
SHC, SAM4S

User Guide

For EllixTool V2.1

ShinHeung Precision Co.,Ltd.

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A large, stylized, and semi-transparent version of the SAM4S logo, rendered in a light purple/pink color with a 3D effect. Below it, the website address "www.sam4s.com" is displayed in a large, light gray, sans-serif font.

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1. INTRODUCTION

It is integrated software for POS Printer ELLIX series and it includes the all of the necessary utility for our printer product. If you want to other resource for our printer example windows driver, OPOS driver and other interface driver, please visit our web site.

2. SUPPORT DEVICE & INTERFACE

DEVICES

- All of the SAM4S POS printers, ELLIX series.

FUNCTIONS

- NV Logo download
- User Setup (only ELLIX20 model)
- Firmware download

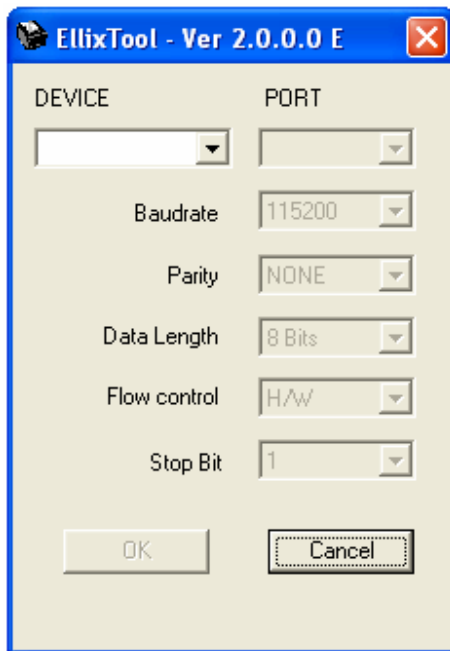
INTERFACES

- RS-232c (Serial Type)
- IEEE1284 (Parallel Type)
- USB (Virtual COM , USB¹)
- Bluetooth (Virtual COM)
- Ethernet (Virtual COM , TCP/IP)

¹ USB bus type interface is supported only in ELLIX20/ELLIX20II.

3. User Interface

1) Configuration Dialog



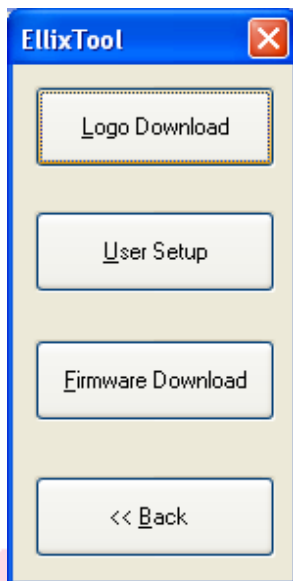
Device Configuration Dialog

You can select the device which you want to use comfortable, on the EllixTool.

<DEVICE LIST>

- ELLIX20S : ELLIX20 with Serial Interface
- ELLIX20P : ELLIX20 with Parallel Interface
- ELLIX20U-I : ELLIX20 with USB Interface
(Virtual COM Port)
- ELLIX20U-II : ELLIX20 with USB Interface
(Bus type)
- ELLIX20S : ELLIX20 with Serial Interface
- ELLIX20P : ELLIX20 with Parallel Interface
- ELLIX20U-I : ELLIX20 with USB Interface
(Virtual COM Port)
- ELLIX20U-II : ELLIX20 with USB Interface
(Bus type)
- ELLIX20E-II : ELLIX20 with Ethernet-II Interface
(TCP/IP type)
- ELLIX10P : ELLIX10 with Parallel Interface
- ELLIX10S : ELLIX10 with Serial Interface
- ELLIX10U : ELLIX10 with USB Interface
(Virtual COM Port)

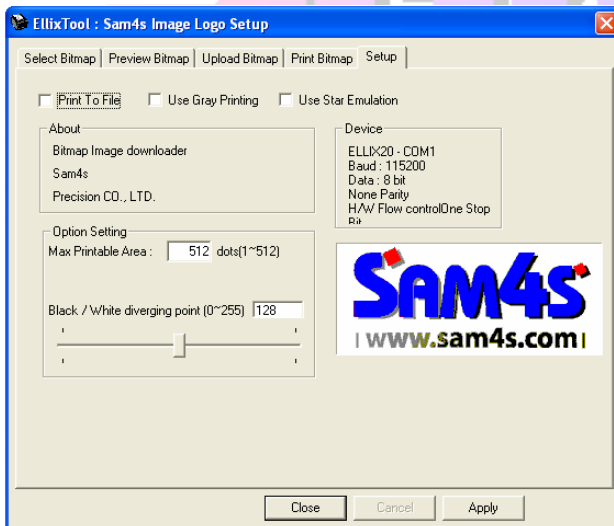
2) Function Select Dialog



Function Select Dialog

You can select a function button as you want to use.

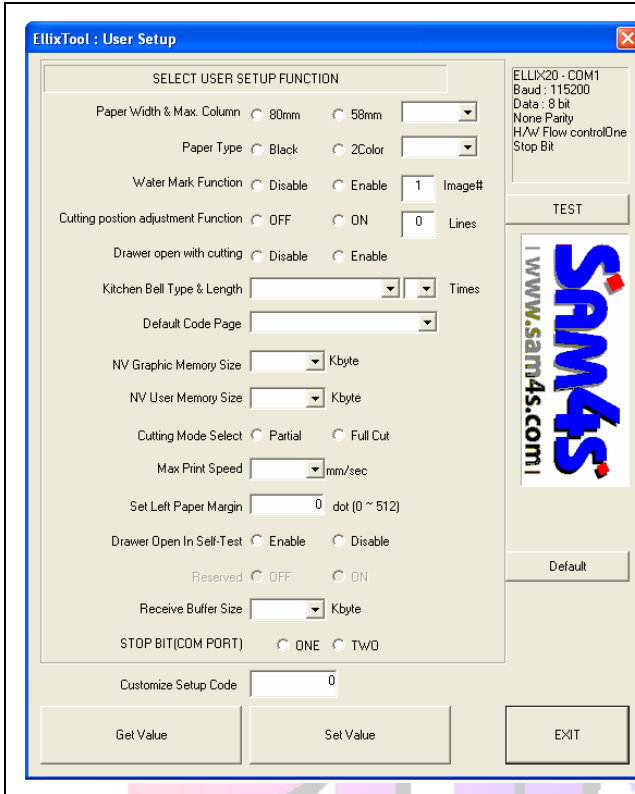
3) NV Logo Download Dialog



NV Image Logo Download Dialog

It is consisted with five property pages which are Select, Preview, Upload, Print and Setup Bitmap tab.

