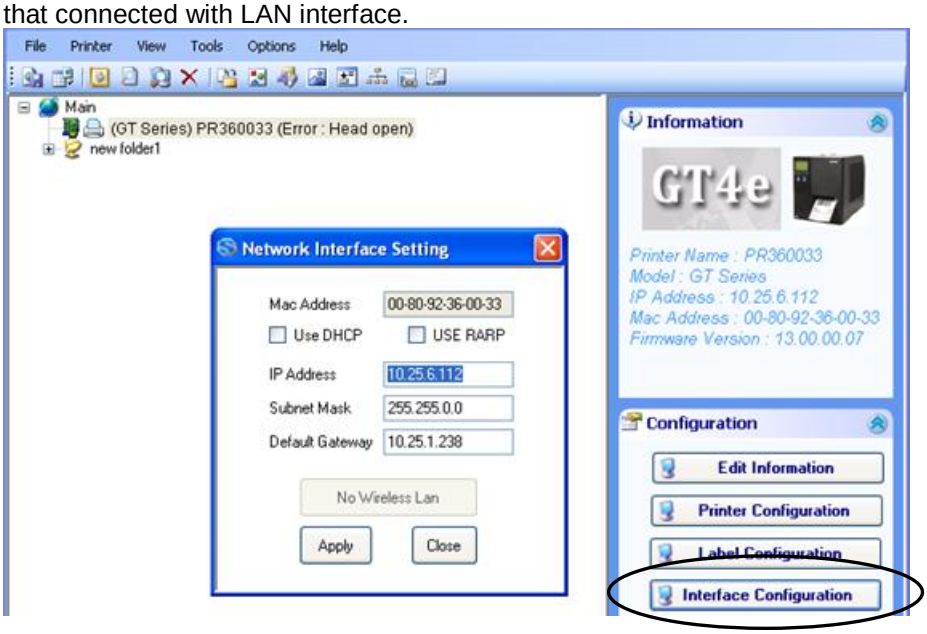


Figure 15 Interface Configuration

Note: When the “Interface Configuration” window is open, the ENQ Status monitoring function of the printer will be stopped.

The following picture shows the Interface Configuration for MB printer:

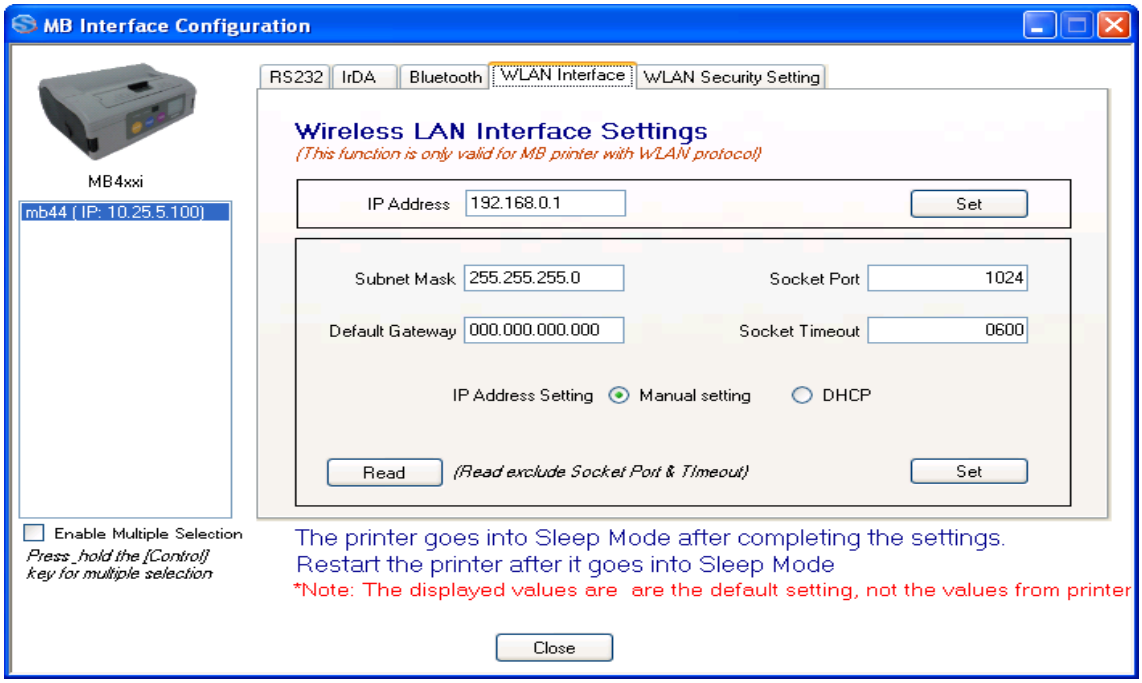


Figure 16 MB-series Interface Configuration

This function supports concurrent setting to multiple MB printers. The following interface settings can be configured on this functionality:

- RS232 settings
- IrDA settings
- Bluetooth settings
- Wireless LAN settings

4.10. Displaying Configuration Information

The displaying and updating of printer configuration information is split into 2 parts: Printer information and Label information. These can be viewed and updated by clicking the “Printer Configuration” and the “Label Configuration” button respectively.

4.10.1. Printer Configuration

SBPL commands will be sent to the printer to retrieve the printer configuration information. The screen will only display the system configuration Information such as print speed and darkness level.

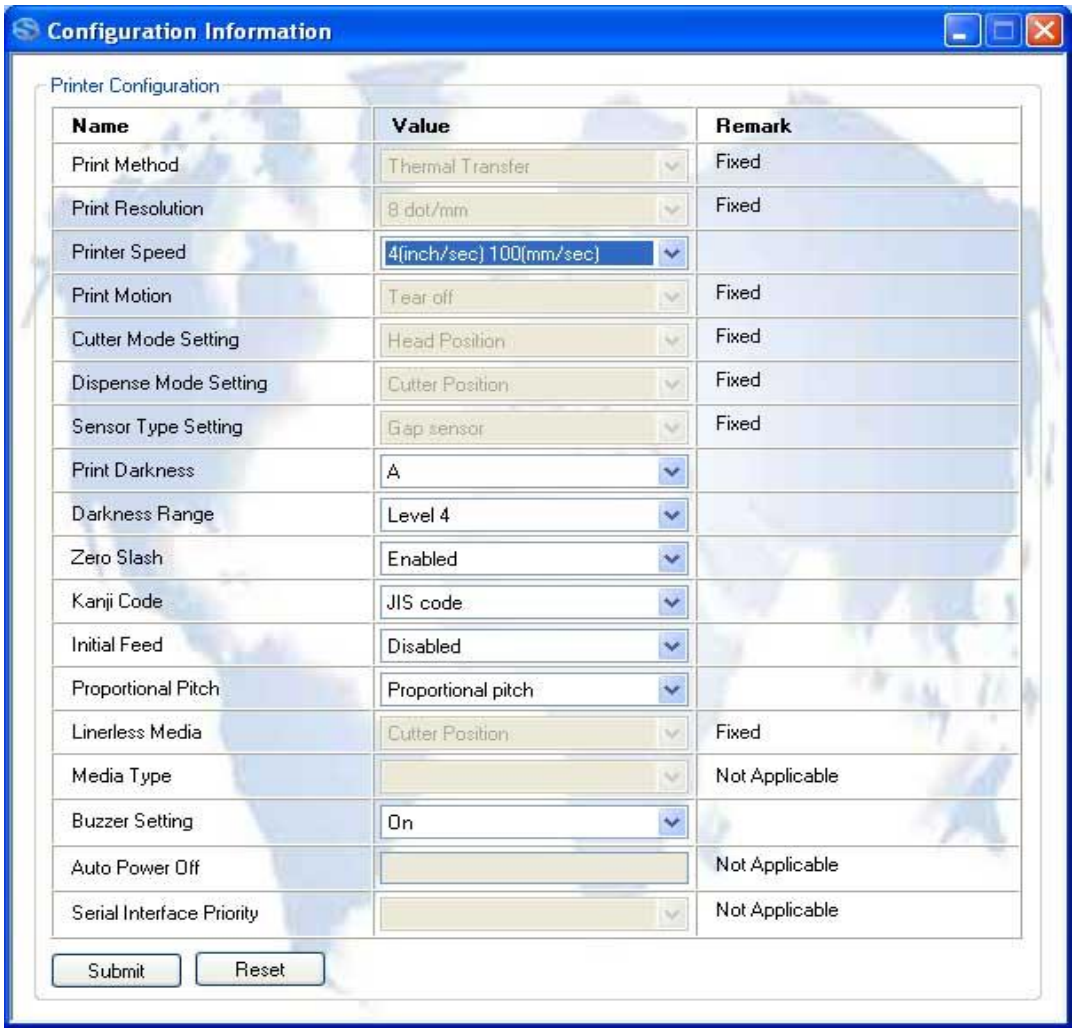


Figure 17 Printer System Configuration Information

Use the drop-down lists to make any necessary changes to the configuration. When the “Submit” button is pressed, the system captures your inputs and issues SBPL commands to change the settings in the printer.

4.10.2. Label Configuration

The remaining configuration data contains label configuration information. The unit of measurement will be changed from “dot” to “mm”.

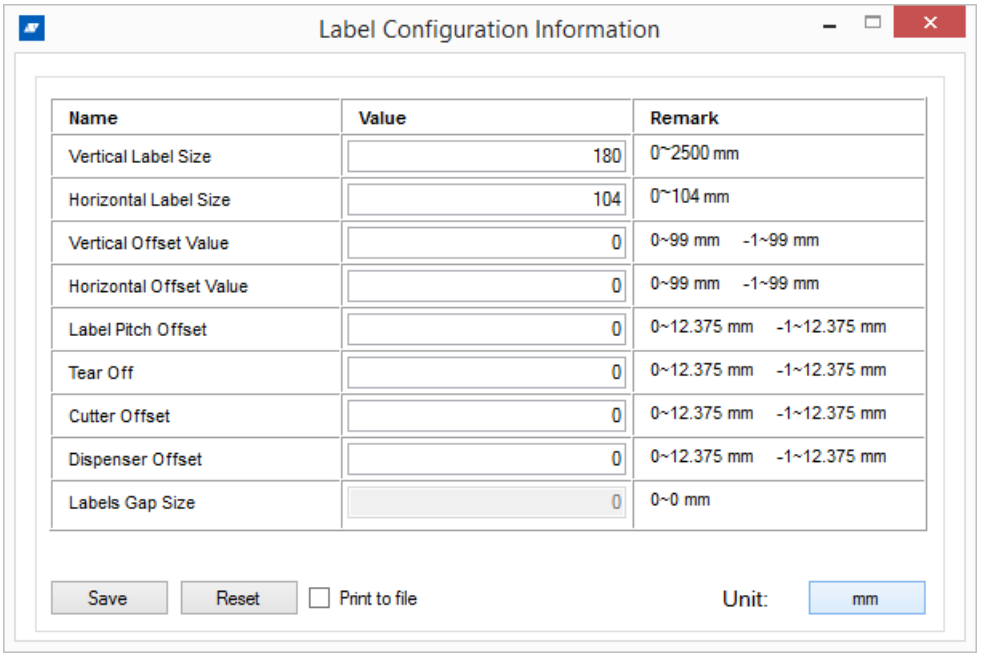


Figure 18 Label Configuration

Use the drop-down lists to make any necessary changes to the configuration. When the “Submit” button is pressed, the system captures your inputs and issues SBPL commands to change the settings in the printer.

4.10.3. Counter Information Display

Some supported model can click on ‘Print Head Information’ button under Configuration to view the detail information for print head counters and statuses.

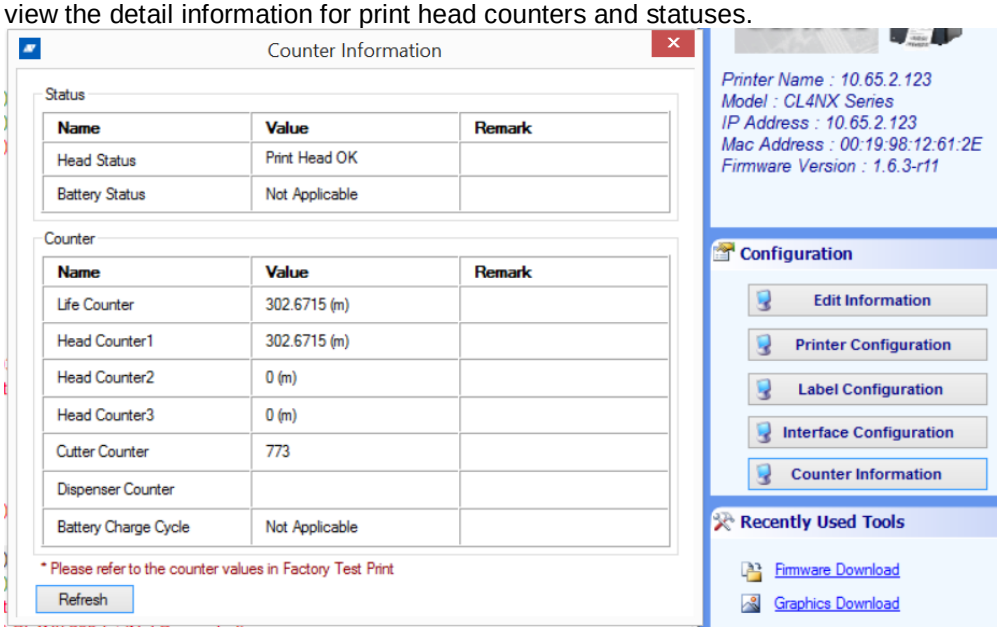


Figure 19 Print Head Information Display

4.11. Export/Import Profile

The effort and time required to populate the application's treeview with the correct printers and folders, need not be repeated every time you start the All-In-One Tool. By saving the "profile" of already detected printers into a file (in XML format), the application will not normally need to auto-detect printers on the network again, unless you force the software to do so.

The profile can also be exported to other computers connected to the same printers, so that the same treeview information can be restored without delay.

The following information is captured in the XML profile file:

- Folder Information
- Name
- Tree Level
  - Printer type
  - Name
  - Model
  - DisplayName
  - Firmware Version
  - Folder Name
  - Interface Type
  - IP Address
  - Mac Address
  - Port
  - Baud rate
  - Parity
  - DataBits
  - StopBit
  - HandShake
  - PortName

Click **File->Export** Profile or **File->Import Profile** to download or upload the printer configuration profiles.

4.11.1. Using External Profile

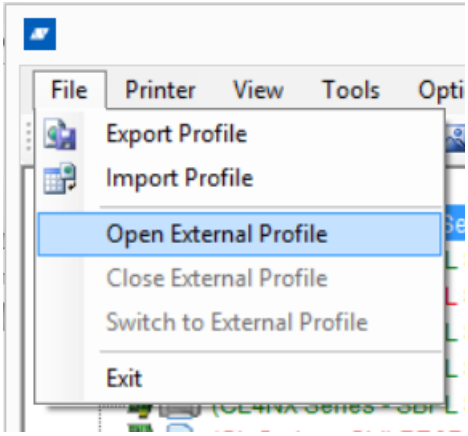


Figure 20 Open External Profile

By default, All-In-One Tool loads printer profile information stored in the application directory during start-up. However, user can choose to load the printer profile information stored in other directory.
User chooses an external printer profile by File->Open External Profile. The application title shows the name of the external profile, to indicate that the current printer profile used by the application.

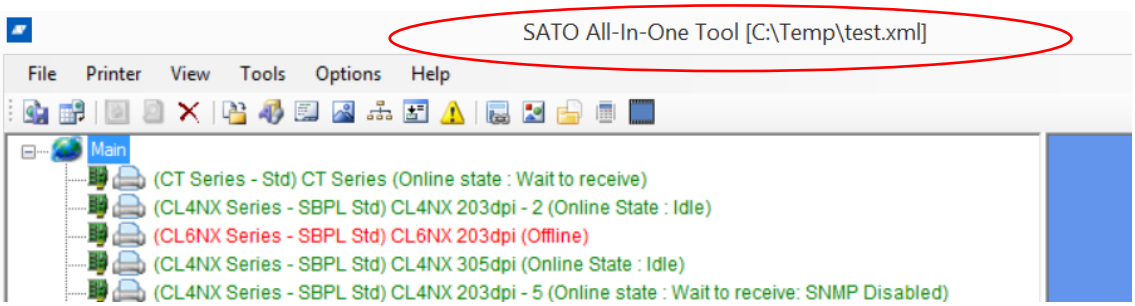


Figure 21 Using External Profile

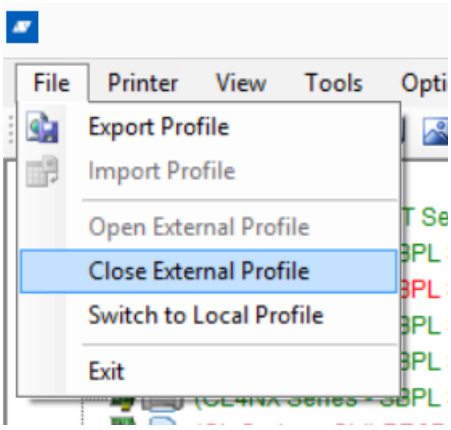


Figure 22 Closing and Switching Profile

Close External Profile: This is to close the external profile and loads again the internal application profile. The internal profile will be loaded during the next application start-up.

Switch to Local Profile: This is to switch to the local application profile but the external profile is still open. The external profile will be loaded during the next application start-up.

4.12. Graphics Conversion

This utility provides conversion functions from raster graphics files (*.BMP;*.GIF;*.JPG;*.PNG) into SBPL commands. Click **Tools->Graphic Conversion**.

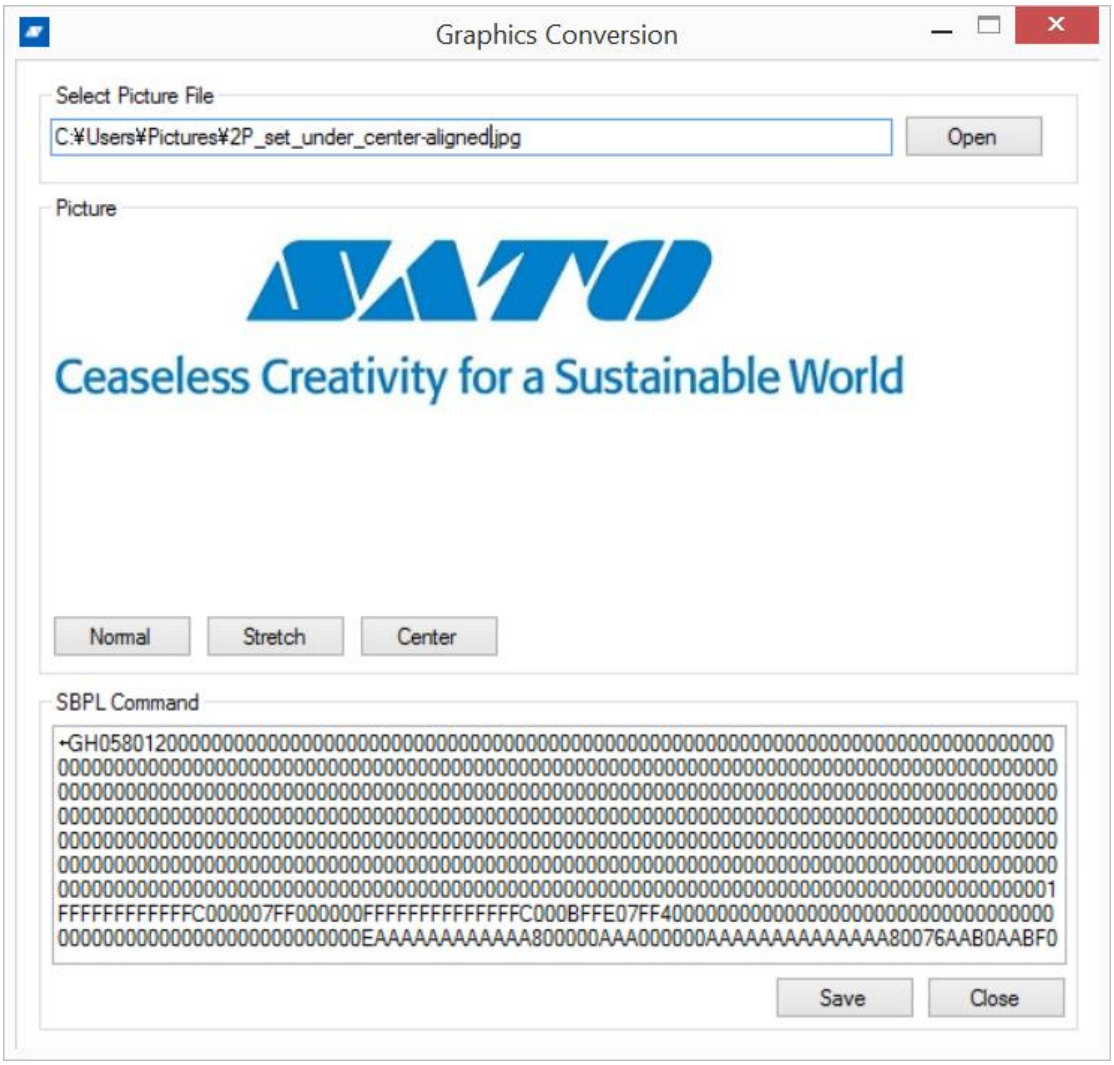


Figure 23 Graphics Conversion

Click the **Open** button to browse for the desired graphics file. A preview of the file will be displayed. You can also edit the graphic by using the **Stretch** or **Center** button, or reset the changes using the **Normal** button.

The appropriate SBPL commands for printing the file will be displayed in the bottom-most window. Click **Save** to save the commands into a file, or click **Close** to end the conversion.

4.13. Loading Graphics

Click **Tools->Graphics Download**. This function allows you to upload and store the graphics into the memory of a printer. It supports the following graphics formats:

- BMP
- JPG
- GIF
- PNG

The function supports the following types of uploading formats:

1) SATO Graphics (ESC+GR/GI command)
2) Bitmap Images (ESC+GT/GC command)
3) PCX Images (ESC+PI/PY command)
4) Logo in Internal Flash (FD command)

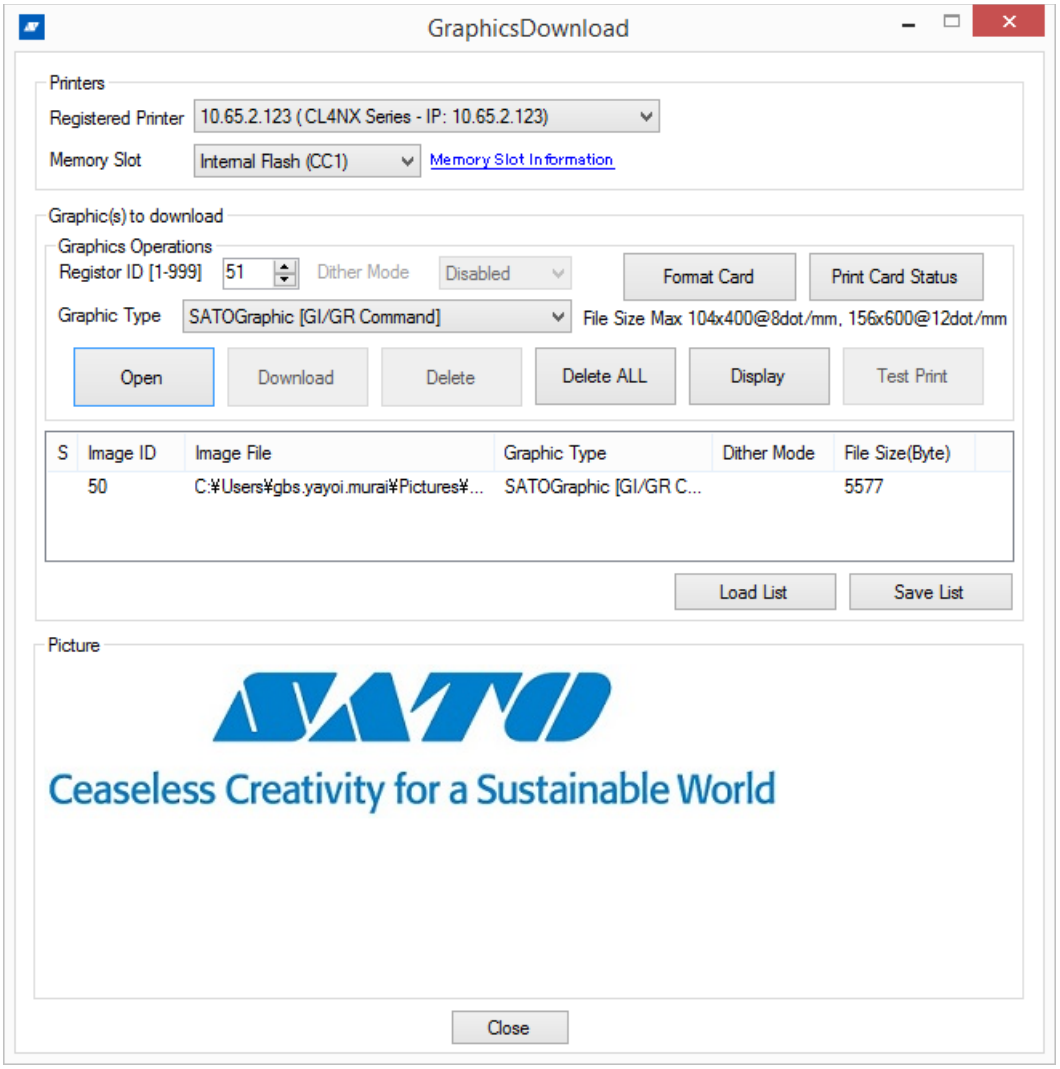


Figure 24 Graphics loading

4.13.1. Dithering Effect

For Bitmap and PCX files, the Dithering effect feature is available to allow downloading of graphics with color fading effects.

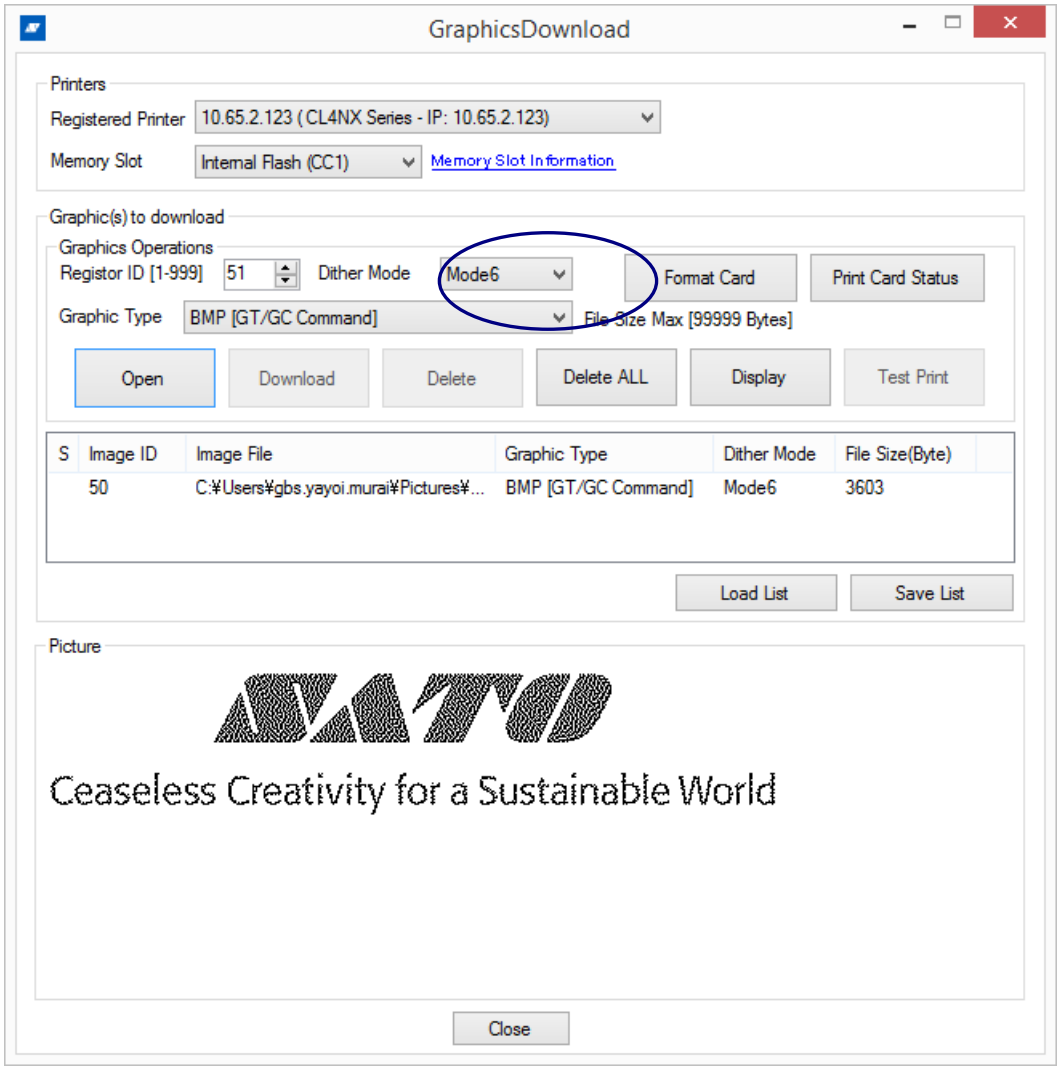


Figure 25 Dithering Effect

4.14. Font Downloading

Click **Tools->Font Download**.

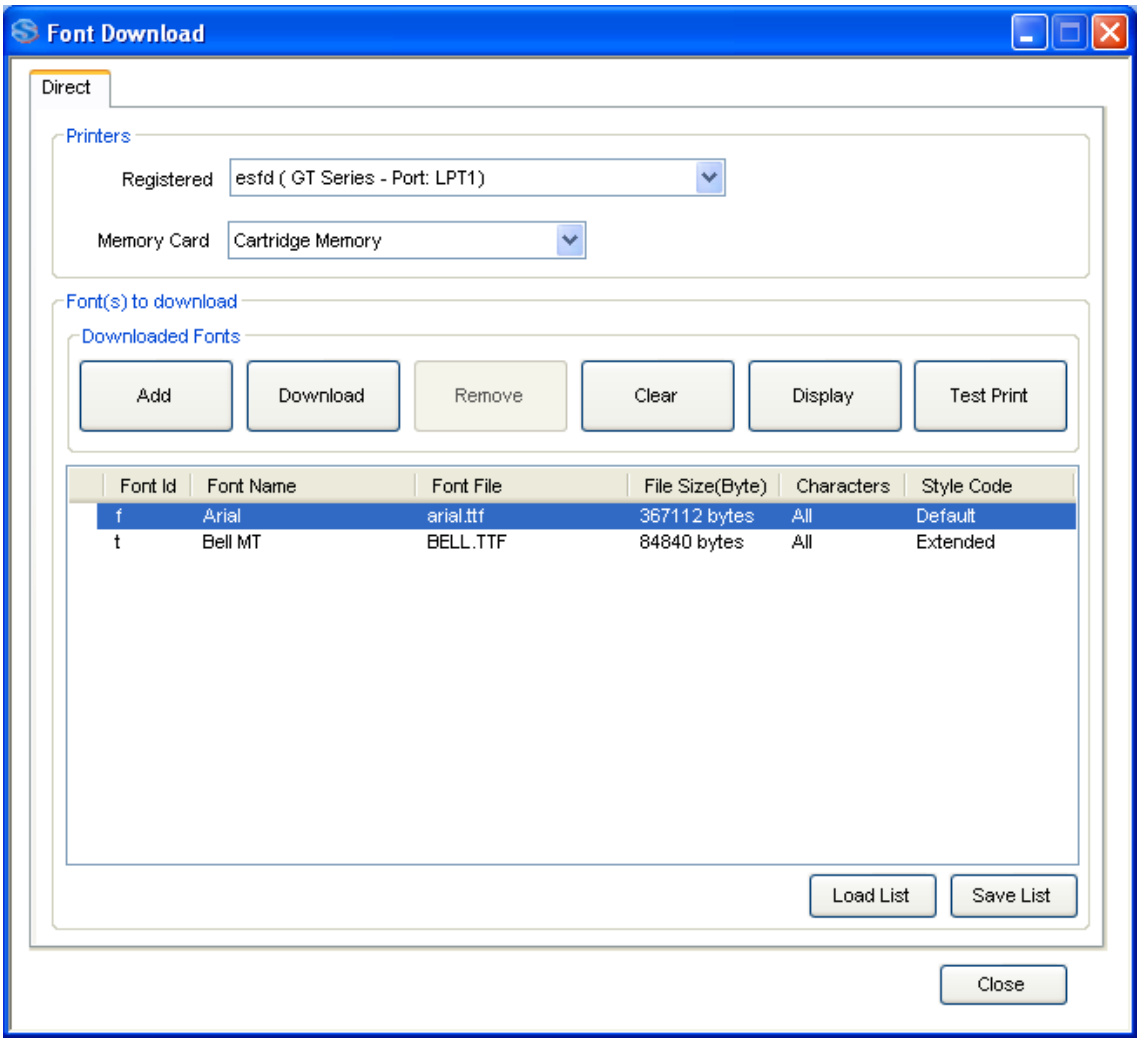


Figure 26 Font Download

Full set of True Type Font (TTF) can be downloaded to the extended memory or cartridge. Whereas only selected size font (bitmap font) can be downloaded to internal flash. The following shows the steps of downloading full set of TTF into **extended memory or cartridge**.

The Font information can be reused and applied onto another printer by using the “Load List” and the “Save List” functions.

4.14.1. Font Selection

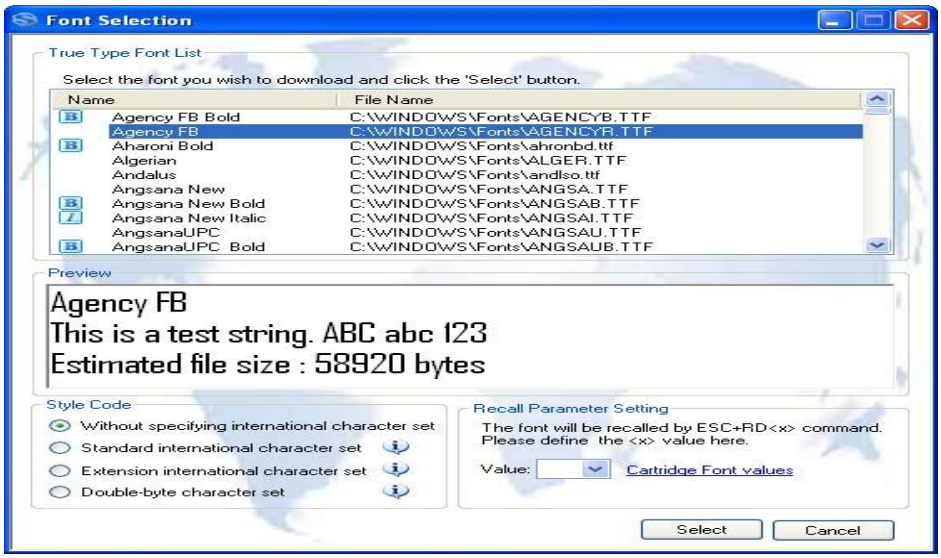


Figure 27 Font Selection

When the “Add Font” option is selected from the popup-menu (5), the above dialog box will be displayed to let you select the font to load.

- **Without specifying international character set**
  This option is for User TrueType Font load. The command will have a prefix ESC+RD<x>00, where x ranges from ‘u’ to ‘z’, to be specified by user.
- **Standard international character set**
  This option is for Code Page 850 character set. The command will have a prefix of ESC+RD<x>10, where x is specified by user according to the font style:

F	FuturaIIBook
G	CG Triumvirate Condensed
P	CG Palacio
S	CG Century Schoolbook
V	Univers Medium
u,v,w,x,y,z	User True Type Font

- **Extension international character set**
  This option is for a font that contains an extension international character set such as Arabic and Thai. The command will have a prefix of ESC+RD<x>20, where x is specified by user according to the font style:

V	Univers Medium
t	CG Times
T	Angsana UPC
u,v,w,x,y,z	User True Type Font

- **Extension international character set**
  This option is for double-byte character sets such as Chinese, Korean and Japanese. The command will prefix with ESC+RD<x>00, where x is specified by user according to the font style:

C	Simplified Chinese (GB2312)
C	Traditional Chinese (Big5)
K	Korean (HYGungSo-Bold)
u,v,w,x,y,z	User True Type Font

4.15. Bitmap Font (fixed size) Download

Bitmap font with specific size can be downloaded into the Internal Flash of the printer using FD command. The font downloaded with this method can be recalled using the ESC+RF command. Refer to the command specifications of each model for details.

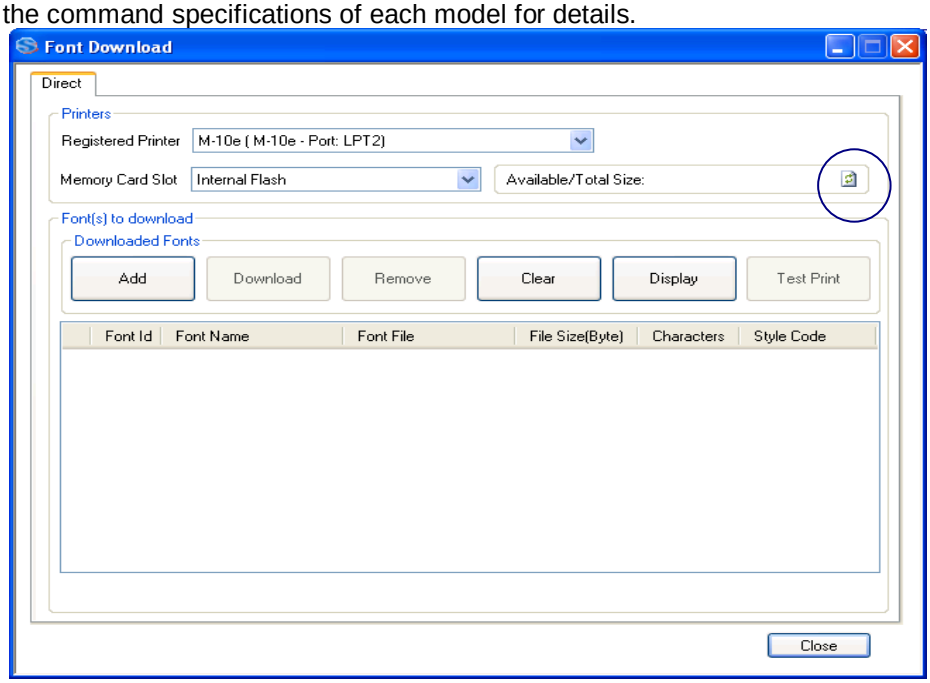


Figure 28 Selecting Internal Flash for Bitmap Font Download

The Refresh button is to get updated storage information of the Internal Flash. Note that the storage space is used for both Bitmap Font and Graphics downloaded using ESC+FD command.