4) User Setup Dialog



EllixTool : User Setup

SELECT USER SETUP FUNCTION

Paper Width & Max. Column: ☐ 80mm ☐ 58mm

Paper Type: ☐ Black ☐ 2Color

Water Mark Function: ☐ Disable ☐ Enable 1 Image#

Cutting position adjustment Function: ☐ OFF ☐ ON 0 Lines

Drawer open with cutting: ☐ Disable ☐ Enable

Kitchen Bell Type & Length: [Dropdown] [Dropdown] Times

Default Code Page: [Dropdown]

NV Graphic Memory Size: [Dropdown] Kbyte

NV User Memory Size: [Dropdown] Kbyte

Cutting Mode Select: ☐ Partial ☐ Full Cut

Max Print Speed: [Dropdown] mm/sec

Set Left Paper Margin: [Text] 0 dot (0 ~ 512)

Drawer Open In Self-Test: ☐ Enable ☐ Disable

Reserved: ☐ OFF ☐ ON

Receive Buffer Size: [Dropdown] Kbyte

STOP BIT(COM PORT): ☐ ONE ☐ TWO

Customize Setup Code: [Text] 0

Get Value Set Value EXIT

TEST

Default

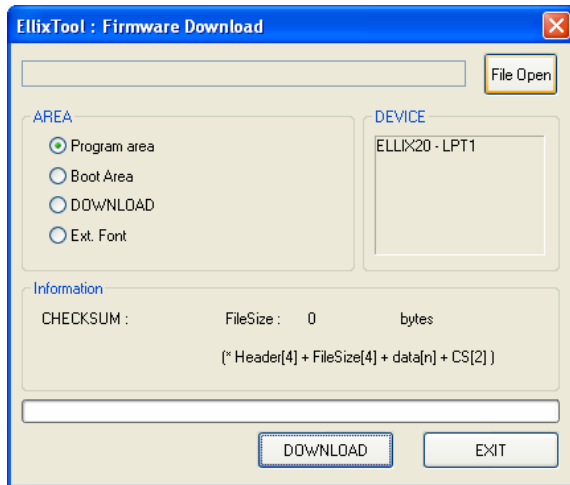
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User Setup Dialog

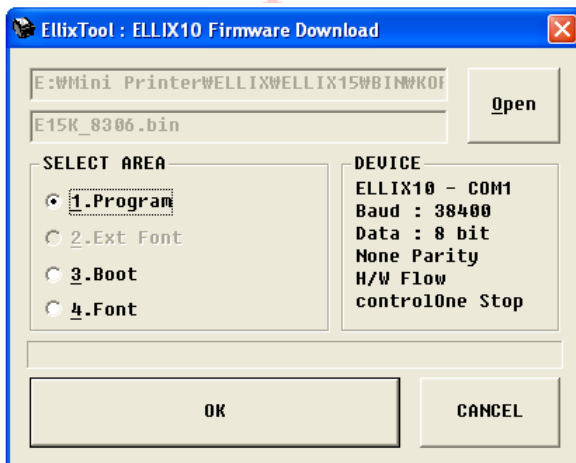
You can change variable custom settings only for ELLIX 20 series.

Note) The more information describes in the next chapter.

5) Firmware Download Dialog

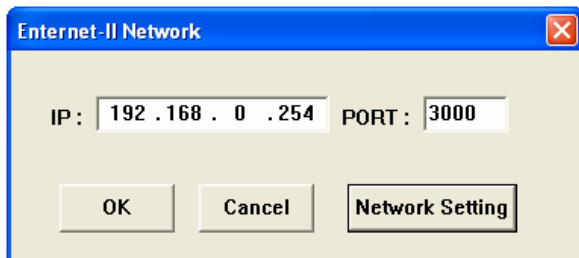


Firmware Download Dialog for ELLIX 20 / 20II update



Firmware Download Dialog for ELLIX 10 update

6) Network Setting Dialog (Only Ellix20II Ethernet-II Interface)



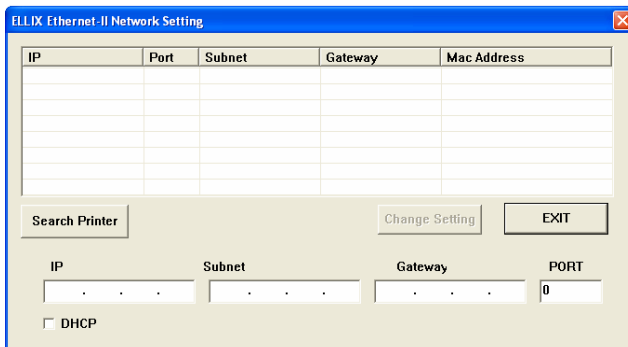
Ethernet-II Network

IP : 192 . 168 . 0 . 254 PORT : 3000

OK Cancel Network Setting

Ethernet-II Network Dialog

If you enter IP and Port number, You can access Ellix20II Ethernet-II interface.



ELLIX Ethernet-II Network Setting

IP	Port	Subnet	Gateway	Mac Address

Search Printer Change Setting EXIT

IP Subnet Gateway PORT

☐ DHCP

ELLIX Ethernet0II Network Setting Dialog

You can change Ellix20II's network setting.

3. Description of each functions

1) Logo download

Logo download function can be used for image downloading to NV (Non-Volatile) memory of ELLIX or for image printing from it.