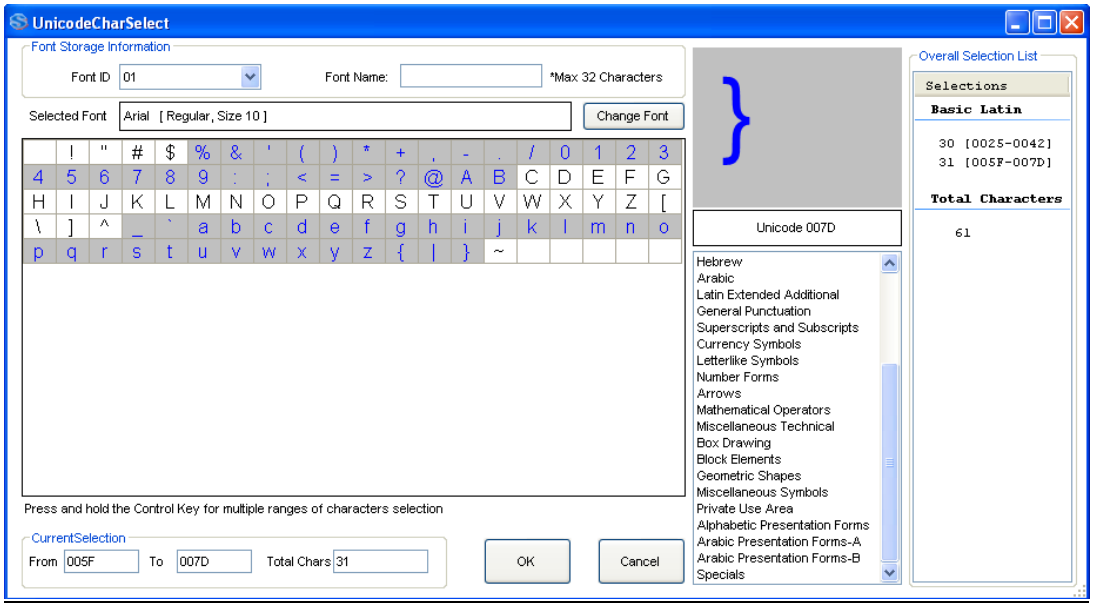


Figure 29 Download Fixed Size Bitmap font

Multiple range of character set is possible by selecting the character while holding down the [Ctrl] key. It is able to span across different Character Set.

4.16. Firmware Download

4.16.1. MB200i and MB400i

Select any MB200i and MB400i printer from the treeview, right click on it and choose Firmware Download from the popup menu. The firmware must be loaded using RS232c interface.

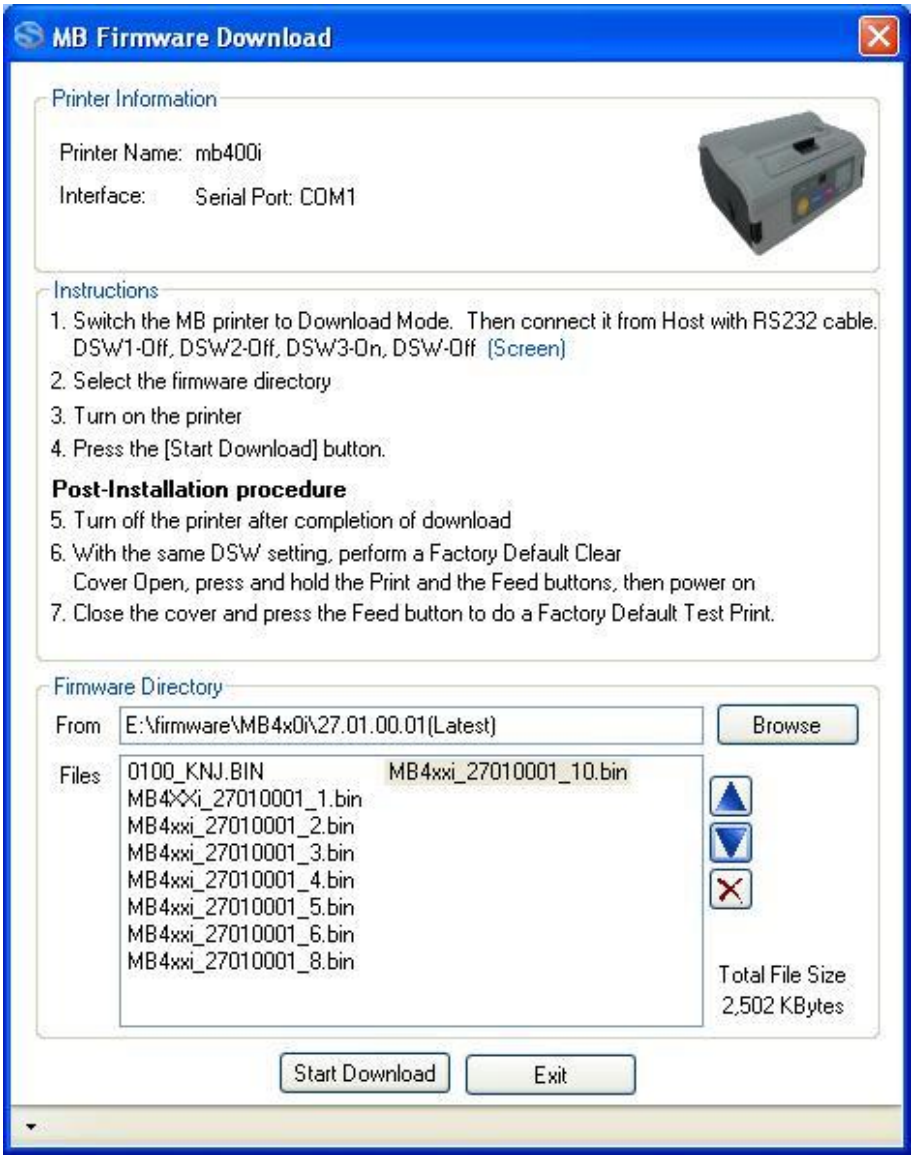


Figure 30 MB Firmware download

4.16.2. CL, CG, CT, LM, S84 and GT

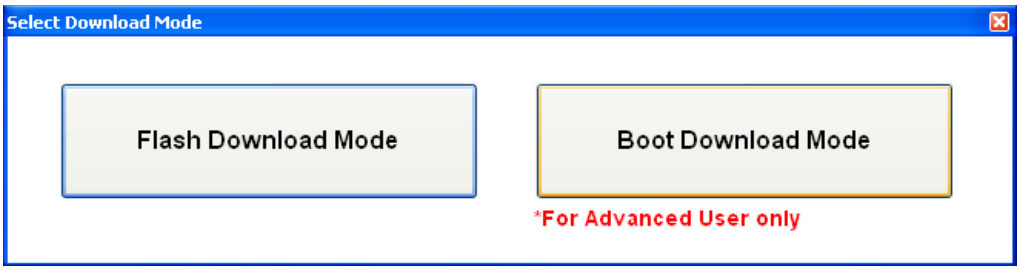


Figure 31 Boot or Flash Download

User is to select the download mode: Boot or Flash Download.

4.16.2.1. Boot Download mode

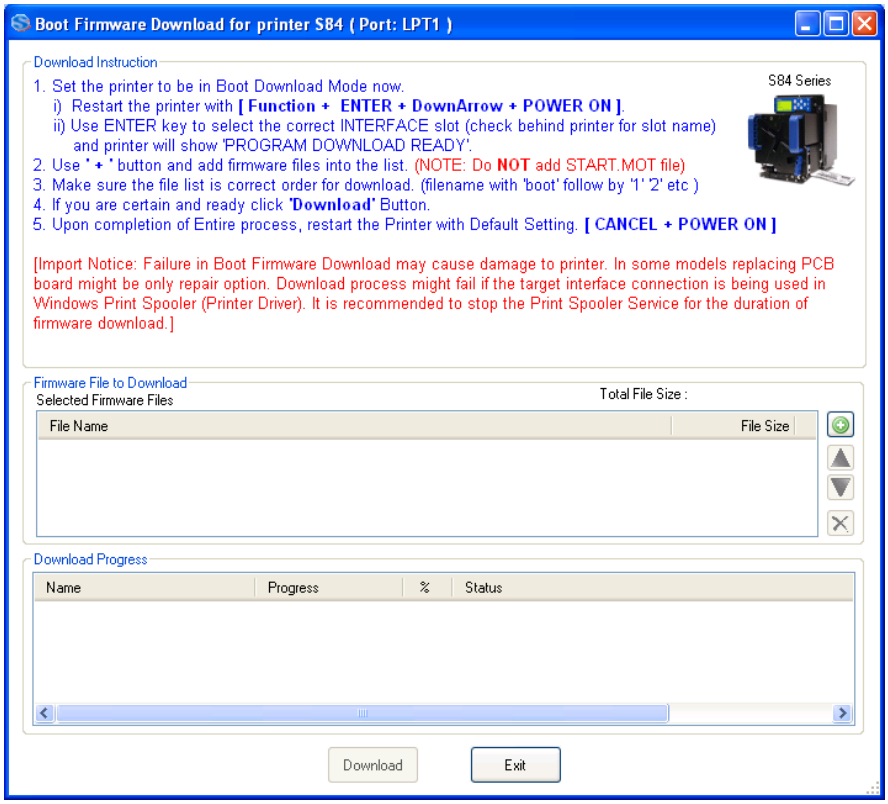


Figure 32 Boot Download mode

User is advised to take extra precautions when using this function. Instruction on the dialog must be strictly followed. This process is carried out with a mixture of human interventions of the printer and the application.

When the first firmware file is completed, user is to set the printer (by pressing button on the printer) to ensure it is on “Program Download” mode before the next file is sent from the application. Failure in doing so might cause unexpected exceptions and damages to the printer.

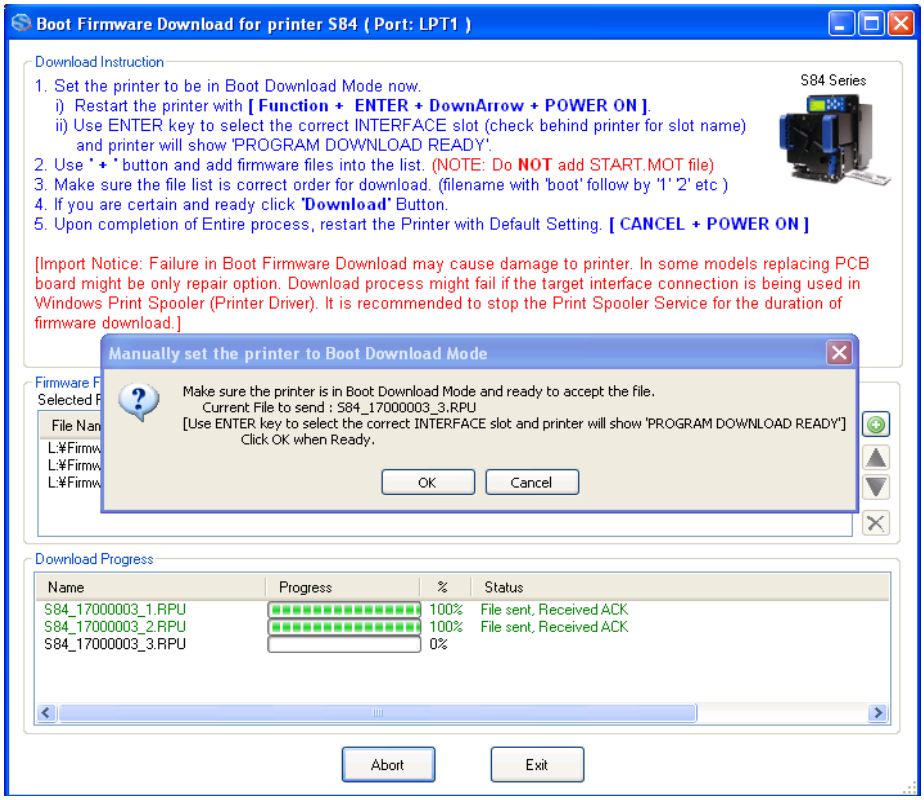


Figure 33 Executing next firmware file

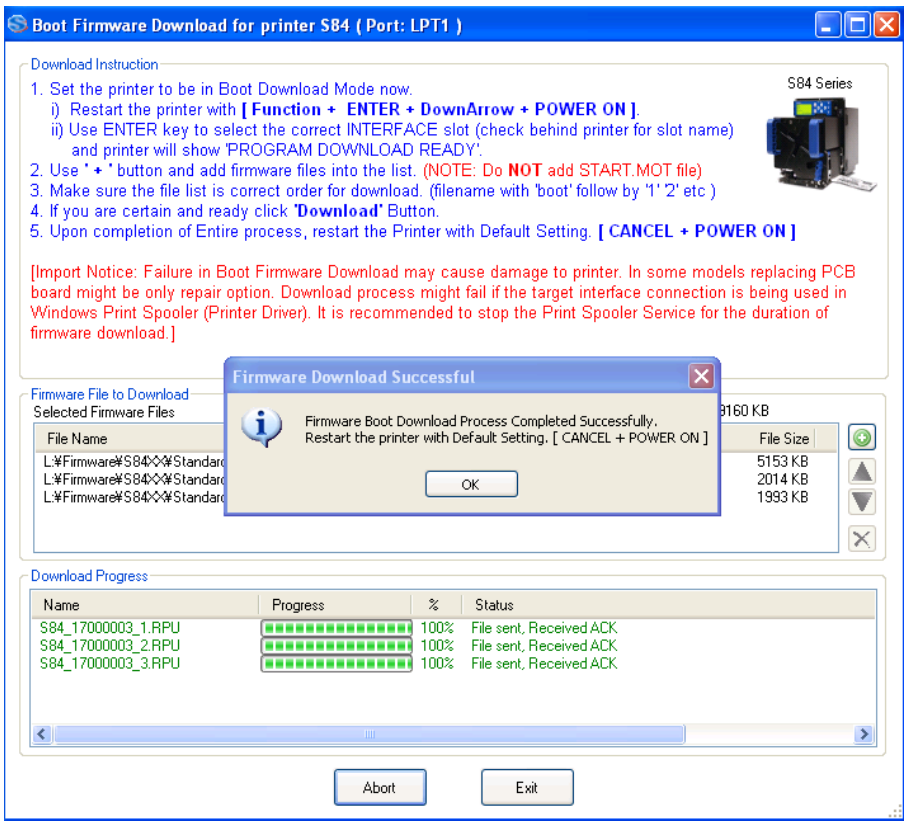


Figure 34 Download Complete

When the downloading processing is complete, user is to perform a default setting on the printer, manually.

Please note that the downloading process must be complete without interruptions of the connectivity to the printer.

* **Important**: for downloading of emulation firmware, it is important to refer to the respective firmware download manual for the correct procedure. Certain types of firmware require downloading of font file in order to get the firmware upgrade process working. The sequence of files to download also has to be strictly followed.

4.16.2.2. Flash Download Mode

This function supports firmware loading of GT/CG/CL/CT/LM/S84 with the following limitation:

- Older CL firmware that does not provide the Auto Download and the Restart command will not be supported

The download process is automatic, where the All-In-One Tool automatically sends the next firmware file and restarts the printer to perform factory clear + default setting after download completes.

It supports concurrent firmware loading to multiple printers (of the same model).

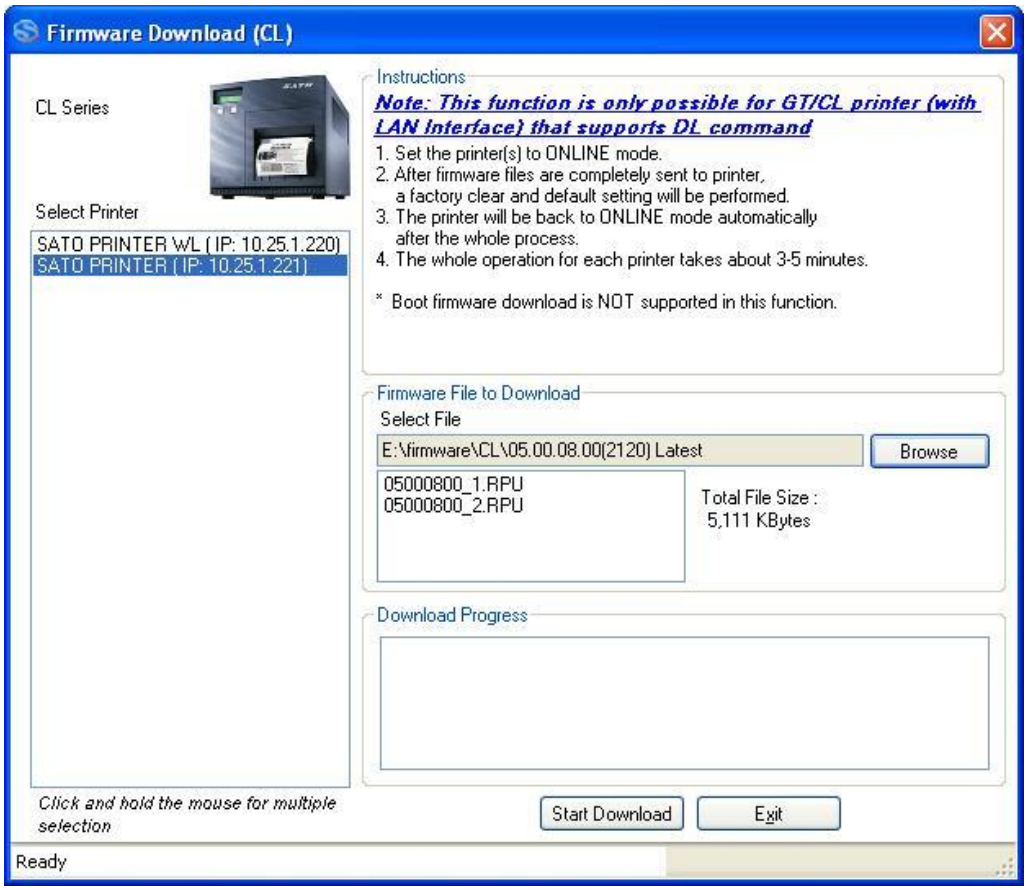


Figure 35 Firmware Download for CL and GT

4.16.3. GL

This function currently supports firmware loading via a LAN interface. The FTP protocol is used to transfer the firmware file from host to printer.

The printer will automatically restart after the firmware loading is complete.

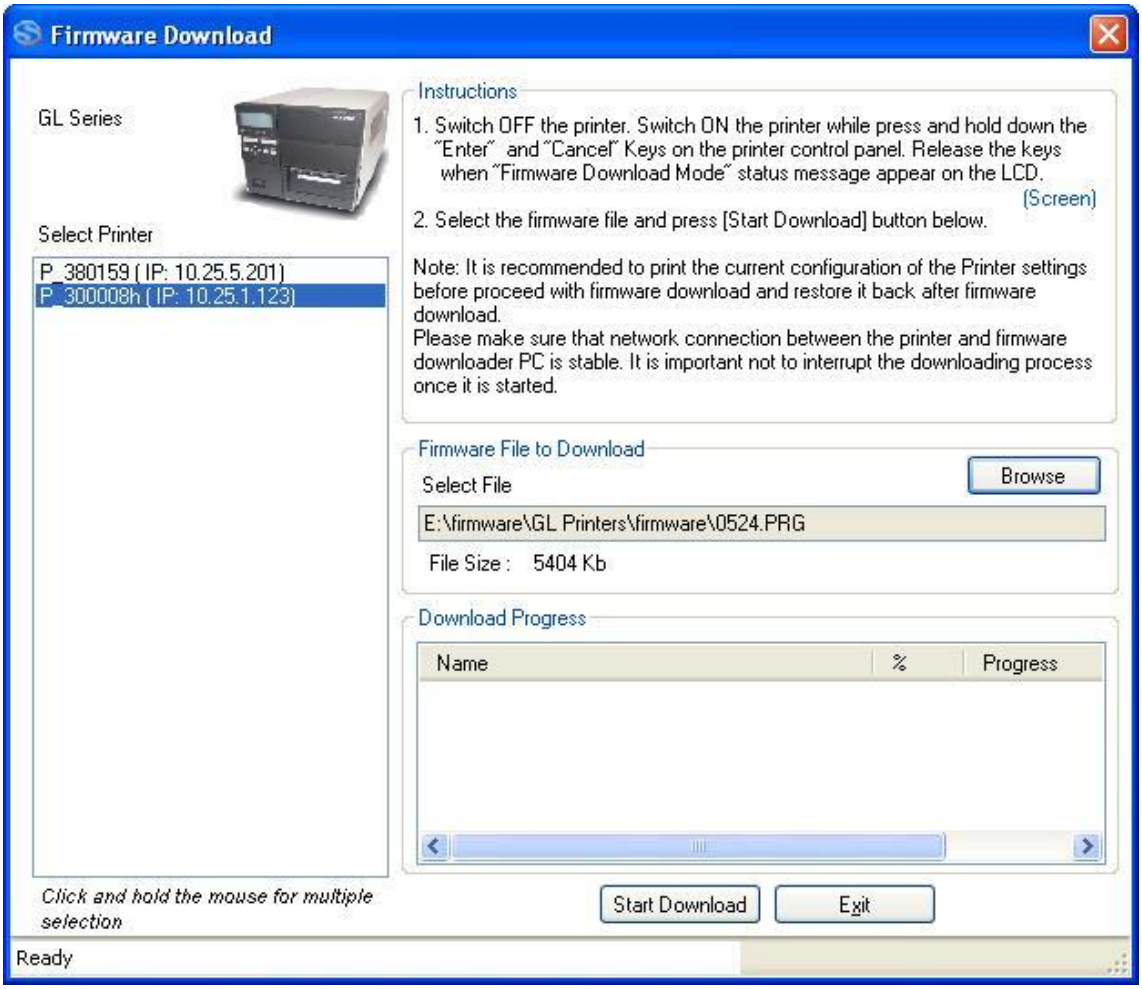
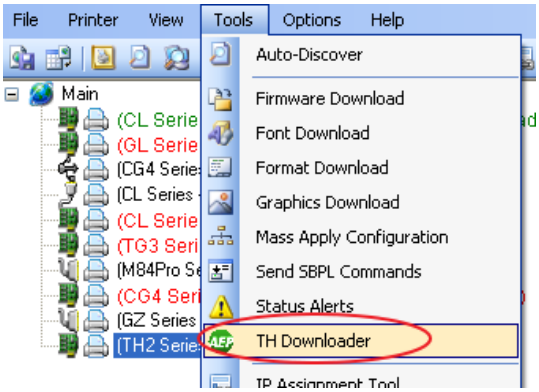


Figure 36 GL Firmware loading

4.16.4. TH2 Downloader

User can use TH Downloader Feature to download package (.pkg) file to multiple TH2 printers concurrently. Select Tools->TH Downloader menu to open TH2 Downloader dialog. Select .pkg file to download, select the printers to download and proceed with “Start Download” button.



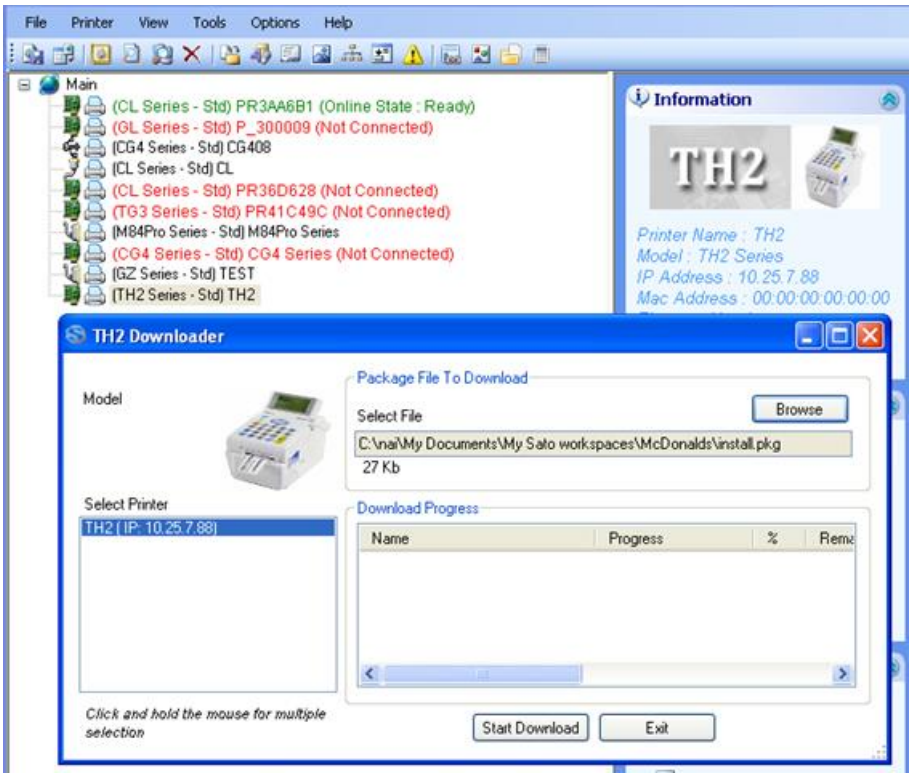


Figure 37 TH2 Downloader

4.17. Test Print feature

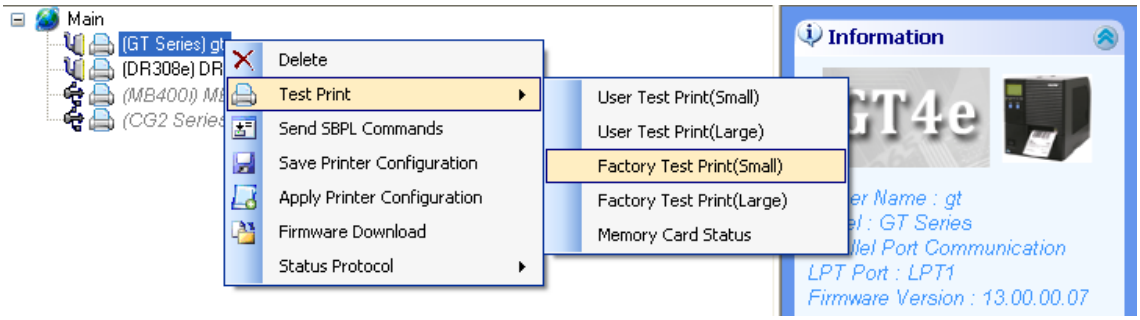


Figure 38 Test Print

This feature allows user to send built-in Test Print commands to any registered printer. The user can invoke the standard test print functions such as User Test Print or Factory Test Print, in either small or large label sizes.

4.18. Switching Interface Selection for CG Printer

After the CG printer is added to the application, the interface selection can be switched by right-click the printer to bring up the Context Menu, and choose the “Interface Mode”.

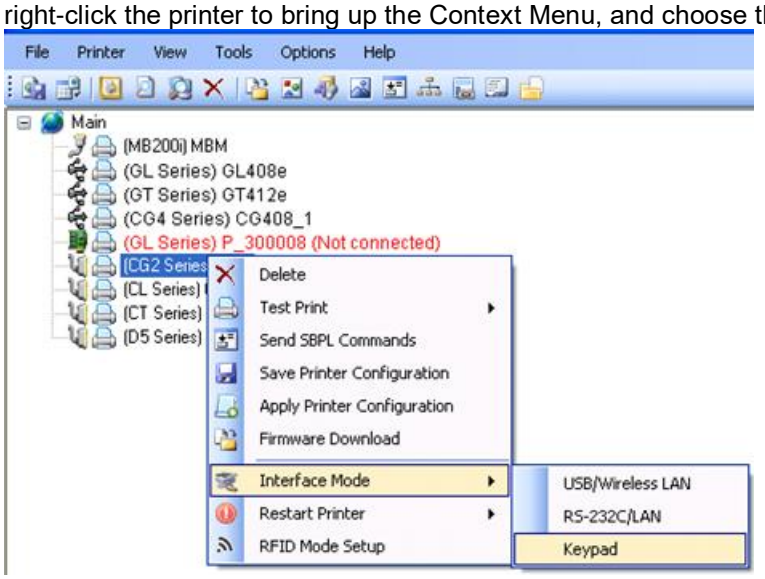


Figure 39 Switching Interface Selection for CG Printer

Note: User is required to **manually** restart the printer after switching the printer interface mode.

4.19. Restart Printer

Currently, this function is only available on CG and GT models.

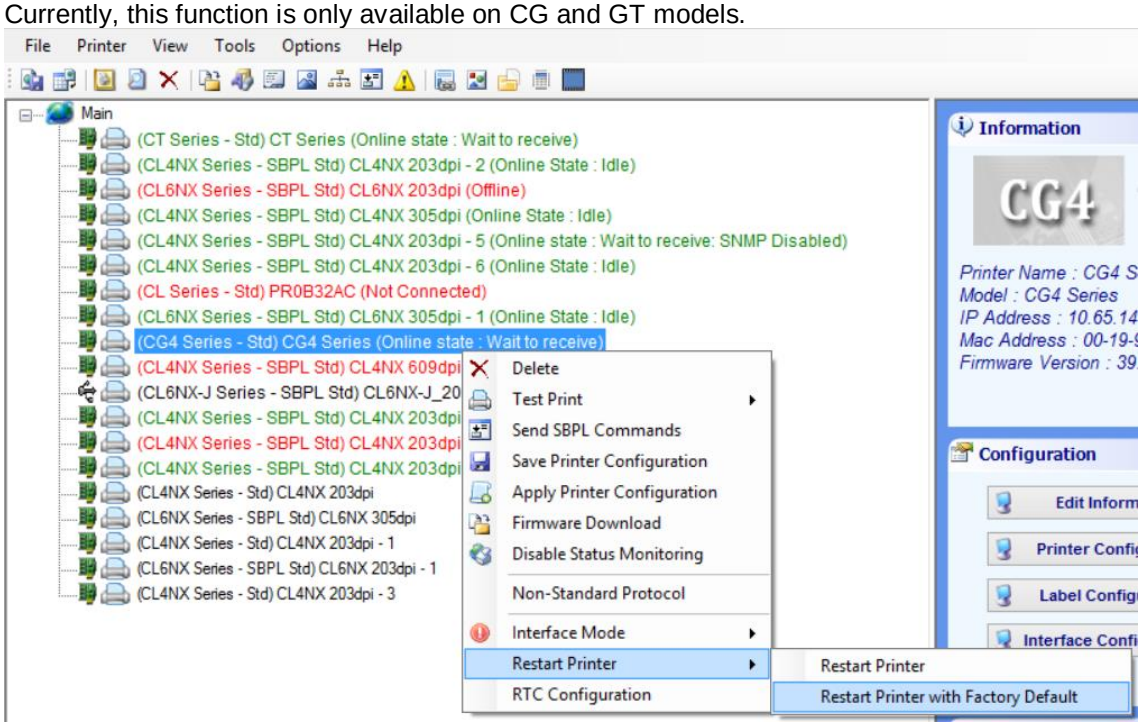


Figure 40 Restart Printer

For CG printer, if the printer is on LAN interface, it will be switched to USB mode after restarting the printer with Factory Default.

Note: Do not use this function if the printer has just changed the interface mode.

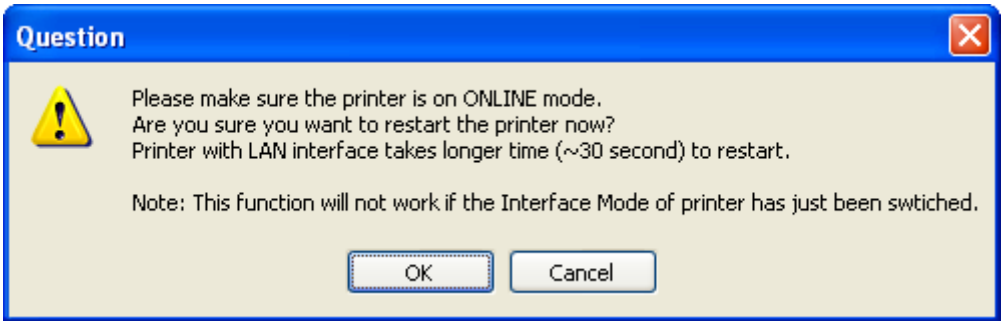


Figure 41 Restart Printer Function will not work if the Interface Mode has changed

4.20. RFID Mode Setup (for NX, CG2 and CT4i)

Currently, this function is only available on CG2 and CT4i printer.

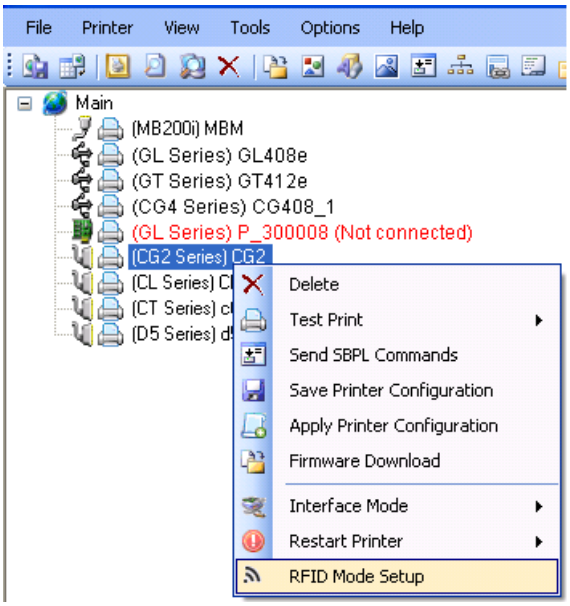


Figure 42 RFID Mode Setup

This function allows user to switch between normal mode, RFID mode and enhanced RFID mode. It is only applicable to printer with the optional RFID kit installed.

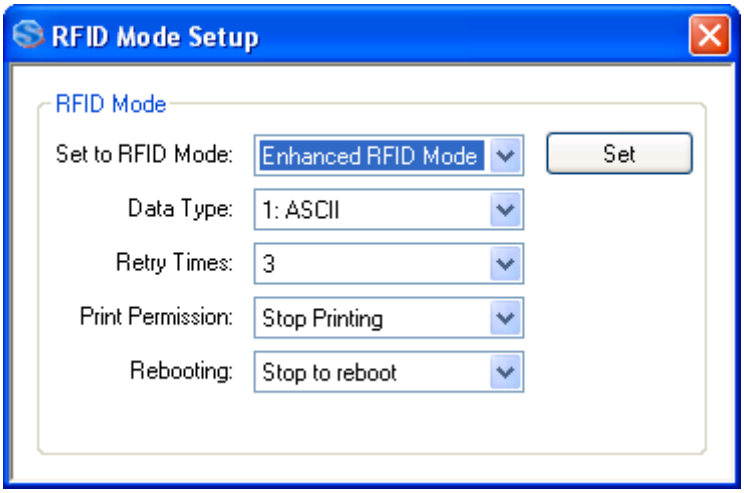


Figure 43 RFID Mode Setup Dialog

4.21. Sending Printer Command Strings

Right-click a printer icon from the treeview and choose Send SBPL Command from the popup menu. This function allows the user to send SBPL commands in both text format and file format. The user can also use it to retrieve printer response from the command.

The response of the printer is displayed in both ASCII and HEX formats.

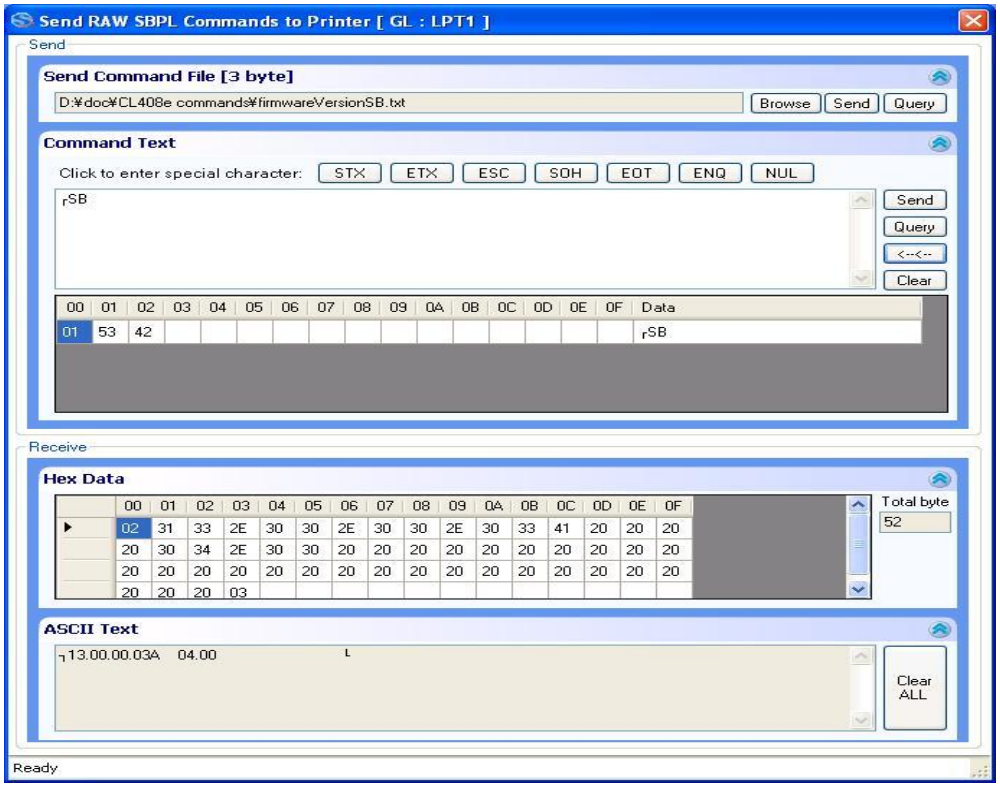


Figure 44 The Send Printer command

4.22. Saving and Applying Printer Profiles

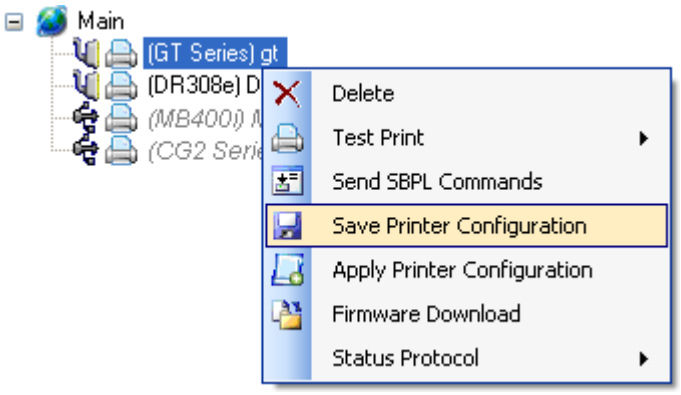


Figure 45 Saving and Applying a Printer Configuration

This feature is necessary for users who need to apply a set of tested settings to many printers at once.