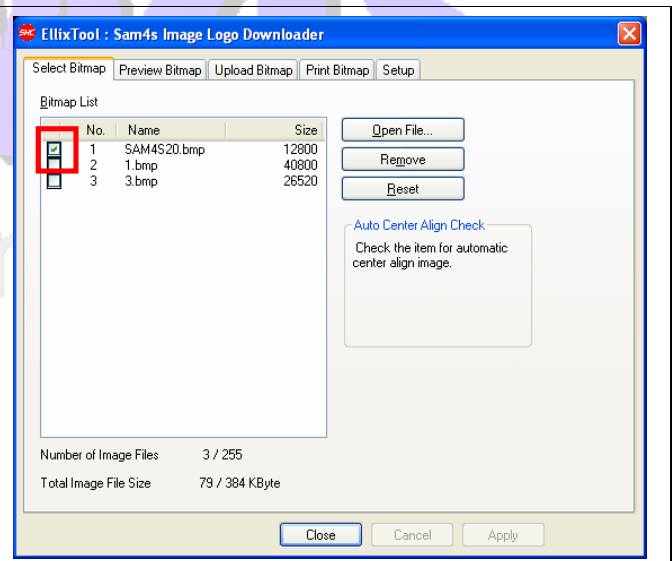
(1) General feature

1. Maximum memory capacity : 384Kbyte (It depends on NV graphics memory size of User Setup)
2. Total logo count : Maximum 255
3. Automatic center align
4. Black/White diverging point
5. Image data format : Changeable to a file
6. Gray Scale Image printing support (It need firmware update to 1.37)

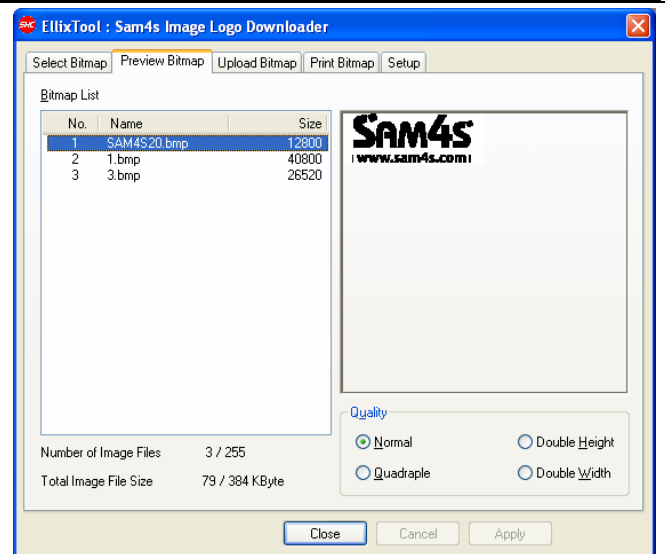
(2) Logo registration sequence

- ✓ Select the bitmap file stored in a printer.
- ✓ If you want to save with "Automatic center align" feature, check the checkbox located at the head of Bitmap No. like a red square.

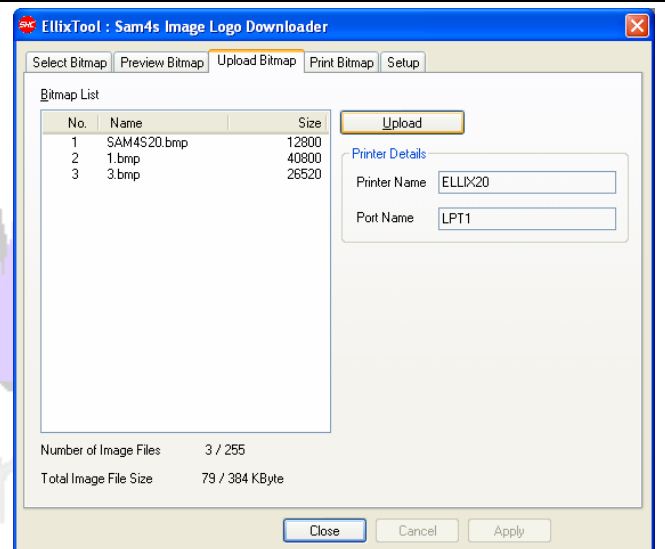
Note) It is very useful the case of printing a small logo image.



- ✓ At Preview Bitmap tab, you can see the logo file you selected.



- ✓ If you press the Upload button, the Bitmap image data will be downloaded in the NV graphics memory area of the connected printer. If uploading process finishes successfully, the printer feeds paper a little.



- ✓ You can specify the Printing Range for the logos uploaded in the printer's NV graphics memory area. Selectable choices are below :

All : Prints all logo images saved in the printer connected currently.

Selection : Prints the selected logo image saved in the printer connected currently. Selection range can be from 1 to 255. But you can select multiple logo-images by using ',' or '-' in the edit box.

(e.g. "1,5,10" or "1-5,8,20-22")

- ✓ You can specify Quality.

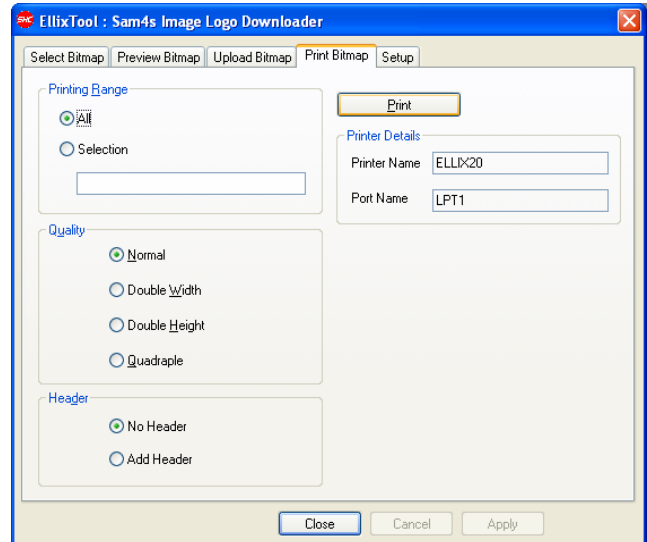
Normal : Print in single height and width

D/Width : Print in double width

D/Height : Print in double height

Quadruple : Print in double height and width

- ✓ You can select option with/without Header as a numbering value of the logo. It is printed on top of logo image.



At Setup tab, you can select some options about the logo downloader.