For Saving Printer Configuration, an ***SBPL*** command will be executed to retrieve the Printer Configuration of the selected printer. The information is then saved into an XML file specified by the user.

For Applying Printer Configuration, the command will be executed after reading the XML file which is specified by the user.

An example of the XML file is shown here (Figure 30).

Figure 46 XML File

4.23. Mass Update of Printer Configuration

This feature is to apply a printer configuration to more than one printer (within the same model) concurrently. Click **Tools->Mass Apply Configuration**.

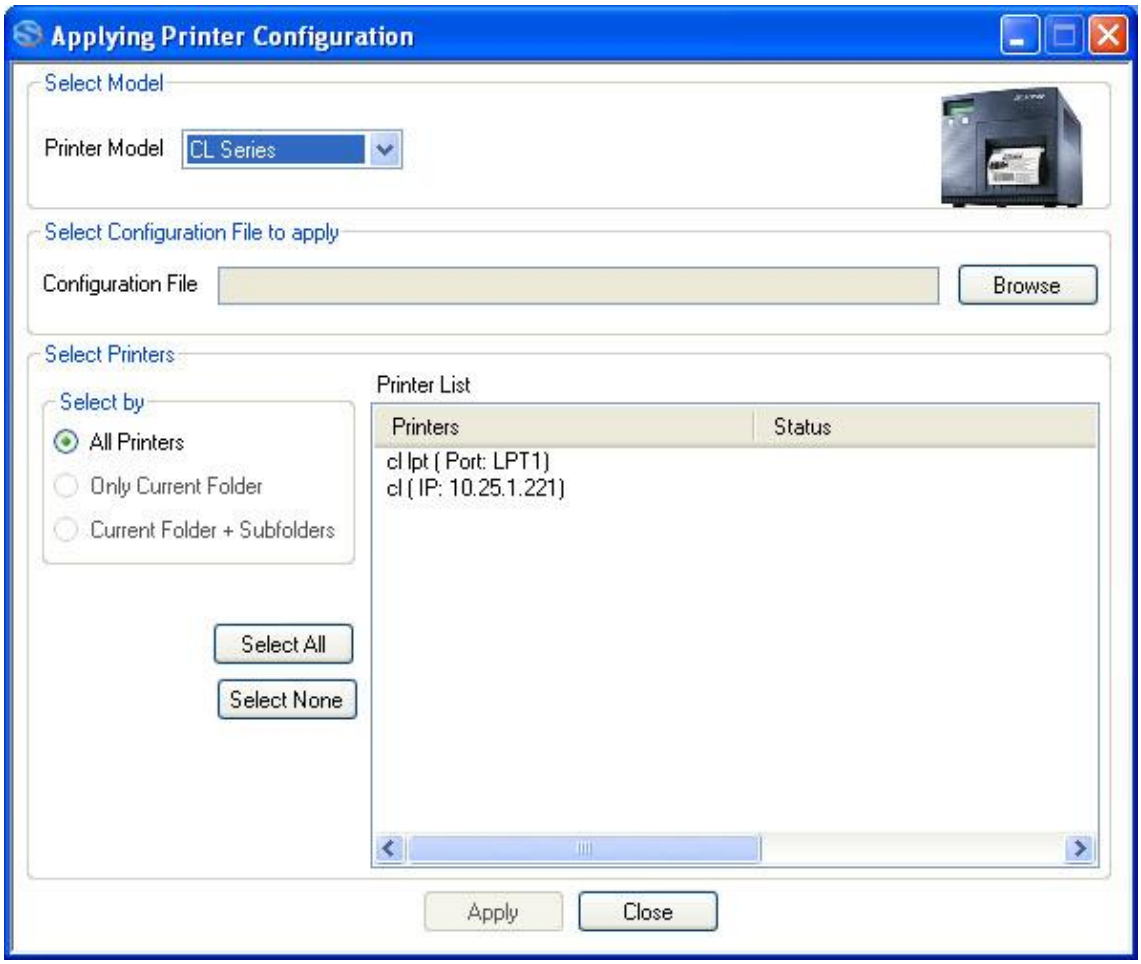


Figure 47 Mass Update of Printer Configuration

After selecting the printer model, the user can choose the printer configuration file (that was previously saved as explained in section 4.22). A list of printers of the selected models will be displayed. User can hold the Control Key to perform the multiple selections of the printer to apply the configuration.

4.24. Application Configuration

Some aspects of the application can be configured at **Options->Preferences**

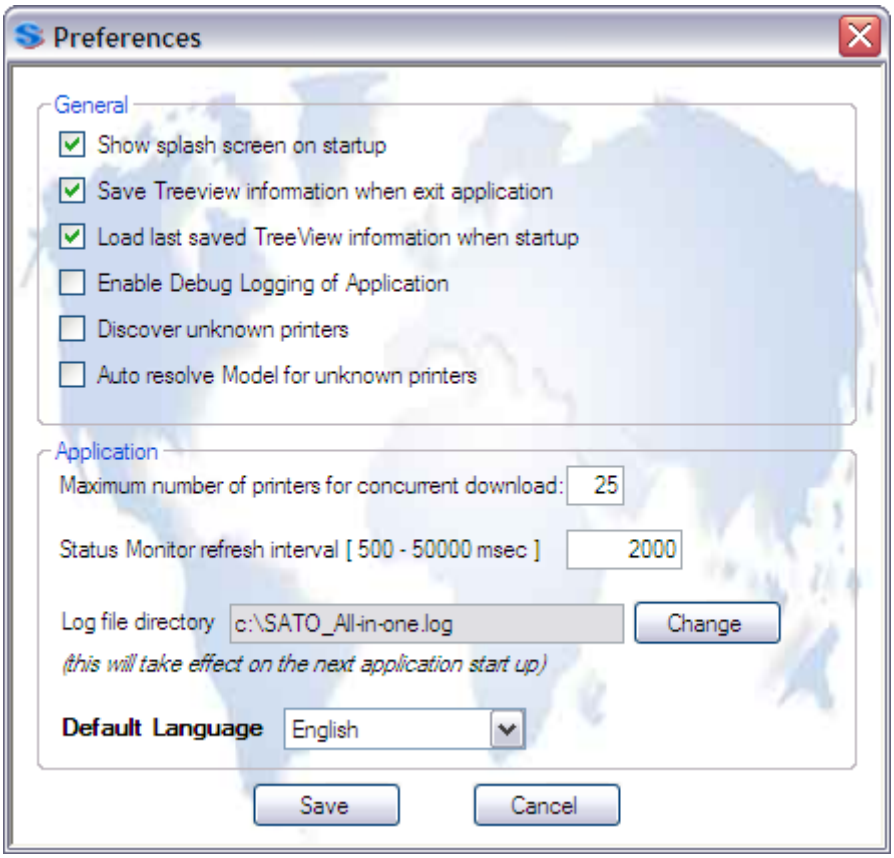


Figure 48 Preferences Dialog

This should be the only proper way to change the application configuration information. Configuration files should not be modified without advice from SATO technical staff.
In case of application problem user should check “Enable Debug Logging of Application” feature and run the application to recreate issue and provide SATO_All-in-One.log file to customer support for help.

4.25. AutoDiscovery Setup

This function offers an advanced setup feature of AutoDiscovery which enables the application to discover printers in the different segment. (By default configuration, All-in-One Tool Auto-Discovery only searches printers on the same segment.) This function is intended to system administrator and/or network administrator who have knowledge of network since this function has the potential to cause malfunction of the software function.

To use this function, the router is required to support "directed broadcast" and should be properly configured. Then you go to "Options" - "Auto-Discovery Setup" - "Broadcast Address Setup" to specify broadcast IP range where you want All-in-One Tool to discover.

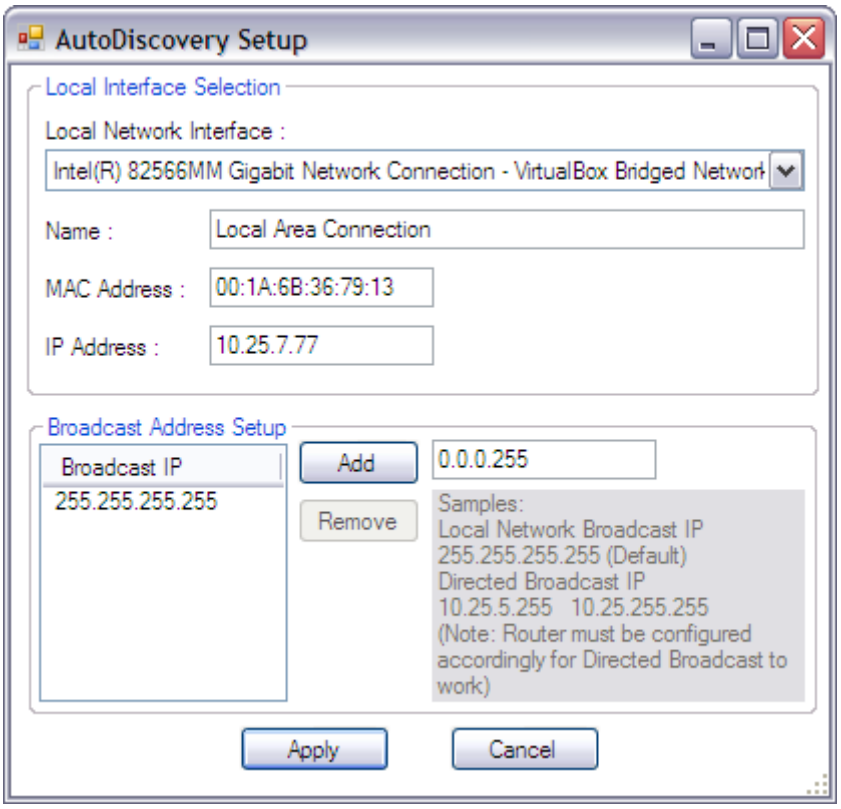


Figure 49 AutoDiscovery Setup Dialog

4.26. Configuration of Network Interface Card

For SATO Printers equipped with Network Interface Card, the network properties (such as IP address and Wireless settings) can be configured by choosing the “Interface Configuration” function.

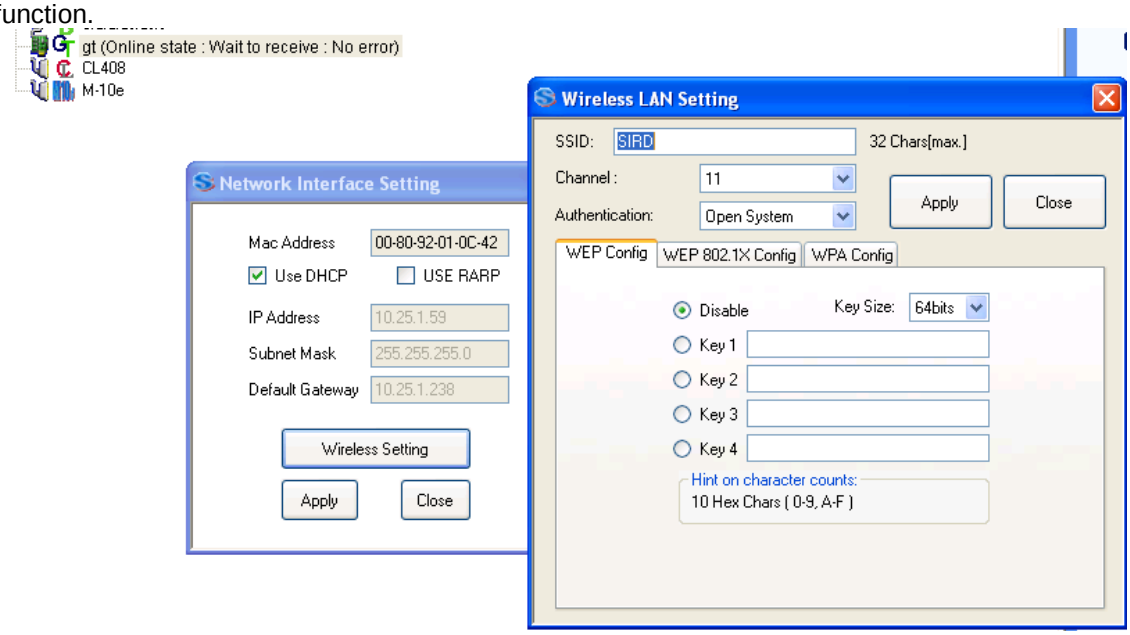


Figure 50 Configuration of Network Interface Card

4.27. Check for Newer Version of Application

The application offers a feature to help user to check if a newer version of the application is available on the website.

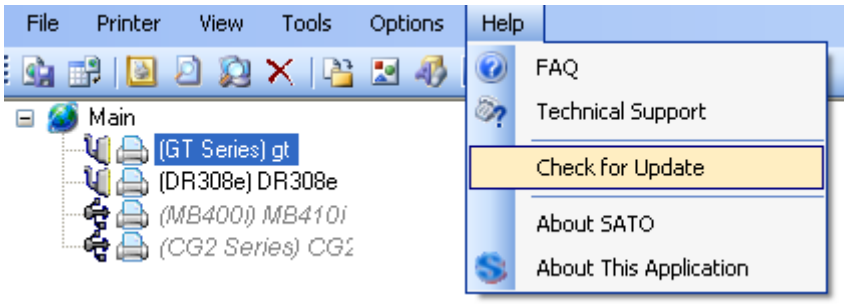


Figure 51 Check for Update

If there is a newer version, the following dialog will be displayed.

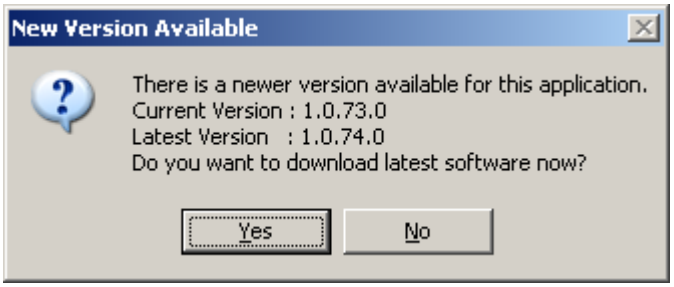


Figure 52 Found newer version

If the user clicks the “Yes” button, an Internet Browser will be opened to download the latest the application package.

4.28. Changing Communication Protocol of GL4

The communication protocol of GL4 printer can be configured by right-clicking on the GL printer node, and then choose “Communication Protocol”.

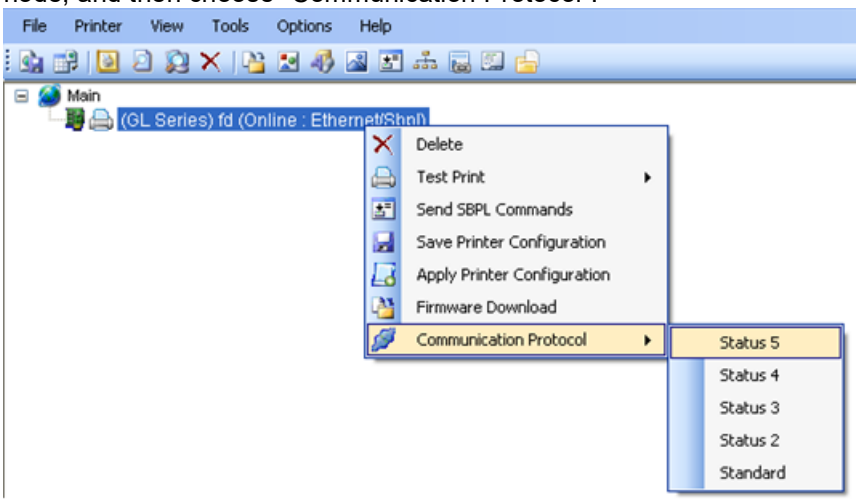


Figure 53 Changing Communication Protocol of GL4

The printer is not required to be restarted after this operation.
This function is only applicable for GL4 printer with LAN/WLAN interface mode.

4.29. Send SBPL Print File to Printer Driver

This function allows sending of SBPL print file to SATO printer driver. The print file will be sent to the print through the interface defined in the driver properties->Port Setting.

Note that the driver settings such as Print Speed or Print Darkness will not be applicable to the print file.

Click Tools->Send SBPL to Printer Driver

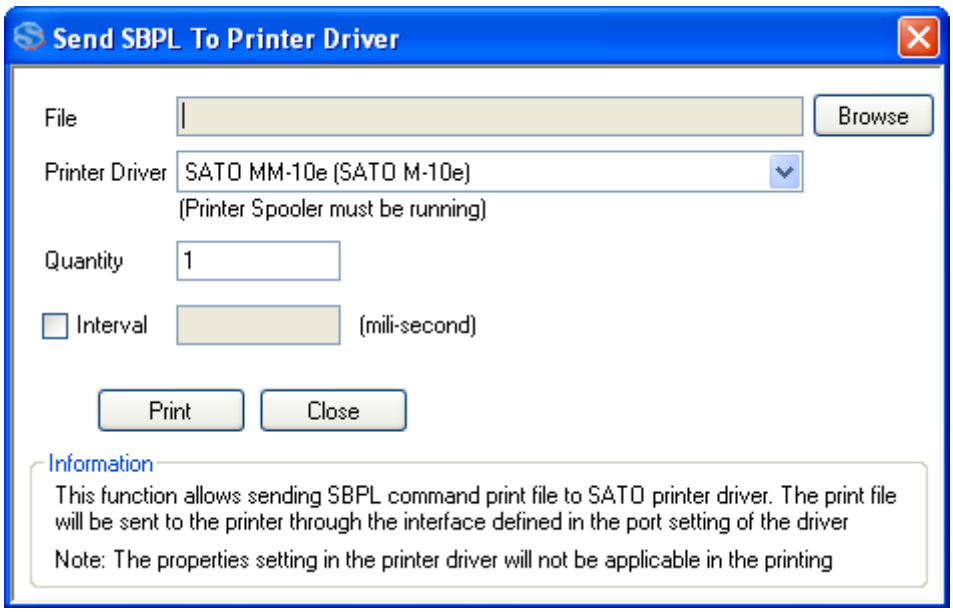


Figure 54 Send SBPL to Printer Driver

Only SATO printer drivers installed in the PC will be displayed.

If the print file is to be printed more than once, and delay is needed in between the print files, then check the Interval checkbox and input the time delay value (in millisecond, 1 second = 1000 millisecond).

4.30. IP Assignment

This function allows user to perform quick search of all Sato printers connected to network. Some network configurations such IP and SubnetMask settings are possible.