- ✓ **'Print to File' check box:** Image data format can be changed to a file. This file can be copied to printer directly by Upload button at "Upload Bitmap" tab.

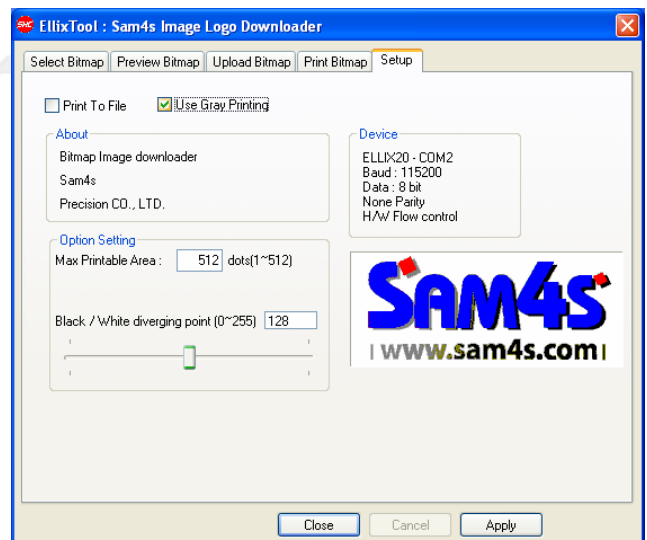
- ✓ **Option Setting:**

Max Printable Area: If your machine is set smaller value than a maximum value (512), it should be set as the same with your machine's setting value.

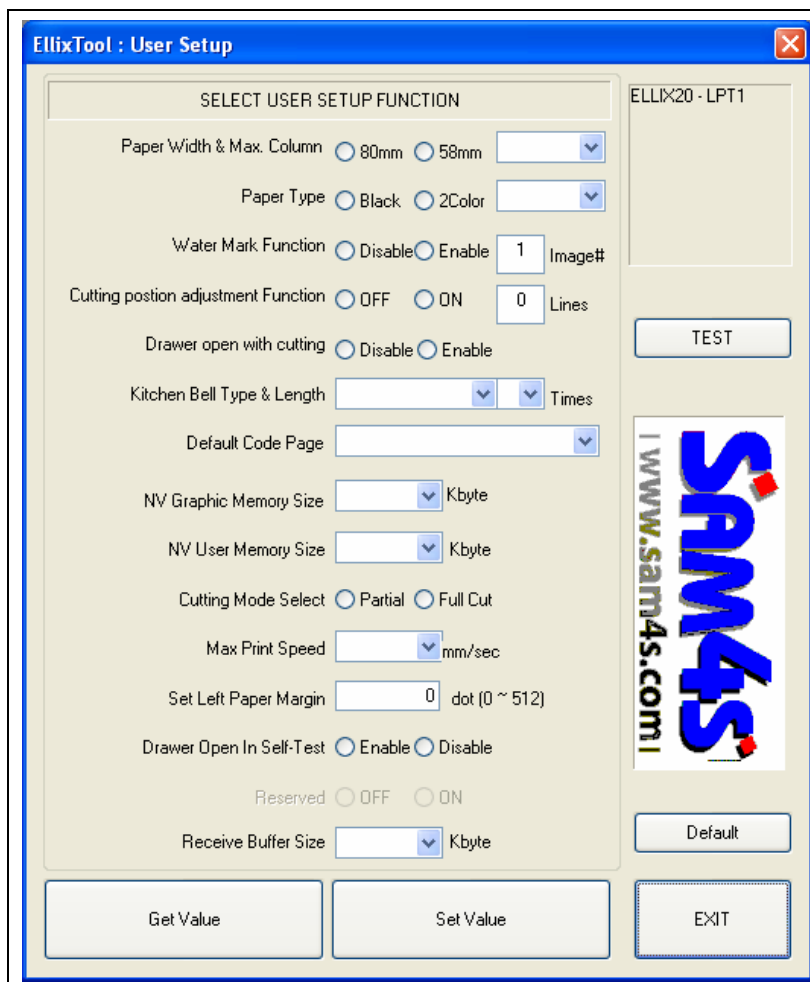
Black/White diverging point: If an image output is too dark or too light, you can adjust the diverging point to suitable value for output which you want to get.

Use Gray Printing: It is new feature of ELLIX20. It can make a better result than the original print when printing the true color bitmap images.

(notes : It needs more large space to store data than the normal print.)



2) User setup



✓ All of options about User Setup are described below as a topic of "Description of User Setup Options".

Note) This works for only ELLIX20 series.

✓ About Buttons

[TEST]

You can test the printer and check the printer's setting. If you press this button, ELLIX prints out some characters and cuts the paper.

[Default]

Can reset to default values all of them.

[Get Value]

It queries the current setting values to the printer and shows those values on the dialog.

[Set Value]

It sets values with displayed on the dialog or selected of the printer.

[EXIT]

Quits this application and returns to Function Select Dialog.

(1) Description of User Setup Options

1. Paper Width & Max Column (Default : 80mm / 30 column In 58mm)

This is an option of the paper width for printing. It can be set the paper 58mm or 80mm width.

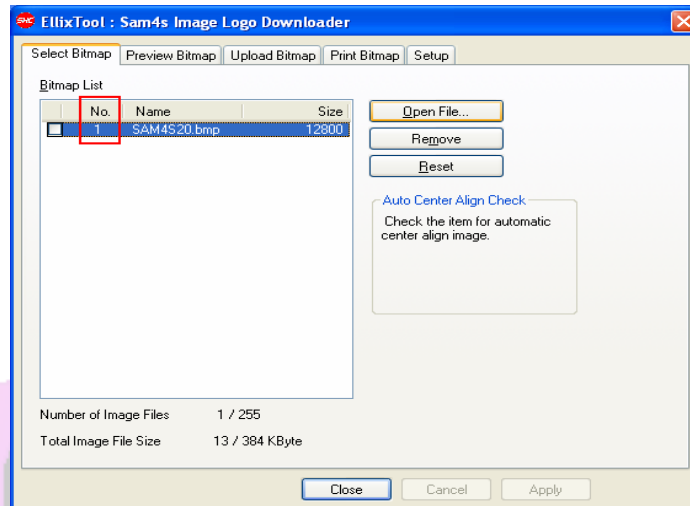
2. Paper Type and Black Density (Default : Black / Medium)

This is an option of the paper type. It can be set Black or 2Color. The second color can be red or blue by 2 color thermal paper type.