Click file menu->Tools->IP Assignment Tool

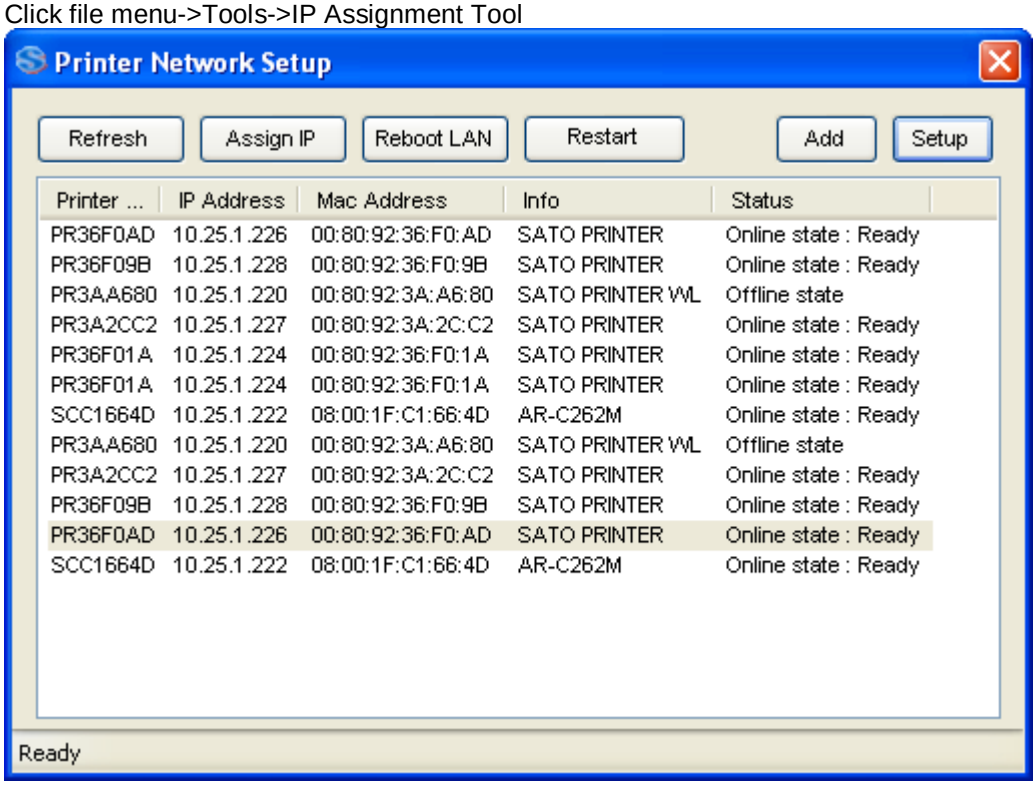


Figure 55 IP Assignment Tool

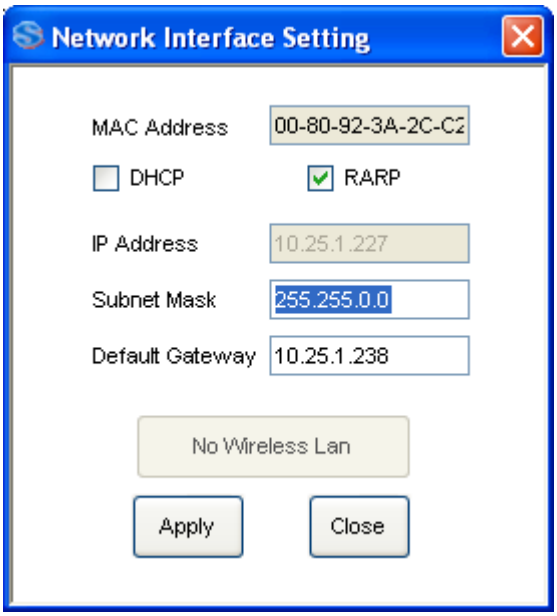


Figure 56 Network Setting

4.31. Unit Convertor

This function allows user to perform unit conversion among dots, mm, cm, inch and hex, in the corresponding resolution.

Click file menu->Tools->Unit Conversion

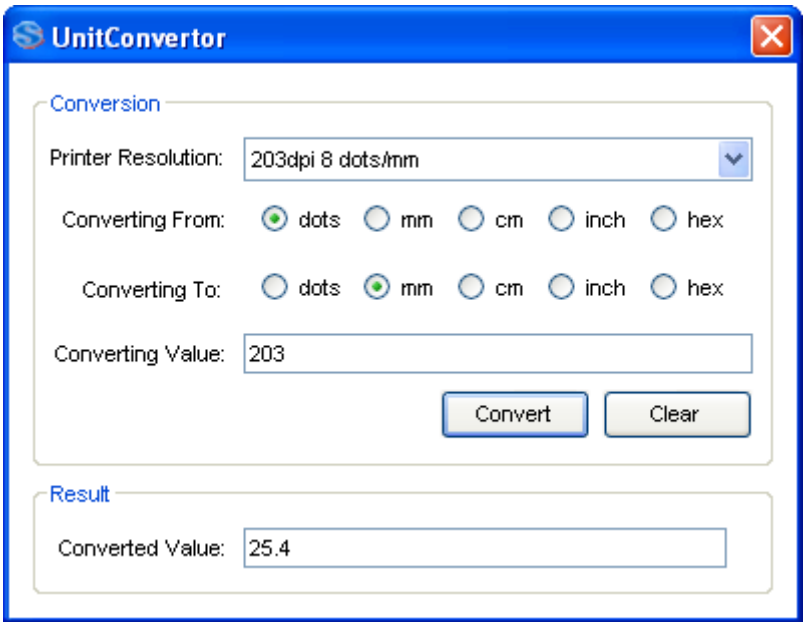


Figure 57 Unit Convertor

4.32. Status Alert via Email

This function sends alert emails to the specified users if an error occurs on the monitored LAN/WLAN printers. Click file menu->Tools->Status Alert
By default Popup is enabled and alert popup will appear top right corner of Display Screen. To disable, check the Disable Popup top right corner of Alert Configuration dialog box.

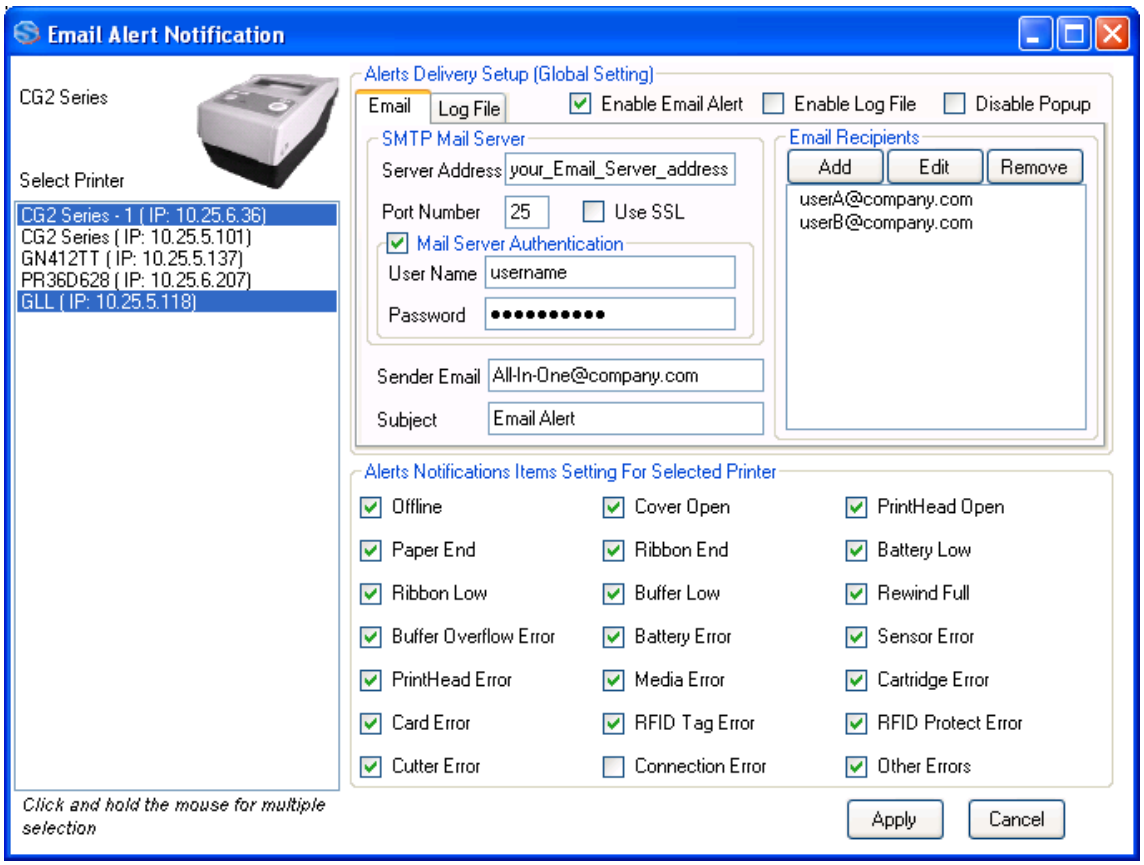


Figure 58 Email Alert Notification

Note : User is to specify the address of out-going email server (SMTP Server). Depending on the email configuration, user might need to provide information of an authenticated email account under the “Mail Server Authentication” in order to make use of the server to send emails.

Figure 59 Alert Popup Dialog

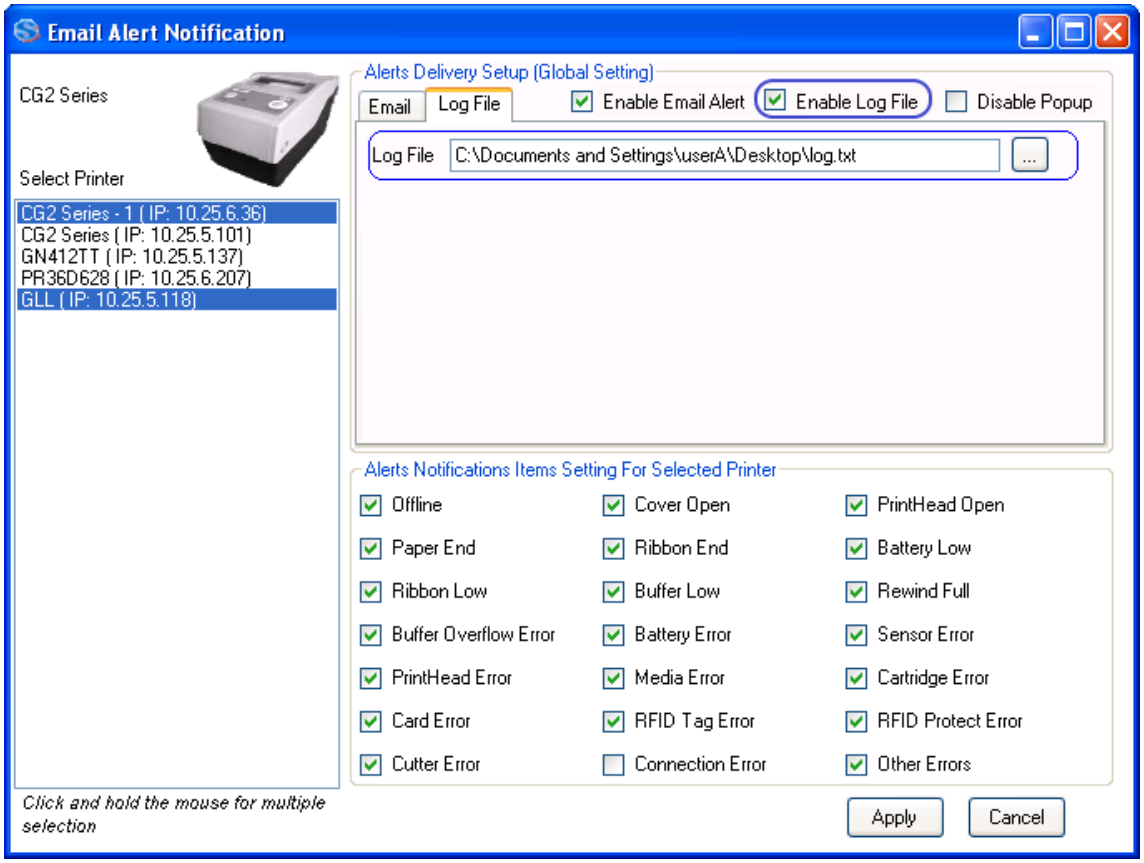


Figure 60 Log File

Detected errors can be logged in a log file by enabling the Log File option and provide a log filename.

4.33. Real Time Clock (RTC) Setting

This function is to send the RTC configuration command to the printer. It is only applicable on those printers with RTC module installed.

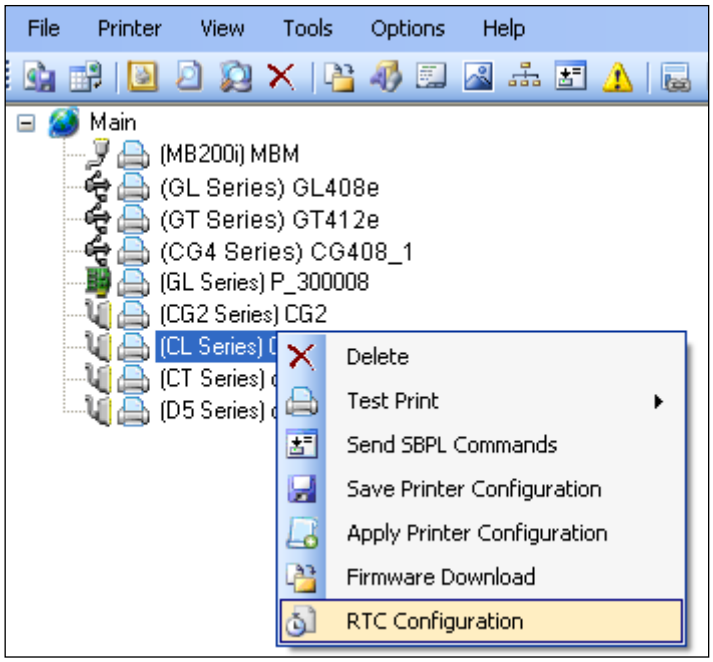


Figure 61 RTC Configuration

By default, the current date/time from the host system is displayed as the setting. Upon changing the value of the drop-down list, the value of the date/time is changed accordingly.

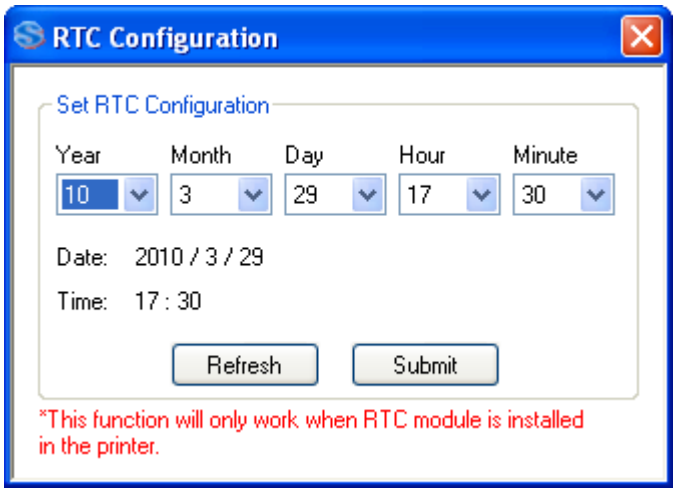


Figure 62 RTC Date/Time Setting

Click the “Refresh” button to get the updated date/time information from the host PC.
Click the “Submit” button to send the RTC Setting command to the printer.

4.34. Format Download to Keypad

This function is to send the Format files to the keypad via the printer. It is only applicable to those printer models which support Keypad and download can be done only when keypad is attached to printer. Format Files are created with SATO Keypad Tool software. In Format Download Dialog click Open button and select SD Card folder \Data\FMT\FMT_xx*.dat file to download to printer.

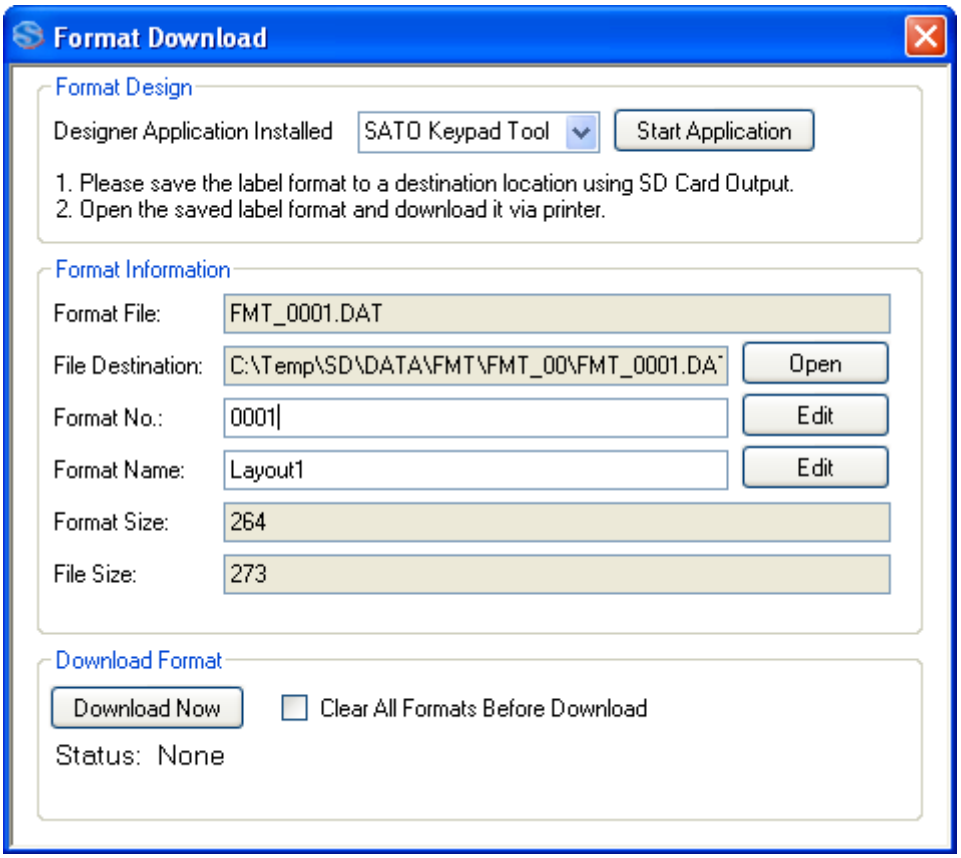


Figure 63 Format Download to Keypad

4.35. Status Bar Icon, System Tray

All-In-One Tool provide Status Bar icon so that if needed user could run All-In-One Tool in background and minimize to System Tray. If Close to Tray setting is selected, Application will minimize to System Tray when user try to Close the windows without using File->Exit menu. Exit menu will actually exit the application from System Tray as well.

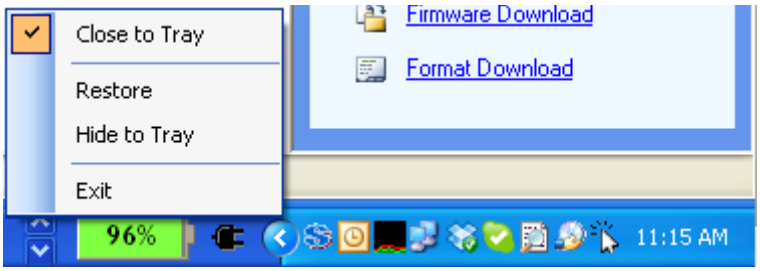


Figure 64 Status Bar Icon and menu

4.36. Shortcut Menu to SATO External Tools

All-In-One Tool provided shortcut menu for all tool installed under “SATO” Start Menu Program folder. This provides quick and easy access to other SATO software user might need directly from All-In-One Tool.