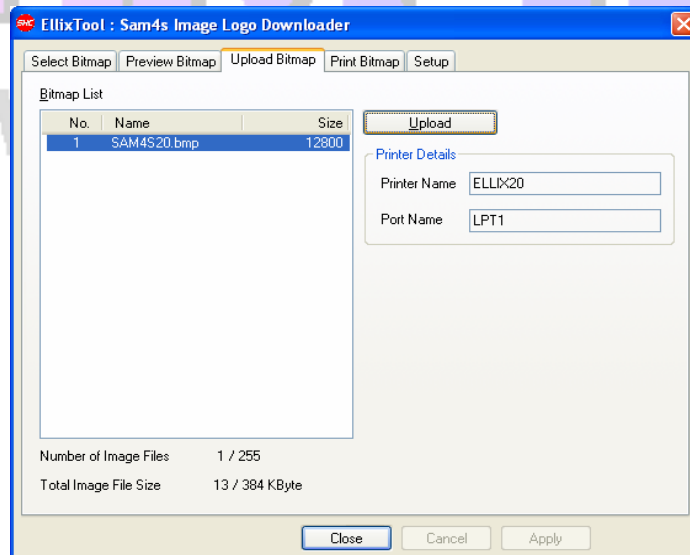
3. Water Mark Function (Default : Disable)

This is a special feature of ELLIX20. It is ELLIX that prints background image on your receipt without any additional commands. You can use Watermark with Sam4s Image Logo Downloader in EllixTool. If you want to print background image, prepare the bitmap image which will be background. And then follow steps as below.

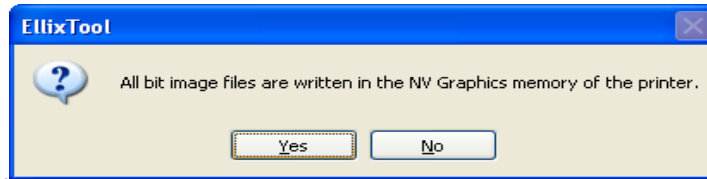
- ① Run Sam4s Image Logo Downloader and select the prepared bitmap image. And check the image number.



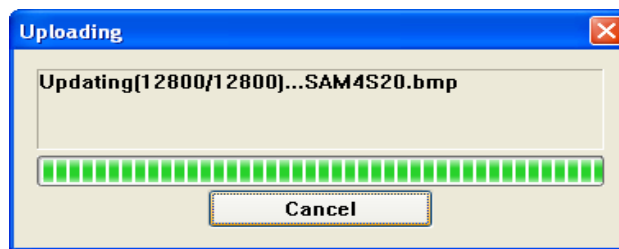
- ② Go to the "Upload Bitmap" tab and click the "Upload" button.



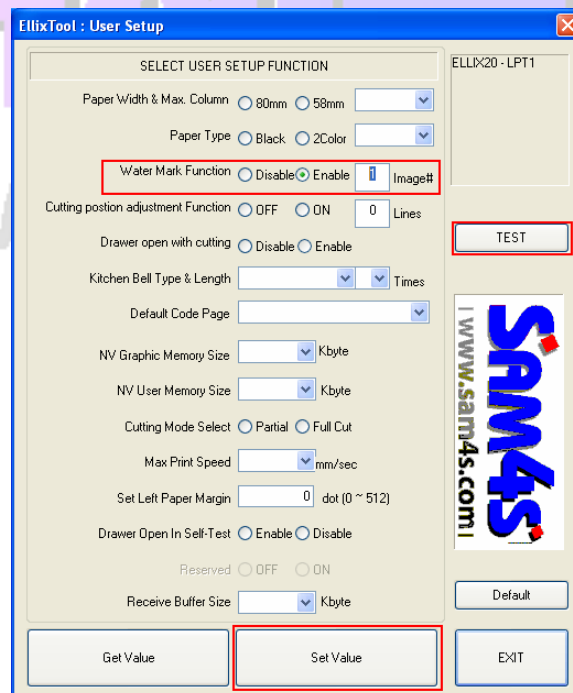
- ③ It will show the message box like below, click the “YES” button.



- ④ All of images saved before on the printer will be deleted and new image data will be downloaded on your printer.



- ⑤ Printer feeds some paper when the logo upload is completed successfully.
- ⑥ Close Sam4s Image Logo Downloader and run User Setup from Function Select Dialog.
- ⑦ Set Enable of the Water Mark Function and input the number of logo image that you want to print as a background. (Refer step ①) And then click the “Set Value” button. The printer will be set values newly and Water Mark Function setting is finished.



- ⑧ Try to click the “TEST” button and you will see the fantastic receipt with background image.
- Left picture is the sample receipt that is applied the Water Mark Function. Right one is bitmap image that is used as a background image.



4. Cutting position adjustment Function (Default : Disable / 0 Line)

If your receipt is cut wrong, this option will be very useful with you, it makes the application not change.
When this option set to enable, printer will feed amount (line number input) of paper before cutting.

5. Drawer open with cutting (Default : Disable)

This option will make drawer take an open-signal when printer is received the paper cutting command.

6. Kitchen Bell Type & Length (Default : Sam4s Bell / 3 times)

ELLIX20 offers one bell and three melodies for using on kitchen. It is possible to adjust ringing time or length of melody.

The offered bell types are below.

Sam4s Bell: Default sam4s bell

Melody 1 ~ 3: Three different melodies

Other Bell: Blend bell (Internal oscillation type)

7. Default Code Page (Default : PC437-USA, Standard Europe)

If you want to fix the specified codepage as default, select one of codepages in the list and then click the "Set Value" button.

8. NV Graphic Memory Size (Default : 384Kbytes)

ELLIX20 has NV (Non-volatile) memory area for saving graphics and user data. The NV Graphic memory size is 384Kbytes maximum and is 0byte minimum. You can take this size freely with this option. But it must be set in a range from 0 to 384Kbytes.

Note) Total size of NV memory (NV graphic and NV user memory) is 448Kbytes. Even if you will set the amount over 448Kbytes, it will be automatically set to possible size.

9. NV User Memory Size (Default : 64 Kbytes)

ELLIX20 has NV (Non-volatile) memory area for saving graphics and user data. The NV Graphic memory size is 320Kbytes maximum and is 64Kbytes minimum. You can take this size freely with this option. But it must be set in a range from 64 to 320Kbytes.

Note) Total size of NV memory (NV graphic and NV user memory) is 448Kbytes. Even if you will set the amount over 448Kbytes, it will be automatically set to possible size.

10. Cutting Mode Select (Default : Partial Cut)

You can choose one type of cutting between partial cut (with un-cut point in a center of paper) and full cut.

11. Max Print Speed (Default : 220 mm/sec)

If printer, especially machine is fast and data transfer-speed is low, that is, two of them have speed mismatched. This case may be cause of an intermittent printing. You can control print speed from this option for better printing, e.g. smooth printing.

12. Set Left Paper Margin (Default : 0 dot)

Left margin of paper is changeable for better receipt (printed) shape. For example, if you are using 40-column-format receipt on ELLIX20, you may be seen a print-result tended to left side. In this case you can take much better result, if you set 24-dots which is the value of left margin.

13. Drawer Open In Self-Test (Default : Disable)

Check the drawer operation at print self-test mode.

14. Received Buffer Size (Default : 4Kbytes)

ELLIX20's received buffer can be 64Kbytes maximum. You can change buffer size with this option.

15. Stop Bits (COM) (Default : ONE)

Stop bits used during serial communication can be changed.

16. Customize Setup Code (Default : 0)

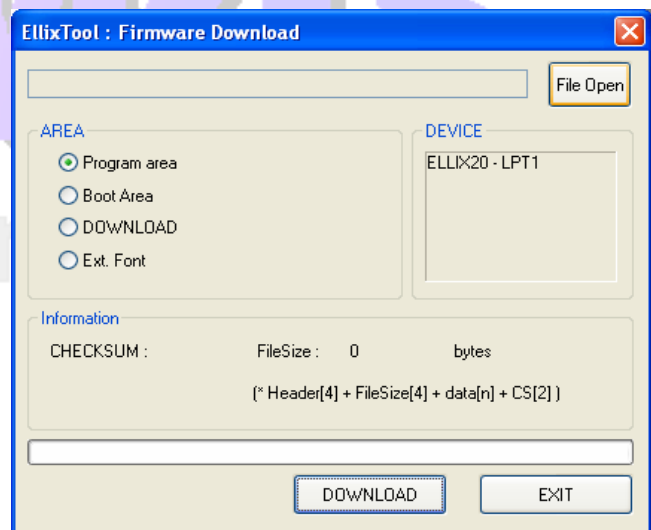
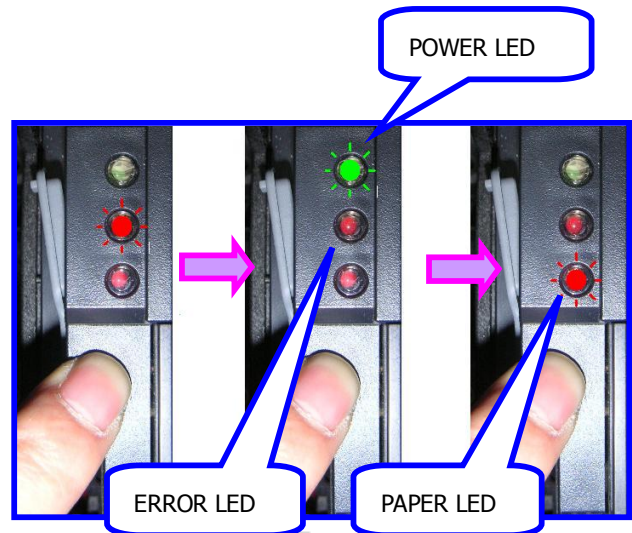
You can enter a Customize Setup Code .

3) Firmware download

(1) ELLIX20 / ELLIX20II

Firmware update sequences are below.

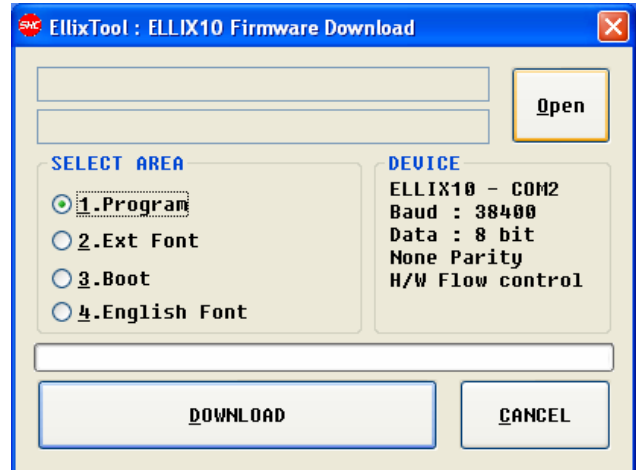
1. Remember folder directory with downloaded firmware file.(*.E20)
2. Turn the ELLIX20 off and all dip switches off too.
3. Check the cable connection between ELLIX20 and your PC.
4. Open the printer cover.
5. Turn on ELLIX20 with FEED button; hold the feed button until the PAPER LED is ON. (Other LED should be off.)
6. Now, ELLIX20 is ready to update firmware.
7. Run the "Firmware Update Dialog" on EllixTool and open the downloaded firmware file.
8. And then, select the download area which you want to update. (generally select the "Program area")
9. Select the connected port on your PC. (Already selected on EllixTool)
10. If you click the download button, the firmware update will be started and this application will show the status with progress-bar on dialog bottom side.
(If progress-bar does not proceeding well, when you click download button, you should check 'Port Select' or cable connection whether settings are correct or not.)
11. If download is done, printer will notify download completion with 5 times buzzer, and then its power will be off. (in surely case that download is succeeded)
 - If buzzer does not ring and power does not off, that means communication ERROR is occurred during download. In this case, please check DIP Switch (It should be all OFF – Normal) or Cable connection status (It should be fasten – Normal).
 - After download is completed, WINDOWS shows "DOWNLOAD COMPLETED. PLEASE DO NOT TURN OFF ELLIX20 DURING THE LEDS ARE BLINKING." messages.
12. Please try to operate 'SELF TEST' and check the updated firmware version.