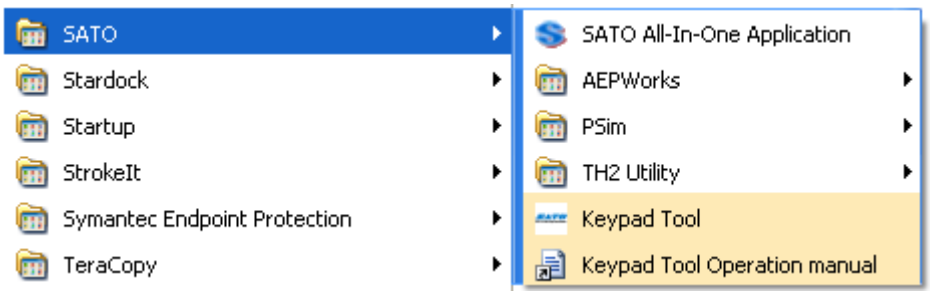


Figure 65 Other Sato Applications in Start Menu

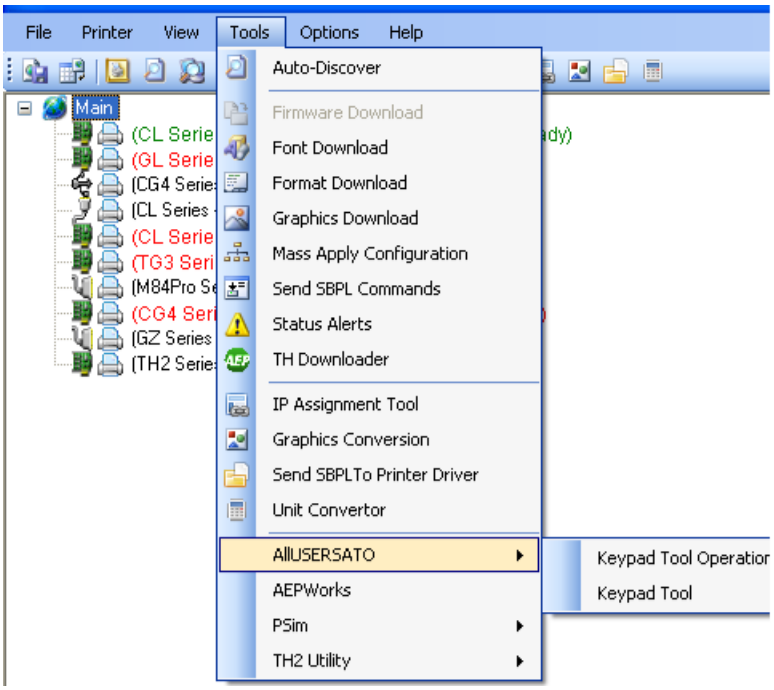


Figure 66 Shortcut Menu to SATO External Tool via All In one

4.37. Non-Standard Protocol

All-In-One Tool use Standard Protocol for sending or querying data to printer. In Standard Protocol mode, commands are started with ESC (Hex 0x1B). SATO printer can be operated in Non-Standard mode where escape character where printable characters (eg. ^ character is used instead of ESC for command).

User can identify the current protocol by looking at the main treeview, before the printer name. By default printer were added as Standard protocol and user has to manually change to correct protocol mode by using context menu of printer in treeview.

User can change the Non-Standard code while switching to Non-Standard protocol.

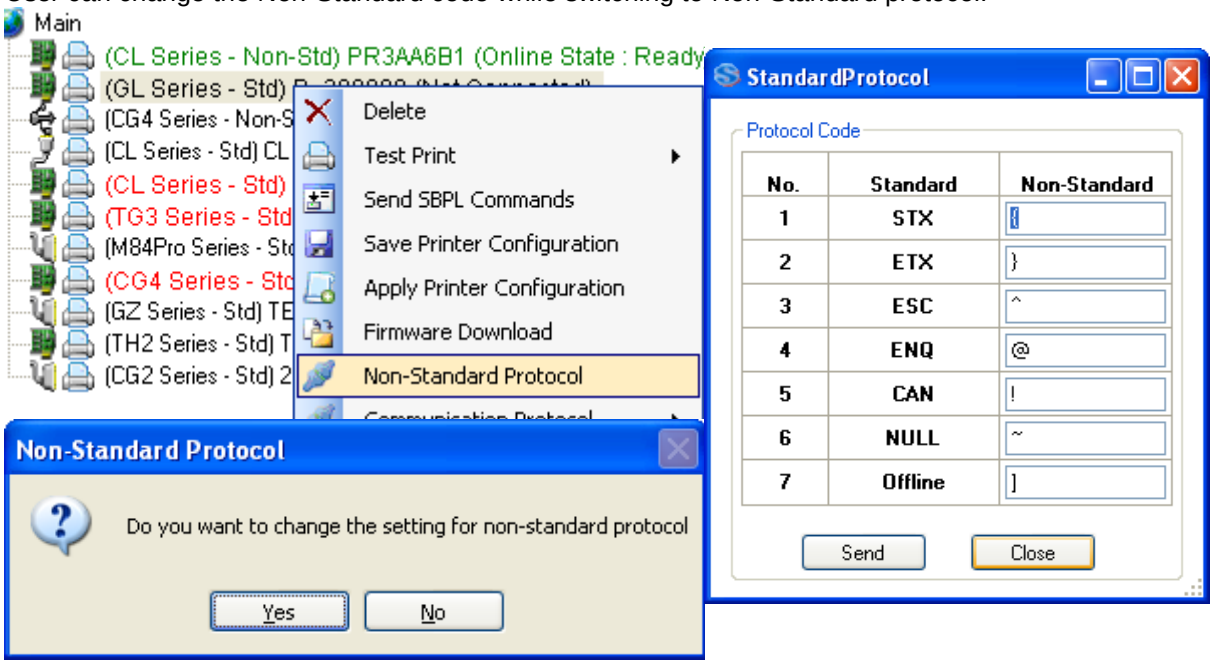


Figure 67 Standard and Non-Standard protocol

4.38. Software DIP Switch Setting

Some printer models such as GZ Series support setting DIP Switch setting via Software, SBPL command. This feature provides easy way to setup DIP Switch setting via AIO Tool. Please note that at present, reading of current DIP Switch setting is not supported. That means the setting displayed upon loading of dialog is just the default setting which may not be the same as the current setting of target printer.
Right click on printer name and select DIP Switch Setting from context menu to invoke DIP Switch Panel dialog.

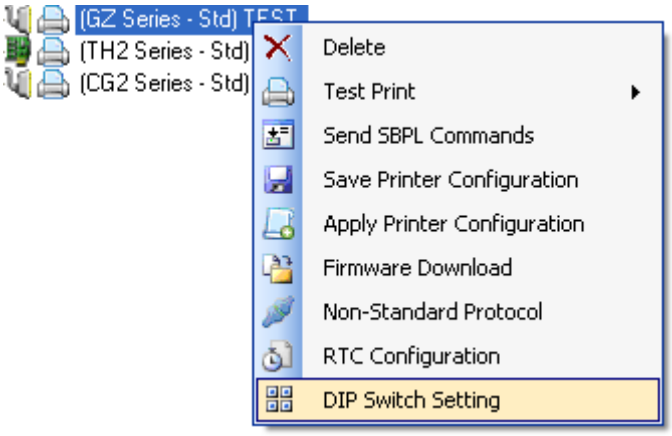


Figure 68 DIP Switch Setting Context Menu

Use Mouse to click on DIP Switch as desired and click Set button to send SBPL command to printer. User could choose the command protocol to use either SBPL or SZPL using radio at the bottom of dialog. Preset commands listed some other useful preset command to sent to printer. Please note that last two Reboot command can only be sent when the printer is in Download Mode. The command will be ignored in Online mode. (Note: At present, only GZ printer support this feature.)

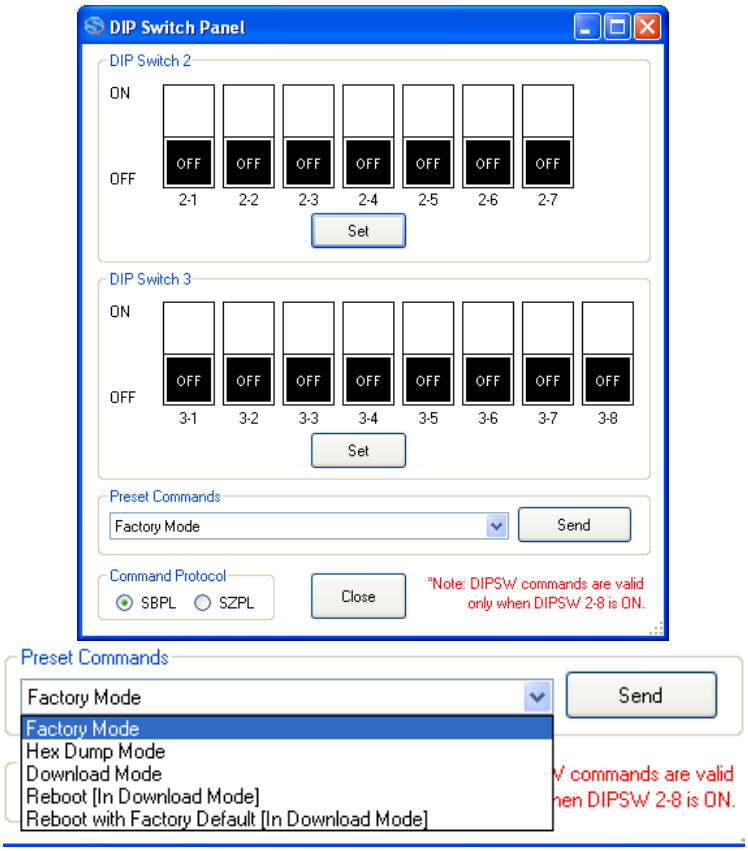


Figure 69 DIP Switch Panel

4.39. Printer Display Customization

The feature lets download boot splash/screen images and help videos being available in the Information->Help menu position of the CLNX/CLNX-J/Plus series(firmware version must be 1.4.1 or higher), FX3-LX, CT4-LX, HC4-LX, CT4-LX-J and HC4-LX-J printers. The user can access the function by either choosing it from context or tool menu.

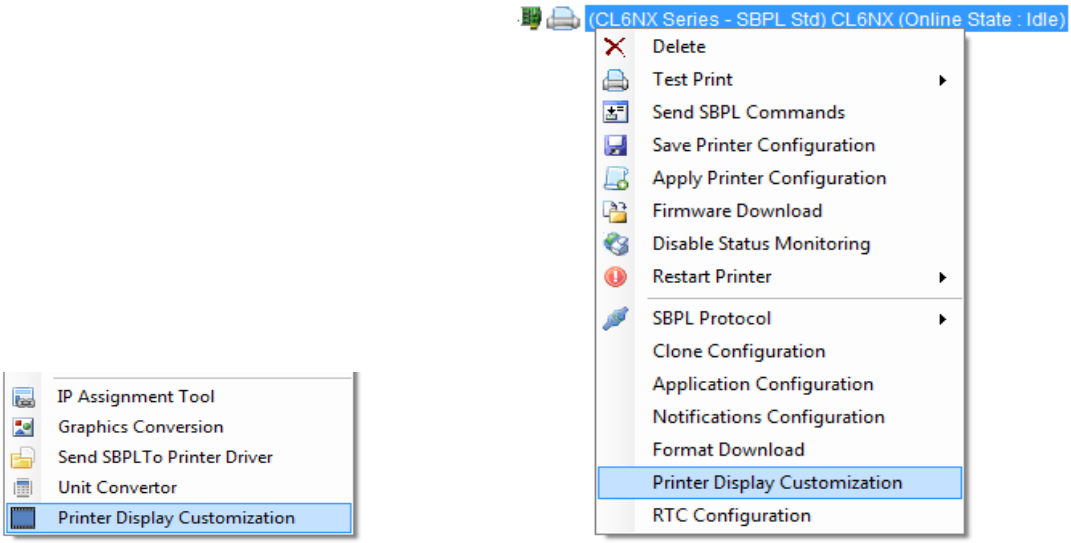


Figure 70 Accessing Printer Display Customization using Context and Tool Menus

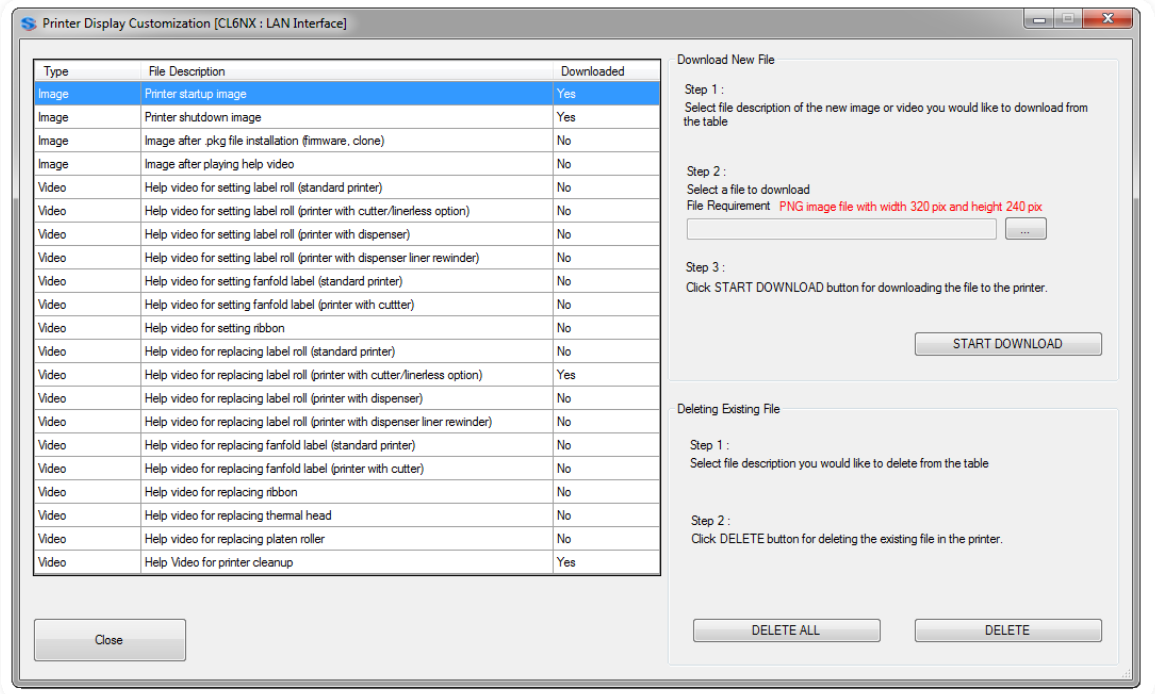


Figure 71 Printer Display Customization

The Printer Display Customization function records a new file or overrides the old one if the file already exists on the printer. The user is notified by “Yes” if the particular file exists or “No” if there is nothing downloaded there yet.
The downloading process starts by selecting the image/video in a grid needed to download, choosing the particular file from the computer’s file system expected to reside on the printer. In order to download the file please press Start Download button.
There are two types of deleting process. The Delete All button removes all files of the printer and the Delete button does it one by one as the selected row indicates.

Download image
CT4-LX, HC4-LX, CT4-LX-J, HC4-LX-J - .png extension, 480x272 pixels size
Other printers - .png extension, 320x240 pixels size

Download video
CT4-LX, HC4-LX, CT4-LX-J, HC4-LX-J - .webm extension, 480x272 pixels size, file size less than 15MB Other printers - .webm extension, 320x240 pixels size, file size less than 15MB

Deleting of images will stop displaying them by the printer but deleting the videos will restore original help movies already being included by default.

4.40. Export Printer Configuration for NFC Tool

NFC Tool is a part of Mobile All-in-One Tool Android app.
This function is available for CLNX/Plus printer series (serial number 6B~ or newer), FX3-LX, CT4-LX/CT4-LX-J.
NFC interface is installed for all CLNX-J printer series (Japan version) and CLNX printer series serial number start with 6B or newer (overseas version).

This feature exports printer configuration from selected printer and save the configuration as file. The file extension is AIOTNFC which can be used with the Mobile All-in-One Tool for transferring configuration to other printers without AC power.

CLNX printer with NFC interface can accept data contains printer configuration via NFC interface while printer power is off. Accepted configuration will be applied when turn on the printer. By using this function, productivity of the printer configuration process may be improved. Users can use this function to configure multiple printer units without removing printer units from packaging box at distribution centre, warehouse or customer site.

You shall configure one printer using LCD, All-in-One Tool or web interface. So this printer will be used for exporting configuration data.
Open the All-in-One Tool, select the printer and open Export Printer Configuration for NFC Tool from right click submenu or printer menu.

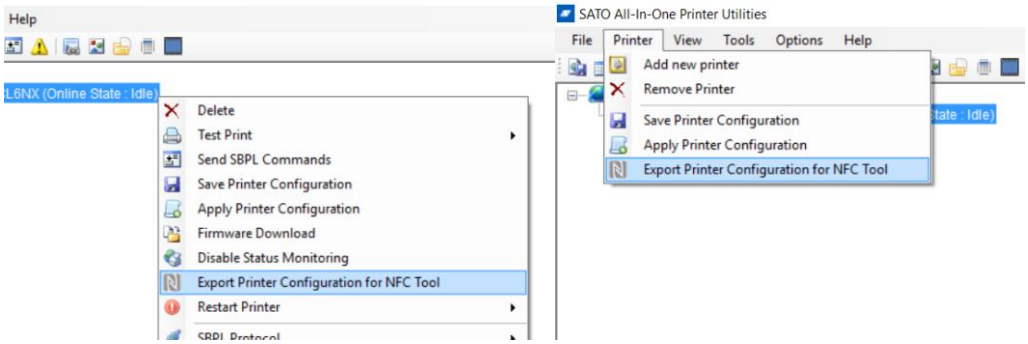


Figure 72 Export Printer Configuration for NFC Tool menu

On the Export Printer Configuration for NFC Tool dialog, select interface, provide WiFi Additional Configuration and select application.

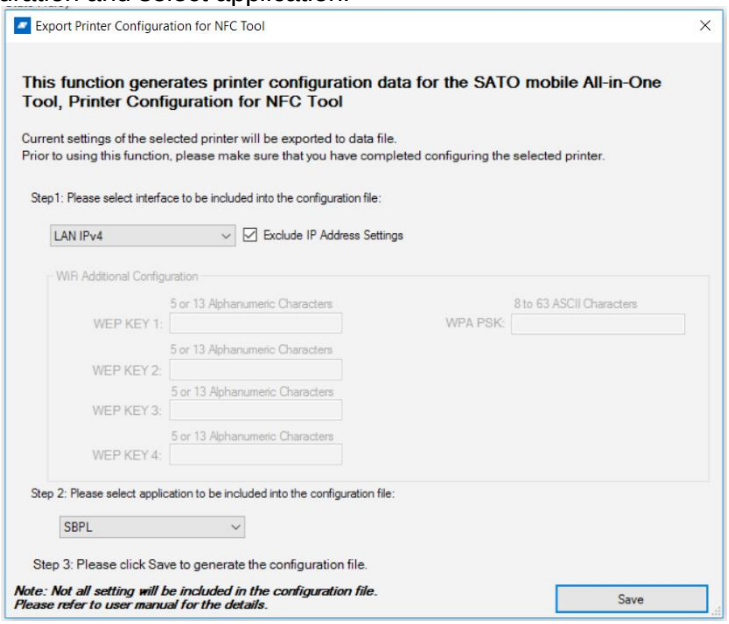


Figure 73 Export Printer Configuration for NFC Tool dialog

- Interface
  - You can include only 1 printer interface setting into configuration file.
  - If you do not want to include static IP address, check for Exclude IP Address Settings. All-in-One Tool will not include IP address setting into the configuration file.

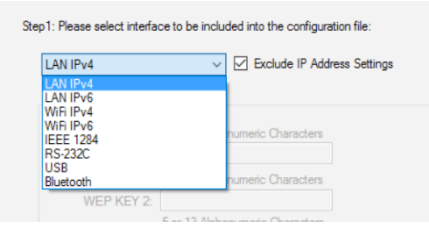


Figure 74 Interface selection

- WiFi Additional Configuration
    - You need to provide WEP KEY and / or WPA PSK when you select WiFi for interface.

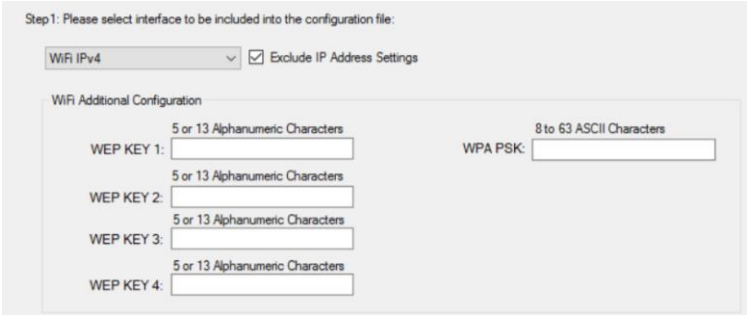


Figure 75 WiFi additional configuration

- Application
    - You can include only 1 application setting into configuration file.

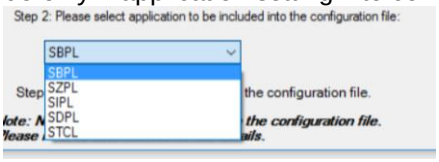


Figure 76 Application selection

Save As dialog will be displayed when you click Save button. Specify file name and save the file. The file shall be transferred to Android mobile device which you will be using Mobile All-in-One Tool for configuring printers.

Note that not all printer settings will be included in the configuration file, as size of configuration file must fit CLNX printer series NFC interface data capacity. Please refer to below table for the settings will be included in the configuration file.

Table 1: Settings will be included in NFC configuration file (interface)

Setting	Configuration	LAN IPv4	LAN IPv6	WiFi IPv4	WiFi IPv6	IEEE1284	RS-232C	USB	Bluetooth
Common	Print speed	✓	✓	✓	✓	✓	✓	✓	✓
	Print darkness level	✓	✓	✓	✓	✓	✓	✓	✓
	Vertical size of label	✓	✓	✓	✓	✓	✓	✓	✓
	Horizontal size of label	✓	✓	✓	✓	✓	✓	✓	✓
	Offset of vertical base reference point	✓	✓	✓	✓	✓	✓	✓	✓
	Offset of horizontal base reference point	✓	✓	✓	✓	✓	✓	✓	✓
	Print method	✓	✓	✓	✓	✓	✓	✓	✓
	Sensor type	✓	✓	✓	✓	✓	✓	✓	✓
	Language settings	✓	✓	✓	✓	✓	✓	✓	✓
	Time zone	✓	✓	✓	✓	✓	✓	✓	✓
	Power saving setting	✓	✓	✓	✓	✓	✓	✓	✓
	Adjust print position	✓	✓	✓	✓	✓	✓	✓	✓
	Offset adjust	✓	✓	✓	✓	✓	✓	✓	✓
	Detect ribbon near end	✓	✓	✓	✓	✓	✓	✓	✓
	Priority setting	✓	✓	✓	✓	✓	✓	✓	✓
	Label near end	✓	✓	✓	✓	✓	✓	✓	✓
	Unit of Measurement	✓	✓	✓	✓	✓	✓	✓	✓
LAN	DHCPv4 setting	✓							
	IPv4 address	✓							
	IPv4 subnet mask	✓							
	IPv4 default gateway	✓							
	IPv4 DNS primary address	✓							
	IPv4 DNS secondary address	✓							
	IPv6 address setting		✓						
	IPv6 address		✓						
	IPv6 default router		✓						
	IPv6 subnet prefix		✓						
	IPv6 DNS primary address		✓						
	Communication protocol (For SBPL)	✓	✓	✓	✓				
	BCC check	✓	✓						
	SNTP function	✓	✓	✓	✓				
	NTP IPv4 server address	✓	✓	✓	✓				
	SNTP error notification	✓	✓	✓	✓				
	SNMP contact information	✓	✓	✓	✓				
	SNMP equipment name	✓	✓	✓	✓				
	SNMP installation location	✓	✓	✓	✓				
	SNMP setting	✓	✓	✓	✓				
	LPD	✓	✓	✓	✓				
	FTP	✓	✓	✓	✓				
	LAN/WLAN Switching	✓	✓	✓	✓				
WiFi	DHCPv4 setting			✓					
	IPv4 address			✓					
	IPv4 subnet mask			✓					
	IPv4 default gateway			✓					
	IPv4 DNS primary address			✓					
	IPv4 DNS secondary address			✓					
	IPv6 address setting				✓				
	IPv6 address				✓				
	IPv6 default router				✓				
	IPv6 subnet prefix				✓				
	IPv6 DNS primary address				✓				
	WLAN mode			✓	✓				
	SSID			✓	✓				
	Hidden SSID			✓	✓				
	Channel number			✓	✓				
	Infrastructure mode network security			✓	✓				
	Adhoc mode network security			✓	✓				
	WEP key			✓	✓				
	WEP key 1			✓(*1)	✓(*1)				
	WEP key 2			✓(*1)	✓(*1)				
	WEP key 3			✓(*1)	✓(*1)				
	WEP key 4			✓(*1)	✓(*1)				
	WEP key index			✓	✓				
	WPA authentication			✓	✓				
	PSK			✓(*1)	✓(*1)				
	WiFi direct device name			✓	✓				
IEEE1284	Communication protocol (for SBPL)					✓			
	BCC check					✓			
RS-232C	Baud rate						✓		
	Data bit						✓		
	Parity bit						✓		
	Stop bit						✓		
	Communication protocol (for SBPL)						✓		
	BCC check						✓		
USB	Communication protocol (for SBPL)							✓	
	BCC check							✓	
Bluetooth	Bluetooth								✓
	Communication protocol (for SBPL)								✓
	Authentication level								✓
	PIN code								✓
	CRC mode								✓

*1: User input data will be included

Table 2: Settings will be included in NFC configuration file (application)

Setting	Configuration	SBPL	SZPL	SIPL	SDPL	STCL
SBPL	Zero slash	✓				
	Type face	✓				
	Proportional pitch	✓				
	EURO	✓				
	Kanji code	✓				
	Kanji mode	✓				
	Code page	✓				
SZPL	Pitch offset at top of label		✓			
	Label shift offset		✓			
	Protocol		✓			
	Command head		✓			
	Control head		✓			
	Delimiter		✓			
	Date and time format		✓			
SIPL	Zero slash			✓		
	EURO			✓		
	Code page			✓		
	Proportional			✓		
SDPL	Protocol code				✓	
	SOH				✓	
	STX				✓	
	CRC				✓	
	CNT				✓	
	Label rotation				✓	
	Format attribute				✓	
	Pause mode				✓	
	SOP emulation				✓	
	1 byte code page				✓	
	Compatibility TTF				✓	
	SDPL measure unit				✓	
STCL	Control code					✓
	Command head 1					✓
	Command head 2					✓
	Command head 3					✓
	EURO					✓
	Zero slash					✓

4.41. Old Model Compatible

This feature is enabled to make CT4-LX/HC4-LX/CT4-LX-J/HC4-LX-J printers to be compatible with L'espritV-ex、L'espritV. Right click on printer name and select Old Model Compatible from the list.

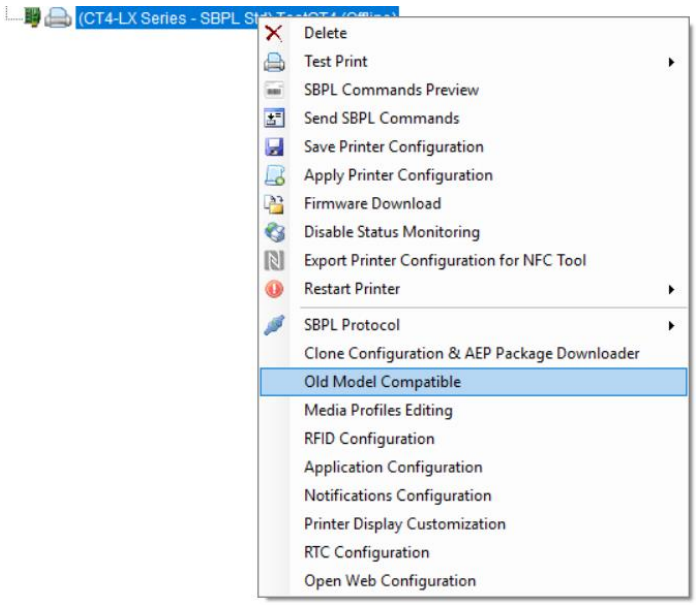


Figure 77 Old Model Compatible

Edit each item and click Apply button. The information is sent to printer.

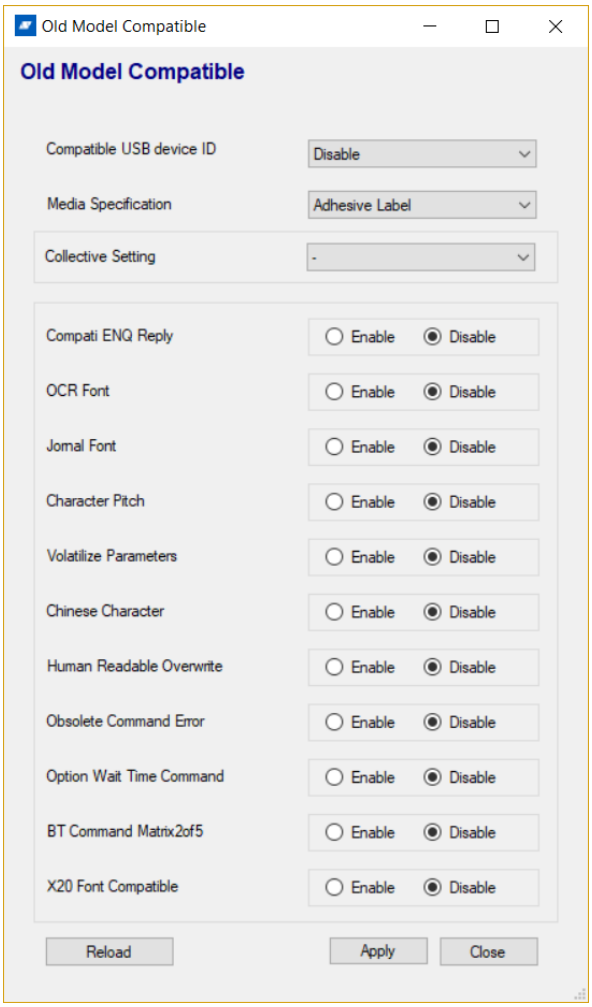


Figure 78 Old Model Compatible

4.42. Media Profiles Editing

This feature is to register printer setting by label as Media Profile. When you change to a different label in a printer, you can select the profile for the label from Home screen and it will configure the printer based on the profile values by simple operation.（Up to 5 profiles）
Right click on printer name and select Media Profile Editing from the list.

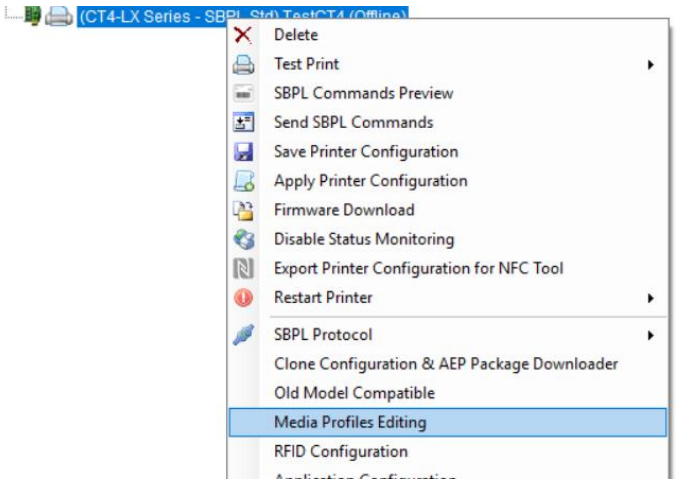


Figure 79 Media Profiles Editing

Select Media Profile 1 to 5 and click the buttion.

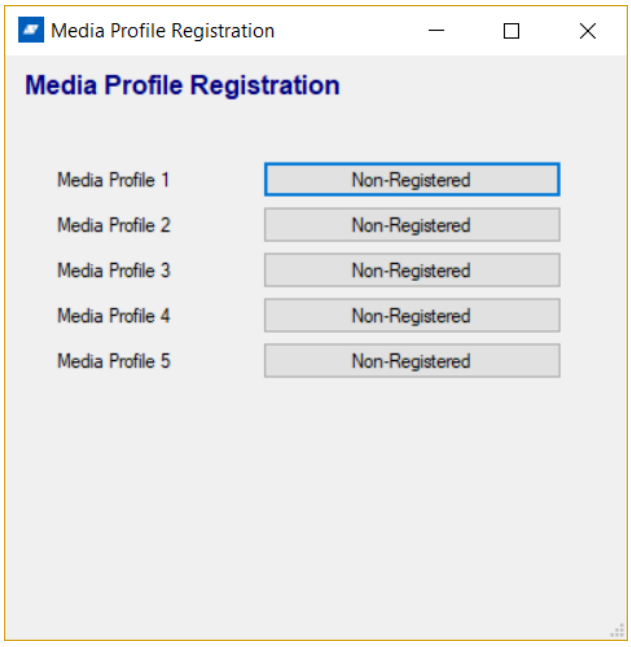


Figure 80 Media Profiles Registration

Edit each item and enter Registered Name and click Apply button. The profile information is saved in a printer.

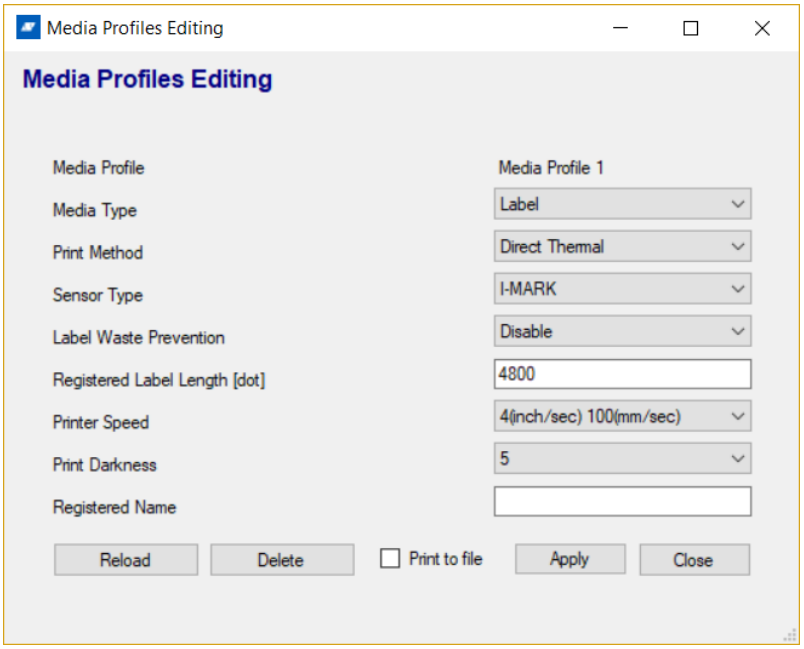


Figure 81 Media Profiles Editing

4.43. Clone Configuration & AEP Package Downloader

Clone Configuration & AEP Package Downloader is a feature to save printer setting to a .pkg file and download the pkg file to other printers. It can copy one printer setting to other printers. This feature is available in CLNX/Plus CLNX-J, FX3, CT4-LX, HC4-LX, CT4-LX-J and HC4-LX-J. Right click on printer name and select Clone Configuration & AEP Package Downloader from the list.

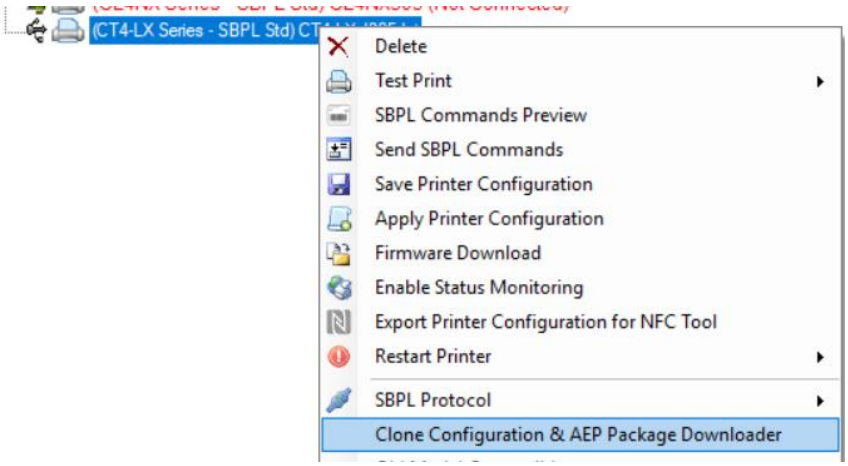


Figure 82 Clone Configuration & AEP Package Downloader

- Clone Import
  Select an option from Clone Import and click Save Clone button then it will save Pkg file.
  Note：Only USB connection is supported for CT4-LX/HC4-LX/CT4-LX-J/HC4-LX-J printers

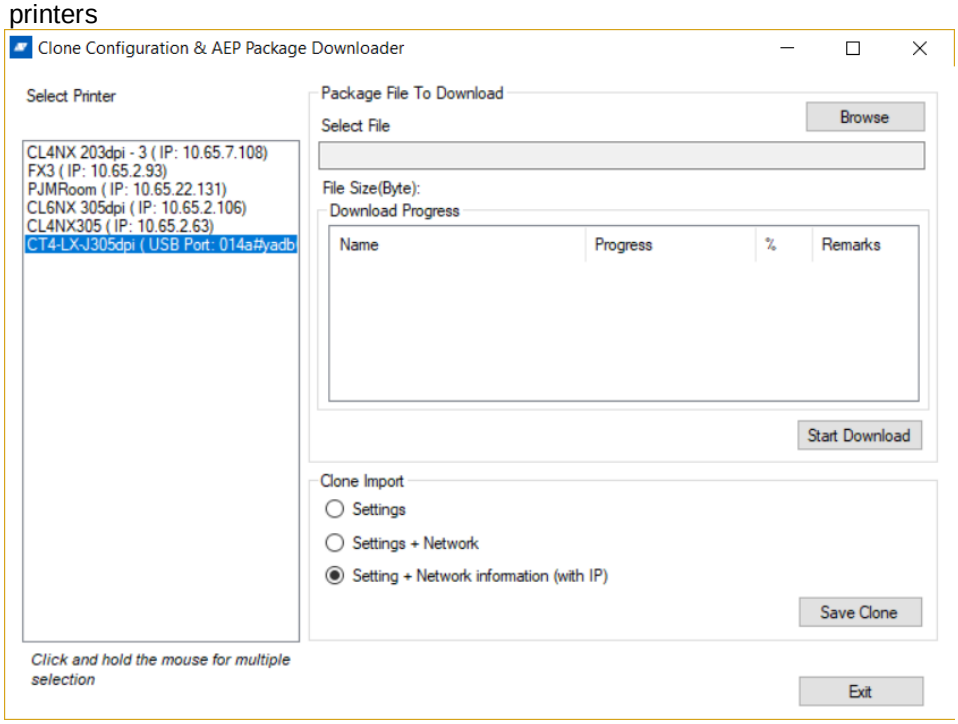


Figure 83 Clone Configuration & AEP Package Downloader

- Package File to Download
  Select pkg file from the Select File, and click Start Download. The pkg file information is saved to the printer.
  AEP package file can be downloaded to printer using this feature.

Extensive contact information of worldwide SATO operations can be found on the internet at **www.satoworldwide.com**

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