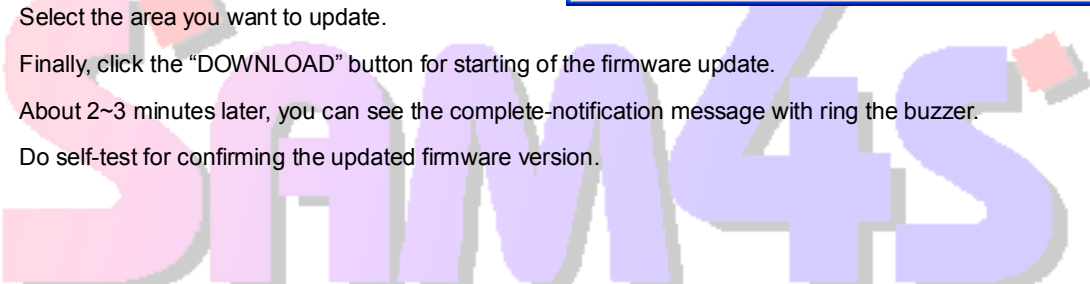


(2) ELLIX10

Firmware update sequences are below. Sequences are similar to ELLIX20 so explanation will be short.

1. Connect ELLIX10 and PC with a cable.
2. Open the printer cover.
3. Turn on ELLIX10 by press the POWER Button with holding the FEED Button.
4. Wait a moment until ERROR LED's ON (Hold the FEED button)
5. Release the FEED button when ERROR LED's on.
6. Run the the "Firmware Update Dialog" on EllixTool.
7. Click the "Open" button and select the firmware file.
8. Select the area you want to update.
9. Finally, click the "DOWNLOAD" button for starting of the firmware update.
10. About 2~3 minutes later, you can see the complete-notification message with ring the buzzer.
11. Do self-test for confirming the updated firmware version.



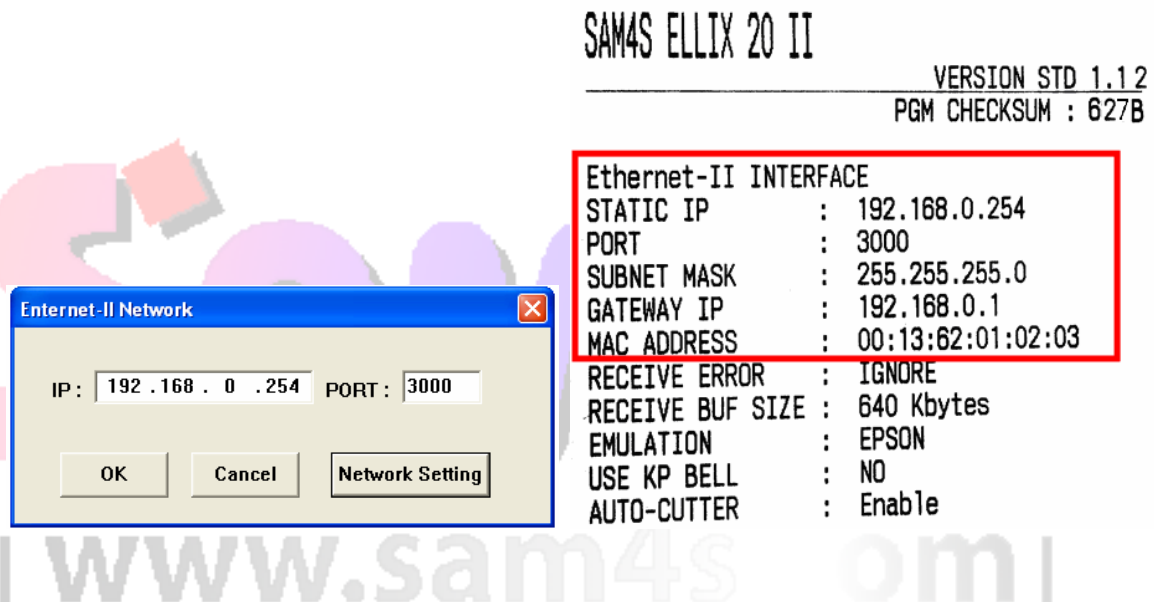

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4) Network Setting Dialog (Only Ellix20II Ethernet-II Interface)

(1) Ethernet-II Network Dialog

When you selected a Ellix20II Ethernet-II (ELLIX20II-EII) In the "Configuration Dialog" and pressed OK button, Ethernet-II Network Dialog is appears. Enter the IP address and port number to connect. Press the OK button. Function Select Dialog will be executed.

In addition, you can select the "ELLIX Ethernet-II Network Setting dialogue" It can change the network settings for the printer. Do you want to check ELLIX IP and Port number? Please run the Self-Test. You can confirm all the settings of the printer.

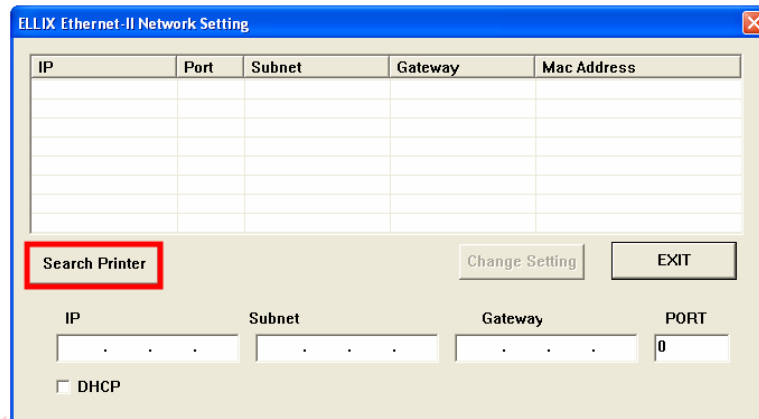


(2) ELLIX Ethernet-II Network Setting Dialog

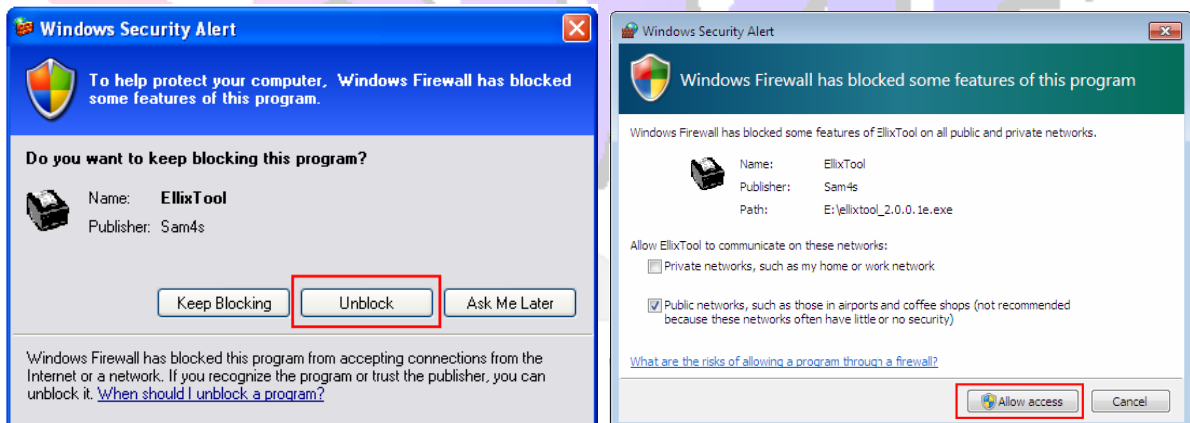
Here you can change the network settings for the printer. If you would like to change the network settings, please follow these steps.

1. The printer is connected to the router.. PC must be connected to the same router.
2. Open the printer cover.
3. Turn on ELLIX20II with feed button. Hold the feed button until the PAPER LED is ON. (Other LED should be off.)

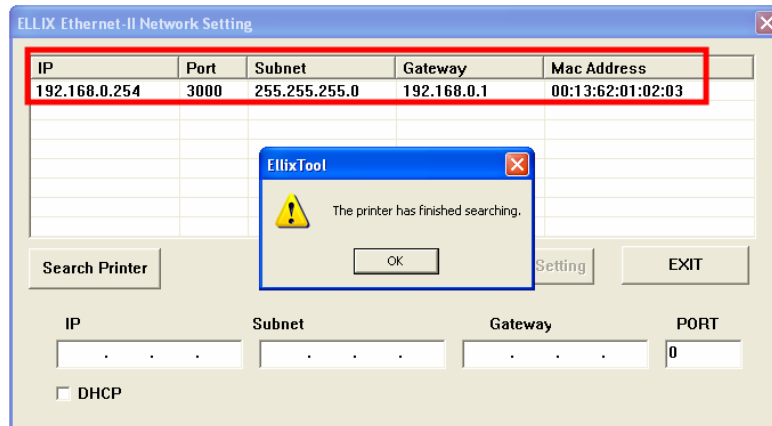
4. Run the "ELLIX Ethernet-II Network Setting Dialog." Press the "Search Printer" button.



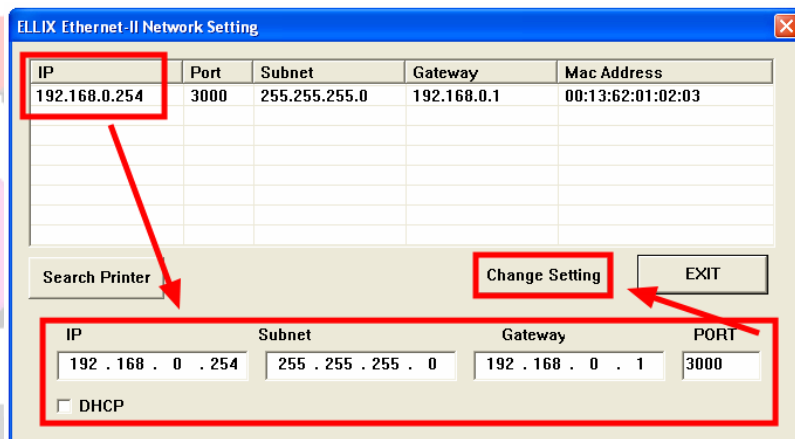
5. If you can see the "Windows Security Alert" message, Click a "Unblock" button(Windows XP) or "Allow access" button(Windows 7). And retry the 4 Step.



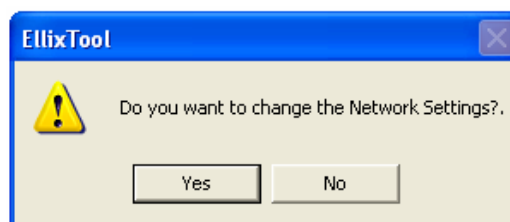
6. If you can see the "The Printer has finished searching." message, detected the printer's network settings appear. (If you can not see any list, Please check cable and network.)



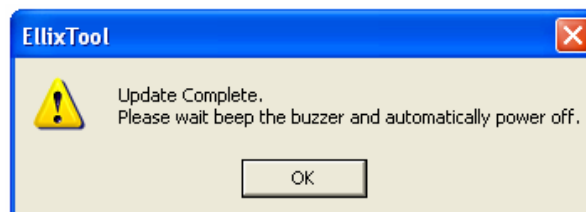
7. Choose one to change the IP. Enter the network settings you want(as shown). Finally, press the "Change setting" button.



8. You can see the "Do you want to change the Network Setting?" message. Press the "Yes" button.



9. Printer will notify update completion with buzzer, and then power will be off.



10. Do self-test for confirming the updated network setting.

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REV 02

Revision History	
Rev 1	DEC, 20, 2007
Rev 2	JUNE, 20, 2011
Rev 2.1	APRILL,27,2012


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